

BRUCEJACK GOLD MINE PROJECT
Application for an Environmental Assessment Certificate /
Environmental Impact Statement

Appendix 7-C

Brucejack Gold Mine Project: Conceptual Model Plan

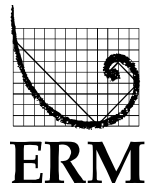


Table B.1 – Conceptual Model Plan

Date: February 25, 2014

Facility Name, Company and Location (Lat., Long.):

Brucejack Gold Mine, Pretium Resources Inc. (56° 28' 20" N, 130° 11' 31" W)

Air Quality Consultant and Contact Name:

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Ministry Contact (Air Quality Assessment):

Li Huang and Ben Weinstein

Assessment Type: *Answer 2 or 3.*

3

Anticipated sources to be modelled and corresponding contaminants:

The Brucejack Gold Mine (the Project), located approximately 950 km northwest of Vancouver and 65 km north-northwest of Stewart, is a proposed underground gold and silver mining operation. The life of mine is expected to be at least 16 years and will produce approximately 16 Mt (megatonne) of ore at a rate of 2,700 tpd (tonne per day).

One 138 kV power transmission line will be built to provide power to the operation. During the maximum production year, the power requirement is estimated to range between 20 to 30 MW (megawatts). The underground operation will be based on conventional rubber-tired, diesel-powered mobile equipment. The ROM (run-of-mine) ore will be processed in a primary crusher underground and transported to surface facilities via conveyor belt. There are two ventilation intakes and two ventilation returns. Emissions from underground will be in compliance with the TWAs (time weighted averages) outlined in the *Health, Safety and Reclamation Code for Mines in BC* and TLVs (threshold limit values) from the ACGIH (American Conference of Governmental Industrial Hygienists).

The crushing circuits will be equipped with baghouses and the gold room discharge will be equipped with a scrubber. A list of equipment used during the construction and operation periods is provided in Appendix A. For this assessment, the CACs (criteria air contaminants) include:

- SO₂ (sulphur dioxide)
- NO₂ (nitrogen dioxide)
- CO (carbon monoxide)
- TSP (total suspended particulate)
- PM₁₀ (particulate matter with diameter less than 10 µm)
- PM_{2.5} (particulate matter with diameter less than 2.5 µm)
- VOCs

The VOCs emissions will be quantified but may not be included in the dispersion model depending on the amount of VOCs expected to be emitted from the proposed project. Emissions sources are summarized in Table 1.

Table 1. Emission Sources

Source	Source Type (Point, Area, Volume)	Contaminant(s) SO ₂ , CO, H ₂ S, PM ₁₀ , PM _{2.5}								
		SO ₂	NO ₂	CO	VOC	TSP	PM ₁₀	PM _{2.5}	Dust Deposition	Acid Deposition
Portals and air raises, including all underground diesel equipment exhaust and blasting	Point	√	√	√	√	√	√	√	√	√
Heaters for ventilation intakes	Point	√	√	√	√	√	√	√	√	√
Diesel generators	Point	√	√	√	√	√	√	√	√	√
Crushing circuit baghouses	Point					√	√	√	√	
Camp waste incinerator	Point	√	√	√	√	√	√	√	√	√
Mining equipment (see Appendix A)	Area	√	√	√	√	√	√	√	√	√
Road dust	Area					√	√	√	√	
Material handling	Volume					√	√	√	√	
Bulldozing	Volume					√	√	√	√	

Dust deposition from fugitive dust sources, and acid deposition from sulphur oxides and nitrogen oxides will also be included in this assessment.

For road dust, modelling parameters were estimated based on recommended area source configuration outlined in Haul Road Workgroup Final Report (US EPA 2012).

Based on the most frequently used vehicle (pickup truck), the vehicle height (VH) is approximately 2 m. The plume height is 1.7 x VH, with release height of half of plume height. The sigma z for road dust was estimated based on plume height divided by 2.15. For fugitive dust, the geometric mass mean diameter and standard deviation are presented in Table 2.

Table 2. Size Parameters for Dry Deposition of Particles

Species Name	Geometric Mass Mean Diameter (μm)	Geometric Standard Deviation (μm)
TSP	10	4
PM ₁₀	2	2
PM _{2.5}	0.48	2

Anticipated model domain and receptors (preliminary domain dimension, receptor grid/locations, sensitive receptors):

The proposed study area is a 30 by 30 km square centred on the Project site (Figure 1). The area is expected to contain isopleths that represent 10% of the ambient air quality objectives. The receptors were configured according to the suggested receptor spacing in *the Guidelines for Air Quality Dispersion Modelling in British Columbia* (BC MOE 2008):

- 20 m receptor spacing along the plant boundary
- 50 m spacing within 500 m of plant boundary and access road
- 250 m spacing within 2 km of plant boundary and access road
- 500 m spacing within 5 km of plant boundary and access road
- 1,000 m spacing beyond 5 km of plant boundary and access road

Sensitive receptors including human and ecological areas will be included in the assessment.

Terrain characteristics within domain: flat terrain or complex terrain (i.e., will complex flow need to be considered?)

Complex mountainous terrain.

Dominant land cover:

The GeoBC land use data (BTM – Baseline Thematic Mapping) were used for this assessment. The land use is presented in Figure 2 and a breakdown is shown below:

- Rangeland: 0.14%
- Forest Land: 6.67%
- Water: 0.61%
- Wetland: 0.14%
- Barren Land: 28.31%
- Perennial Snow or Ice: 64.14%

Figure 1
Brucejack Air Dispersion Modelling Domain and Receptor Spacing

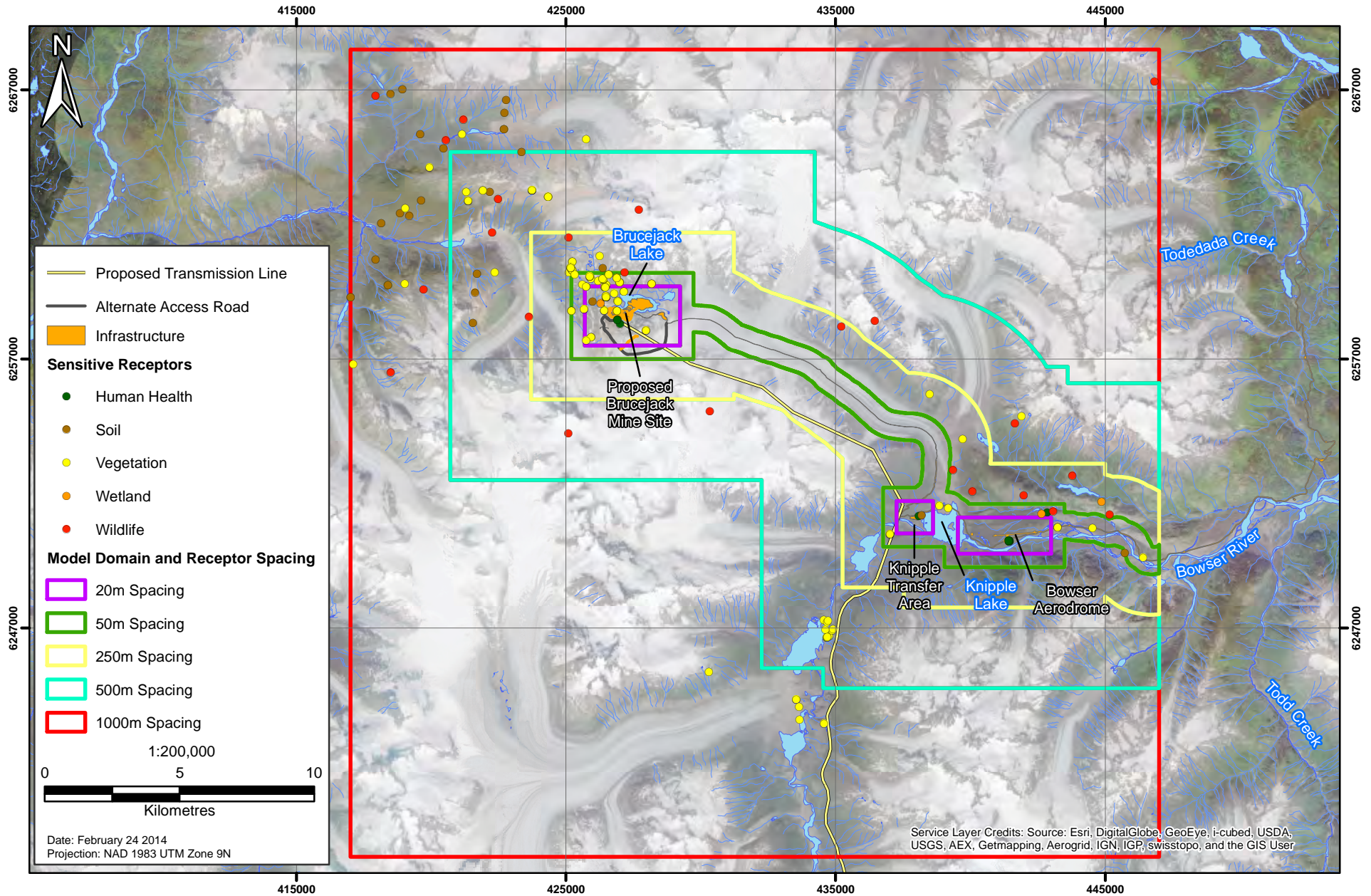
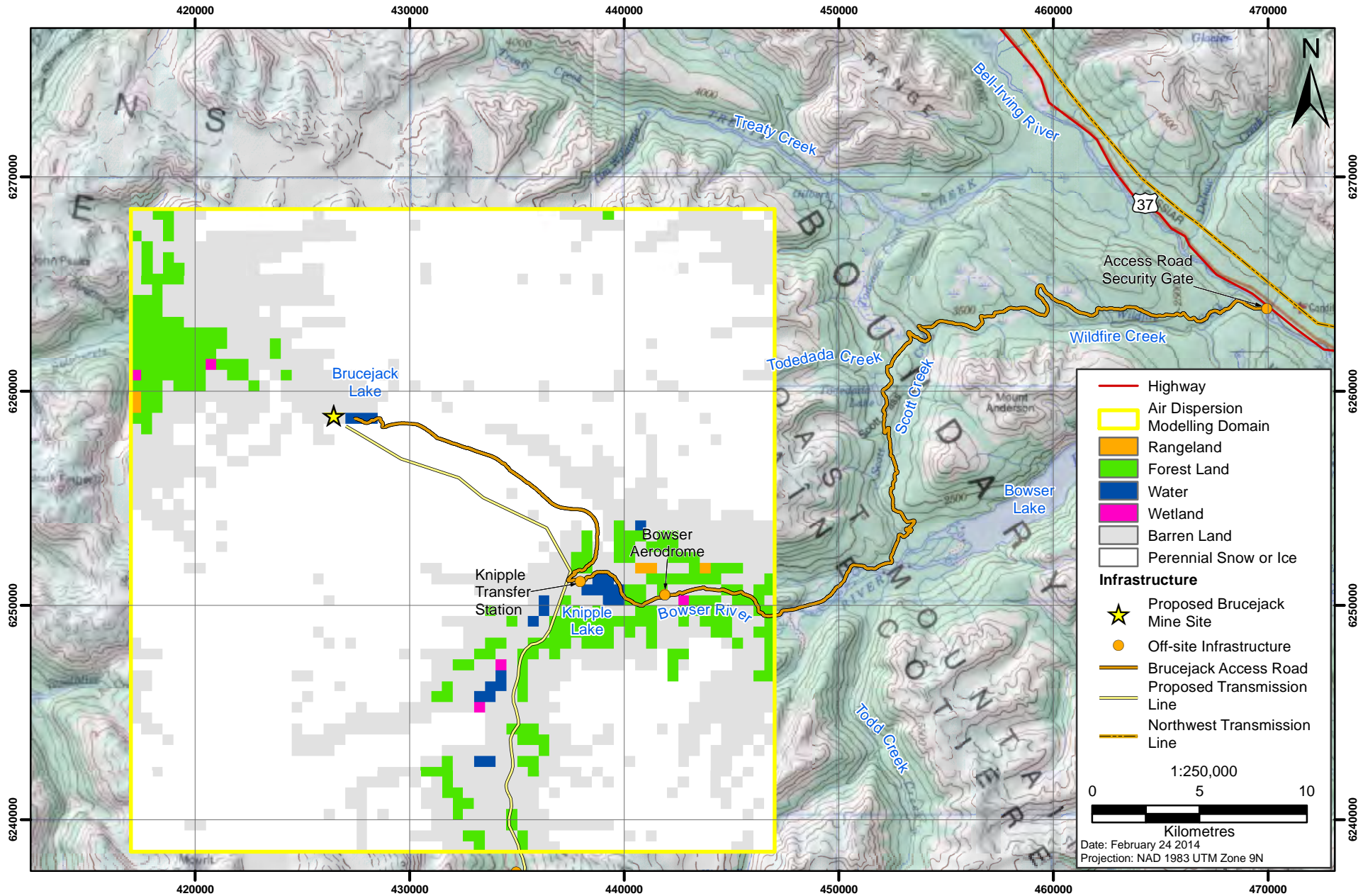


Figure 2
Baseline Thematic Mapping Land Use for Air Dispersion Modelling Domain



Terrain elevation:

Terrain information extracted from CDED DEM for the BC area from GeoBase and “Fixed” SRTM DEM data from USGS for the Alaska area. The CDED DEM used has a resolution of 0.75 arc second. The SRTM DEM used is 1 arc second (~30 m in this area).

Existing air quality situation (pristine, industrial, urban):

The Project is in a remote area and with few anthropogenic sources. A memorandum on the Brucejack Gold Mine Project ambient air quality background concentration proposed for this assessment is presented in Appendix B.

Potential meteorological data sources (site specific or offsite measured surface/upper-air, mesoscale model data):

A larger meteorological domain (100 x 100 km) will be prepared to incorporate Scott Creek and Wildfire Creek stations in the meteorological model (CALMET). Upper air and precipitation data will be obtained from mesoscale meteorological model output (MM5) data. The MM5 domain used is 100 x 100 km, with resolution of 4 km shown in Figure 3. A CALMET resolution of 0.5 km is used.

Figure 4 shows the location of the three meteorological stations with respect to the model domain and the coordinates are presented in Table 3. Figures 5, 6 and 7 show the windrose for Brucejack Lake, Scott Creek, and Wildfire Creek stations in 2012.

Table 3. Locations of Meteorological Stations in the Brucejack Lake Project Area

Meteorological Station	Elevation (masl)	UTM Coordinates		Operating Period	
		Easting (m)	Northing (m)	Start	Finish
Brucejack Lake	1,360	425,729	6,259,022	10/14/09	Active
Scott Creek	780	451,418	6,254,104	07/29/10	Active
Wildfire Creek	720	470,397	6,256,874	08/13/11	Active
MM5	n/a	n/a	n/a	01/01/12	12/31/12

Note: UTM coordinate in NAD83 Datum

The Brucejack Lake meteorological station (Plate 1) was installed near the deposit. The Scott Creek meteorology station (Plate 2) was installed in the lower Scott Creek valley near previously proposed Project infrastructure and near an approximate mid-point along the exploration access road. The Wildfire Creek station (Plate 3) was installed near Wildfire Creek to support previously anticipated Project components.

Figure 3
MM5 Domain

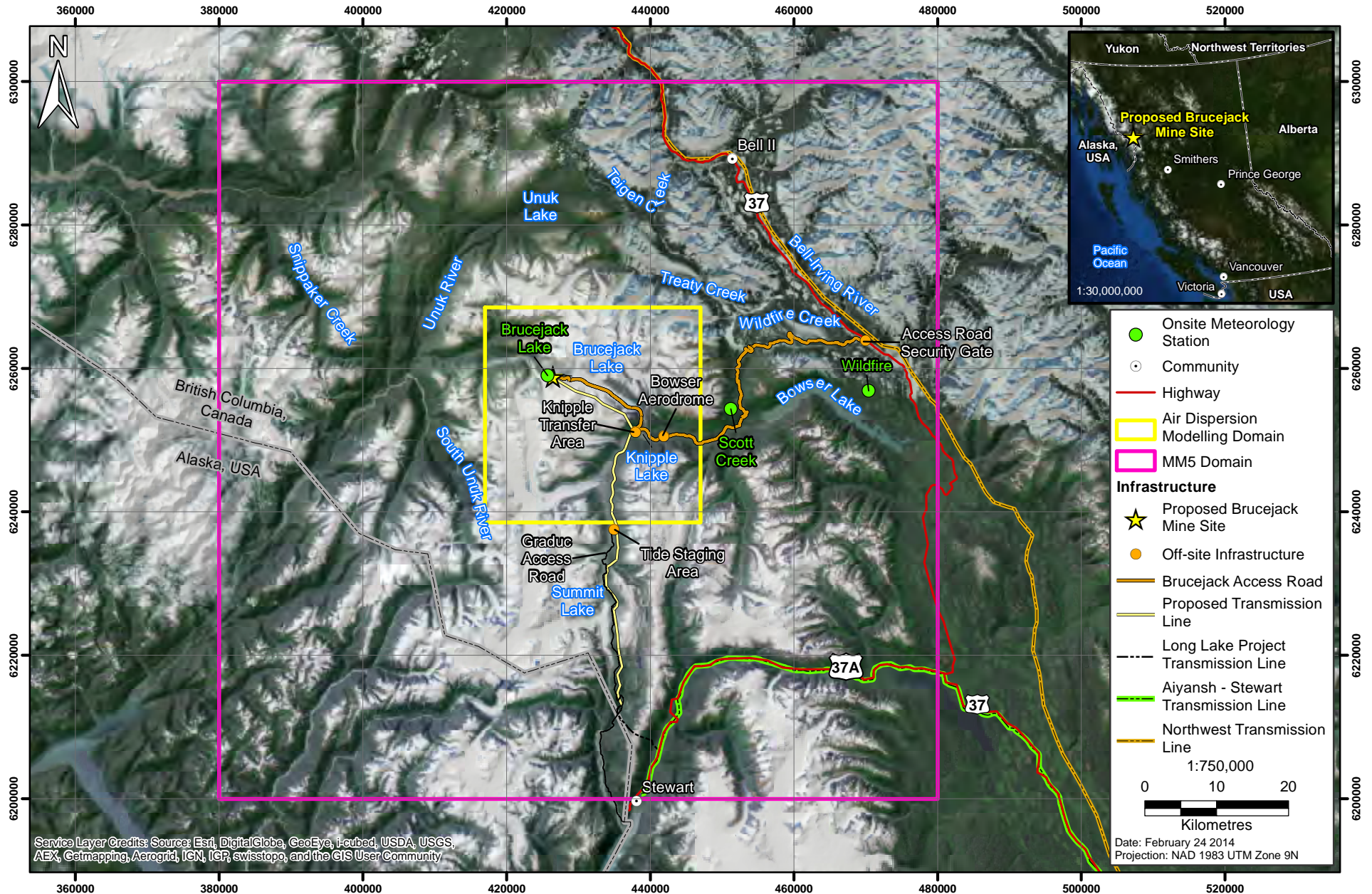


Figure 4
Brucejack Air Dispersion Modelling Domain

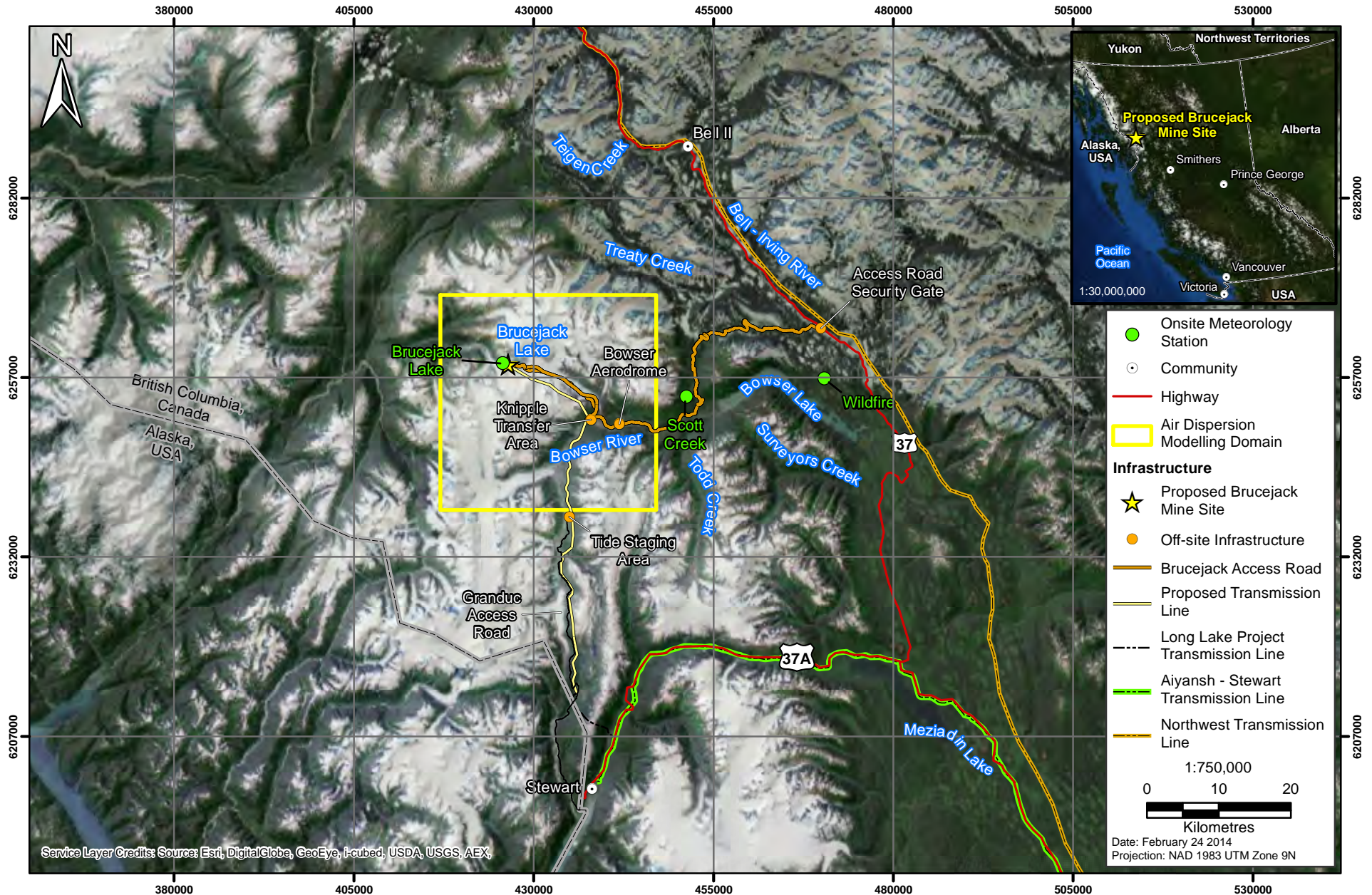
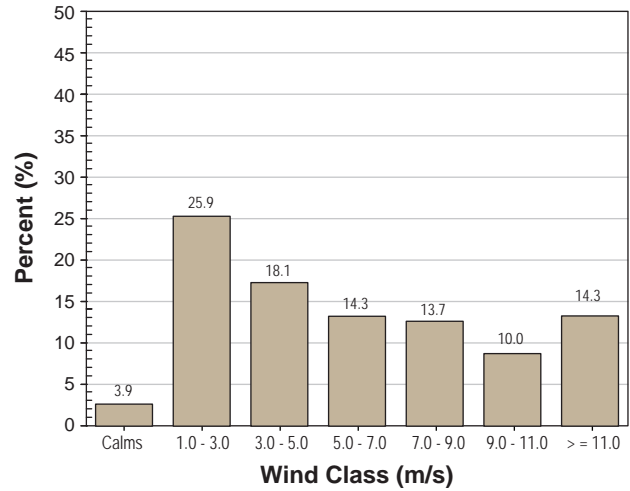
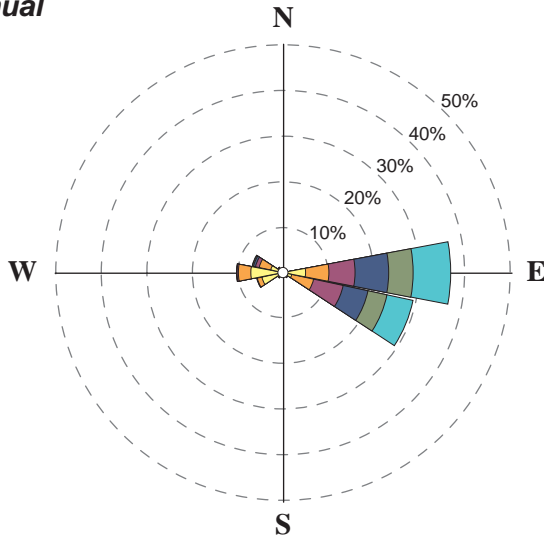


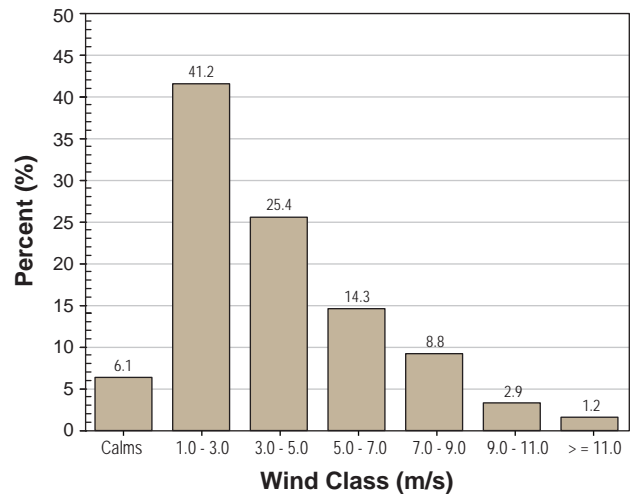
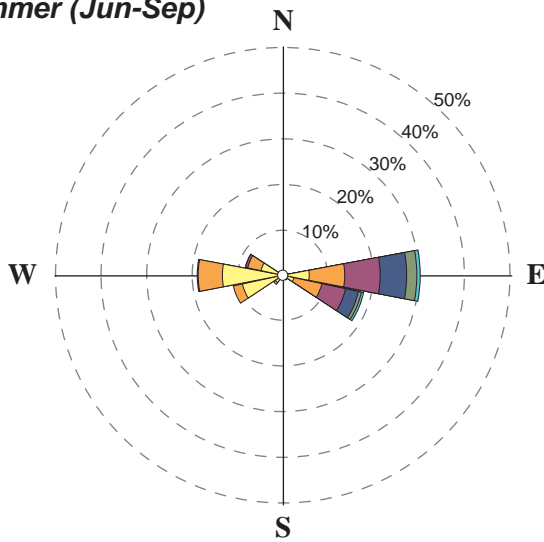
Figure 5
Brucejack Lake 2012 Annual,
Summer, and Winter Windroses



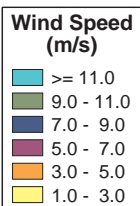
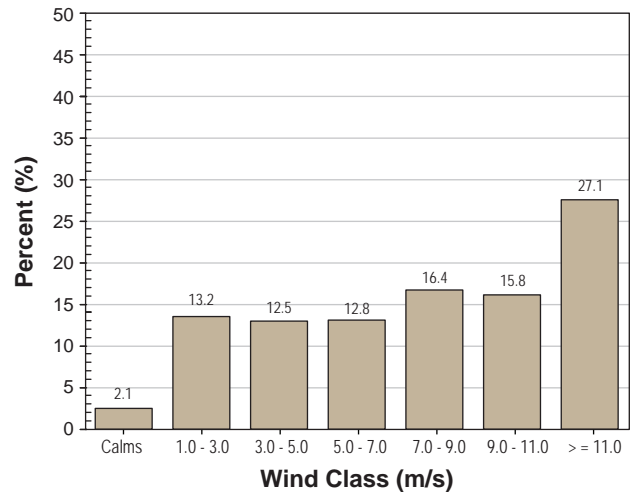
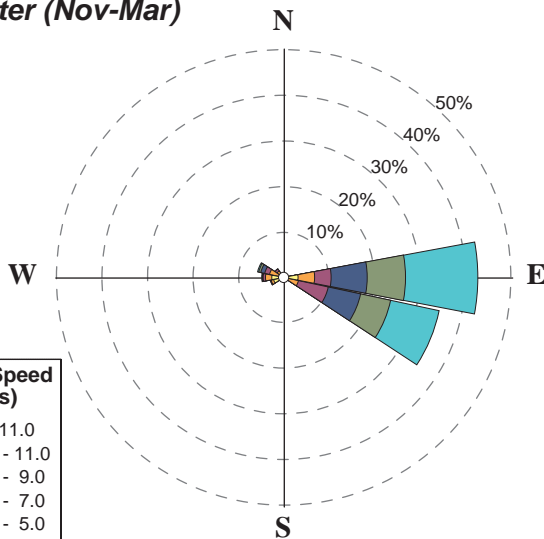
Annual



Summer (Jun-Sep)



Winter (Nov-Mar)

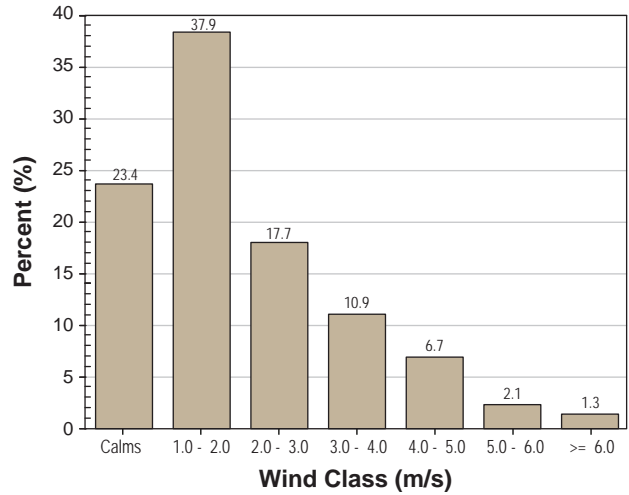
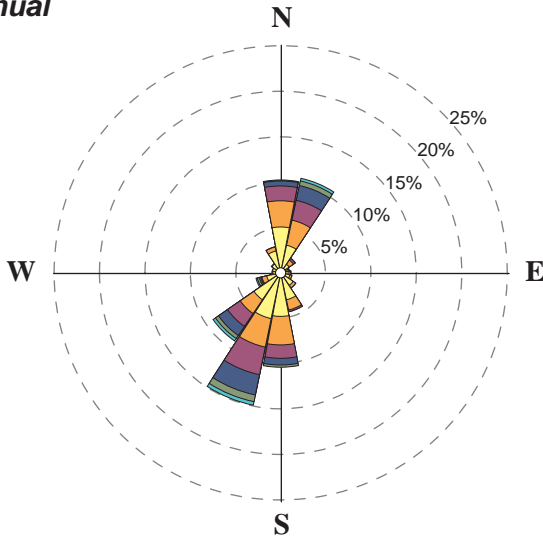


Note: Wind flow is FROM the directions shown. Calms are hourly average wind speeds less than 1 m/s.

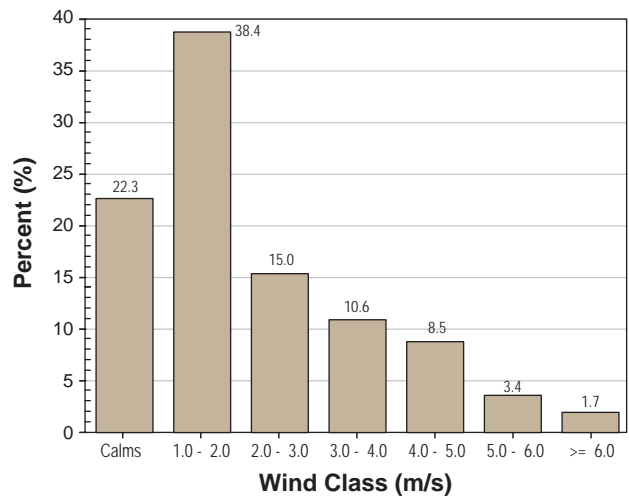
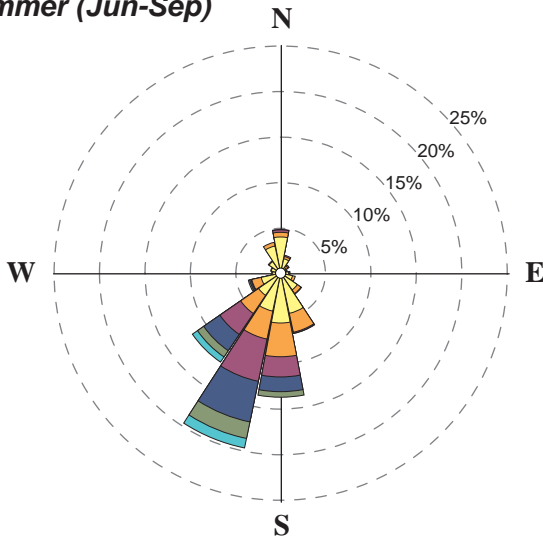
Figure 6
Scott Creek 2012 Annual,
Summer, and Winter Windroses



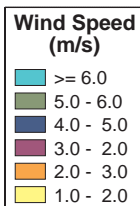
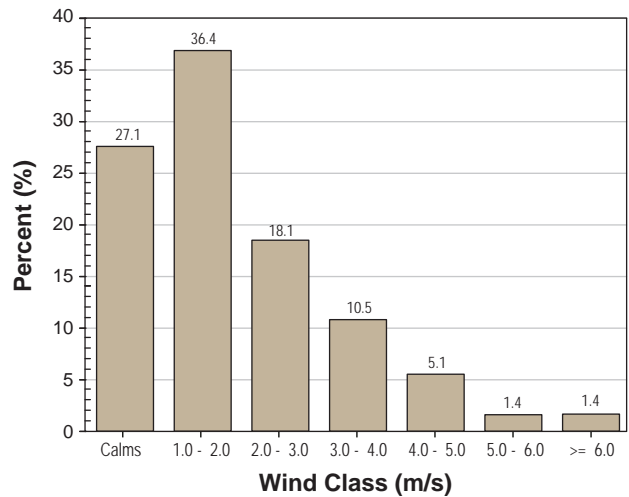
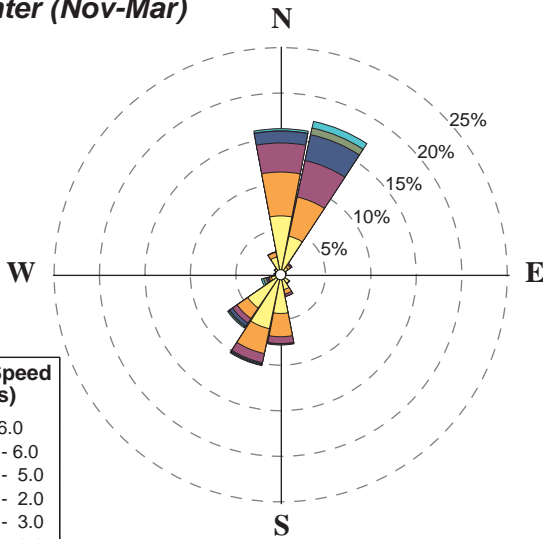
Annual



Summer (Jun-Sep)



Winter (Nov-Mar)

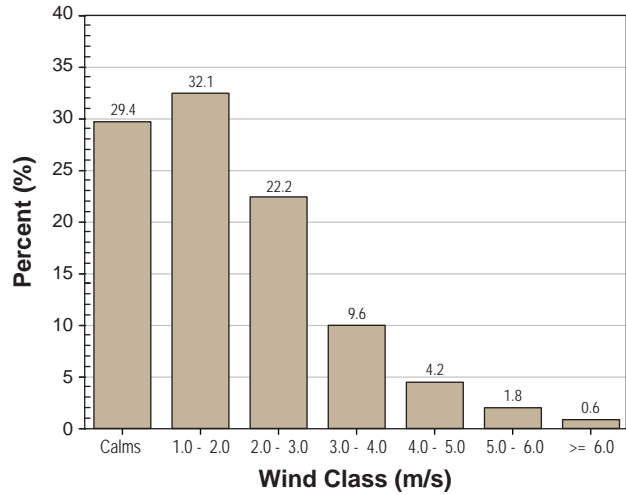
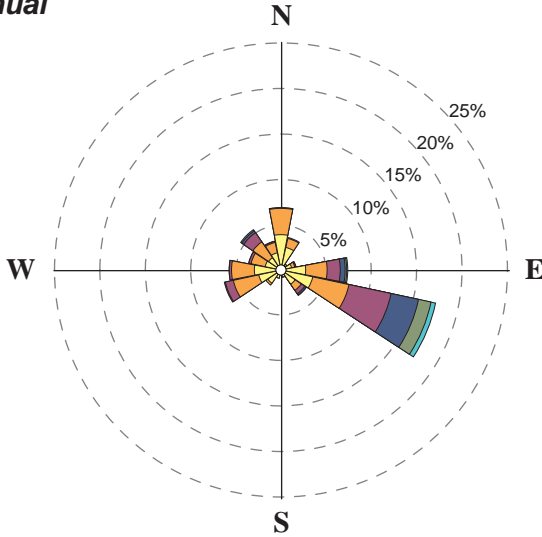


Note: Wind flow is FROM the directions shown. Calms are hourly average wind speeds less than 1 m/s.

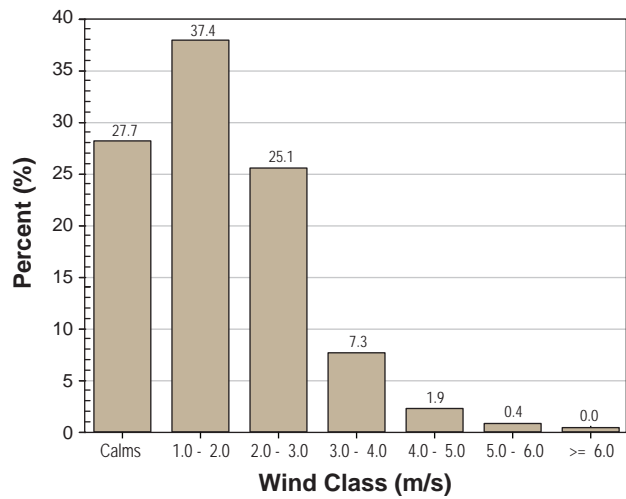
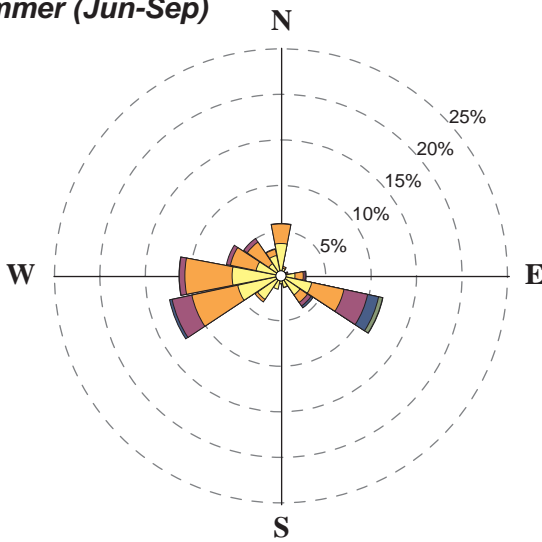
Figure 7
Wildfire Creek 2012 Annual,
Summer, and Winter Windroses



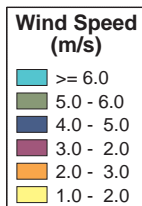
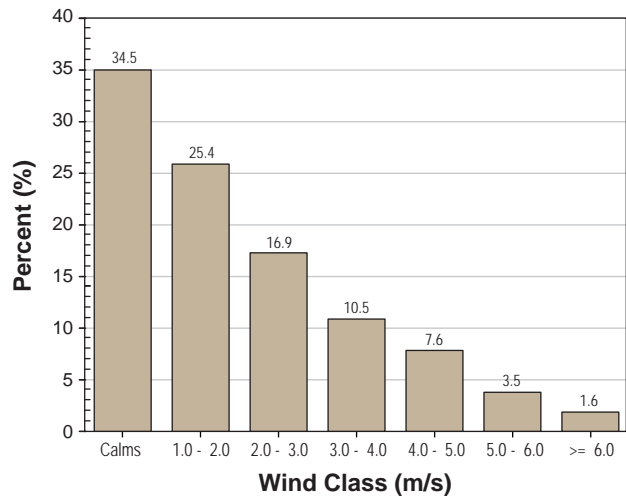
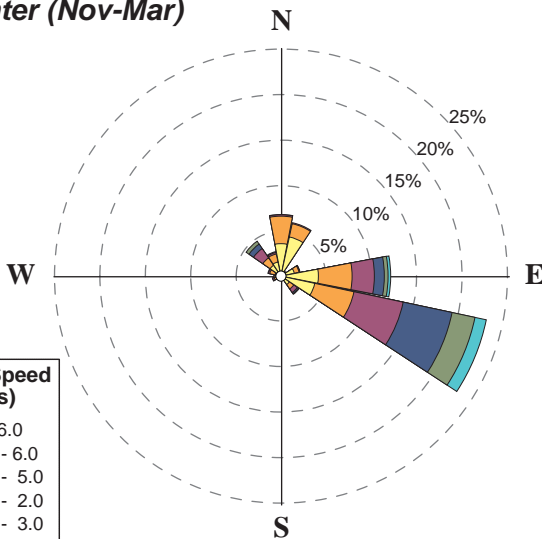
Annual



Summer (Jun-Sep)



Winter (Nov-Mar)



Note: Wind flow is FROM the directions shown. Calms are hourly average wind speeds less than 1 m/s.



Plate 1. Brucejack Lake meteorological monitoring station, October 2012.



Plate 2. Scott Creek meteorological monitoring station, March 2012.



Plate 3. Wildfire Creek meteorological monitoring station, September 2012.

Each of the meteorological stations consists of a standard 10 metre meteorological tower with instrumentation to measure the following parameters:

- wind speed and wind direction;
- air temperature;
- barometric pressure;
- relative humidity;
- snow depth;
- net radiation;
- solar radiation; and
- precipitation (as rainfall and total precipitation).

Each of the stations is powered by a 12 volt DC battery and a 20 watt solar panel. The station data is recorded to a Campbell Scientific CR1000 data logger. The data is saved on the meteorological station data logger at 5-minute intervals. At the conclusion of each day, the datalogger saves a 24-hour summary of the daily weather parameters. The data is downloaded from the datalogger every two to six months using a laptop computer in the field or by replacing the compact flash storage card attached to the datalogger with a second unit to allow downloading of the module offsite. A satellite telemetry system was installed on the Brucejack Lake station in October 2012 to allow for remote access to the data. Data from the Brucejack Lake station is downloaded and reviewed on a bi-weekly to monthly basis. Two 90 watt solar panels were added to the station to power the telemetry system and two enclosures were added which house a Hughes 9502 BGAN M2M terminal, a Moxa 5110 server, and a deep cycle battery.

To ensure that each station collects representative data, all sensors were located according to guidelines set by Environment Canada (EC 2004). These guidelines have been established to promote standardization and describe practices, procedures and specification for the proper siting of instruments, precision and accuracy of measurements, and archive formats. The primary concerns when selecting an appropriate location for the meteorological stations were to avoid obstructions such as future infrastructure, or trees that could bias the wind speeds and directions and to avoid shaded areas that could bias solar radiation data.

At each station, all sensors, except for precipitation gauges, are mounted on a 10 m high galvanized steel tower which is supported using rock anchors drilled into bedrock. Three guy wires are installed to further stabilize the tower and prevent swaying under heavy winds. The wind anemometer is situated near the top of the tower below a lightning rod. The remaining instrumentation is located lower on the tower with the solar panels and datalogger enclosure approximately 3.5 m off the ground.

The GEONOR all-weather precipitation gauges are mounted on 2.5 m high, rock-anchored pedestals approximately 10 m from the base of each main tower. At each station, a tipping bucket rain gauge (TBRG) is also installed approximately 5 m from the base of the main tower. Both types of precipitation gauges are surrounded by a 1.2 m

diameter alter wind screen, which are designed to reduce the effect of wind-undercatch on precipitation measurements.

TBRGs record reliable rainfall data during the summer months but do not record reliable data during months when temperatures are below 0°C due to their inability to convert snow to snow-water-equivalent (SWE) accurately. Data collected using the TBRGs are used primarily for data quality assurance purposes.

All of the collected data were reviewed through a quality assurance and control procedure after being collected. Outliers and anomalous data recorded by sensors are flagged and, if determined to be caused by sensor malfunction, are removed to ensure that only real events are reported. For example, if wind direction records indicate the exact same direction for hours or days, the event would be flagged and analyzed to determine whether or not the wind vane was frozen due to snow or ice build-up.

For this dispersion model, meteorological data from 2012 will be used. Hourly wind speed and wind direction are presented in Appendix C.

Data from CALMET were extracted and presented. Figure 8 shows the Pasquill-Gifford stability class extracted from CALMET at the Brucejack mine area while Figure 9 presents the diurnal mixing height at the Brucejack mine area in 2012. Figures 10 and 11 show the diurnal wind speed and temperature analysis for the summer months (Jun - Sep) and winter months (Nov - Mar).

Wind vectors across the entire model domain at different levels/heights (surface, 200 m, and 1000 m) for a sequential 3-hour period in the light wind winter period are presented in Figures 12 to 20 while in the hot and calm summer period are presented in Figures 21 to 29.

Identify possible model(s) to be applied:

CALMET driven CALPUFF

The US EPA approved CALPUFF version 5.8 suite will be used:

- CALMET – version 5.8 (070623)
- CALPUFF – version 5.8 (070623)
- CALSUM – version 1.33 (051122)
- CALPOST – version 6.221 (080723)
- POSTUTIL – version 1.56 (070627)

Chemical transformation used in this assessment will be MESOPUFF II.

Identify any potential modelling requirements due to Canada/U.S. transboundary issues:

None.

Figure 8

Pasquill-Gifford Stability Class in 2012

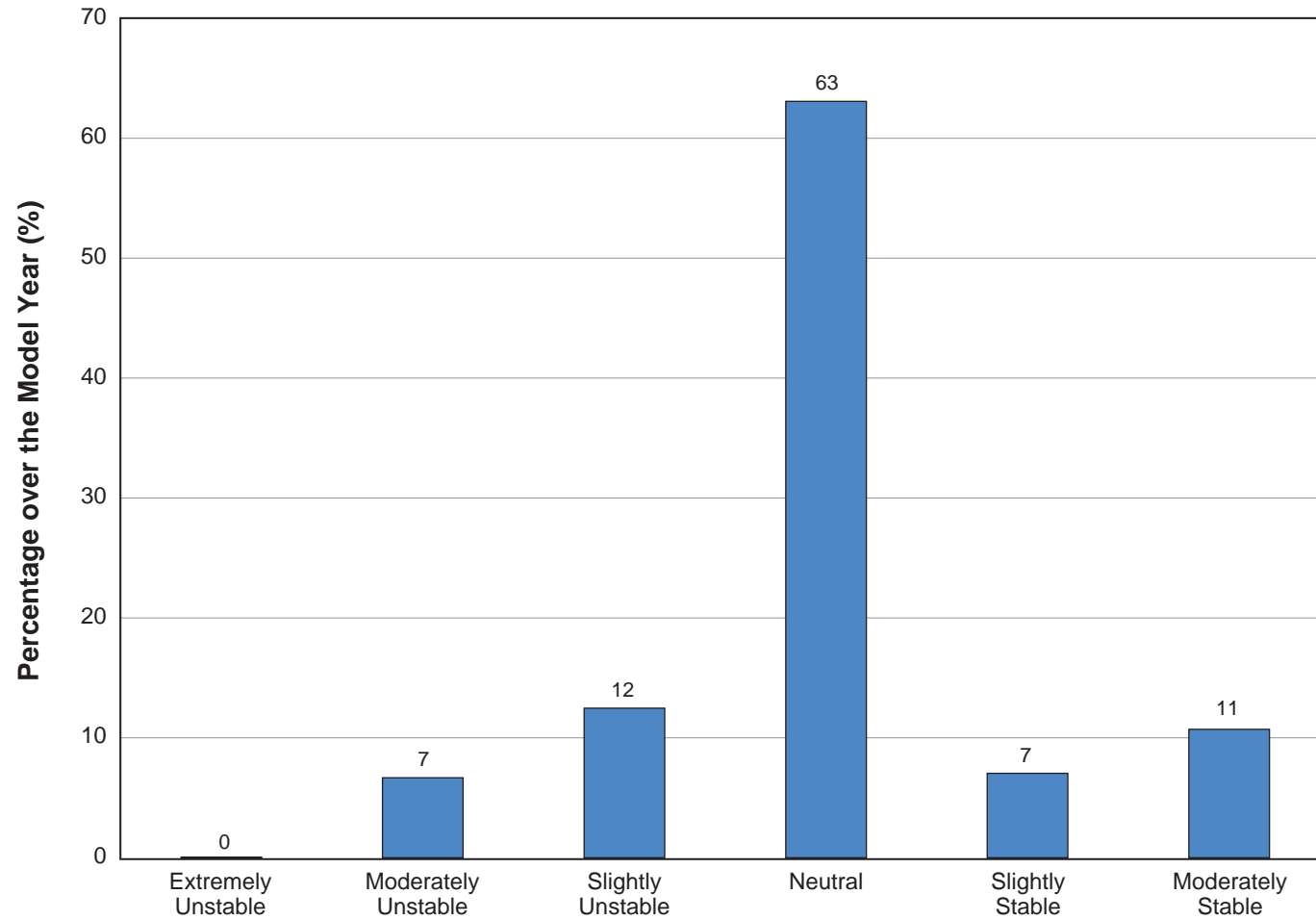


Figure 9

Diurnal Mixing Height in 2012

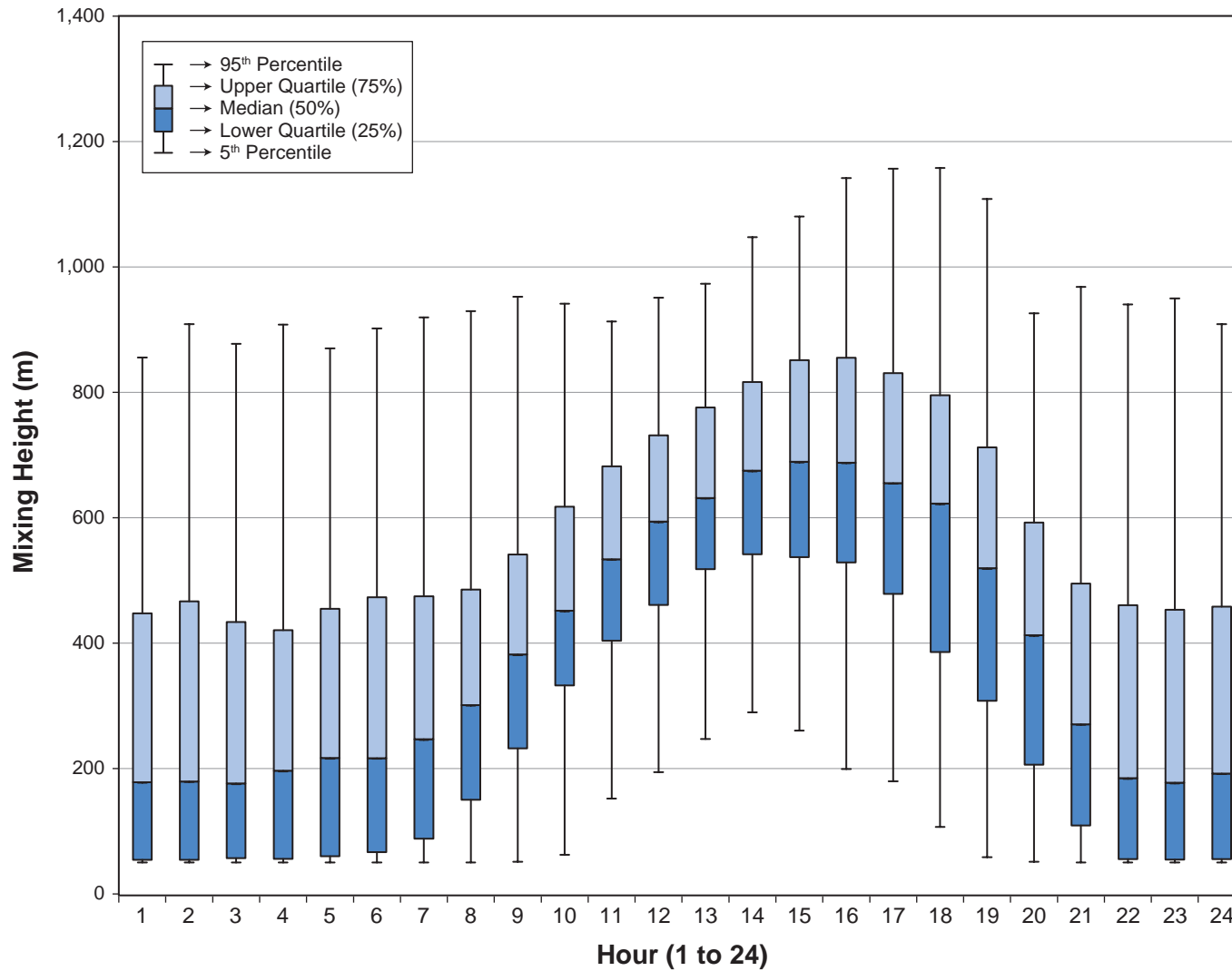


Figure 10

Diurnal Wind Speed in 2012

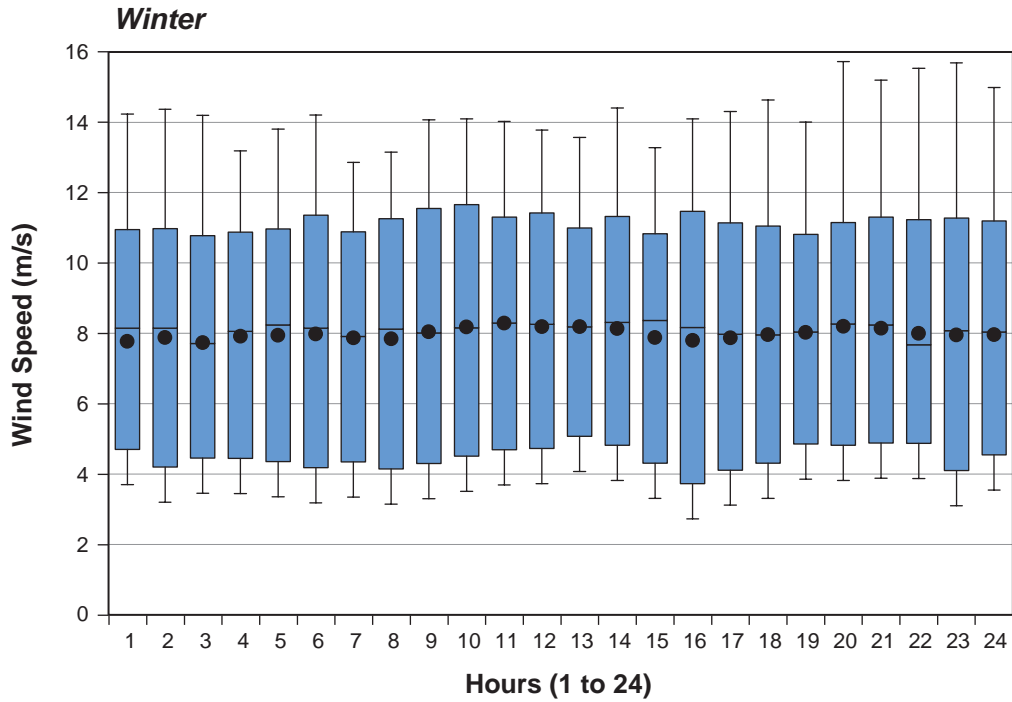
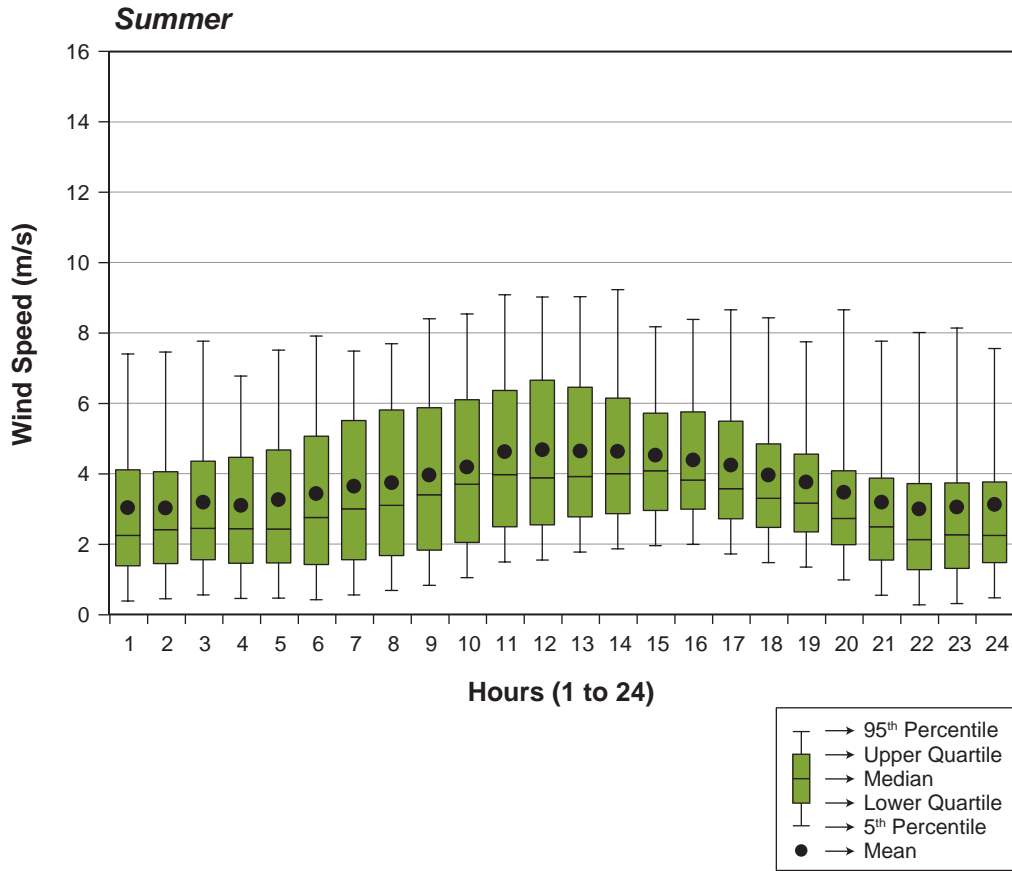


Figure 11

Diurnal Temperature in 2012

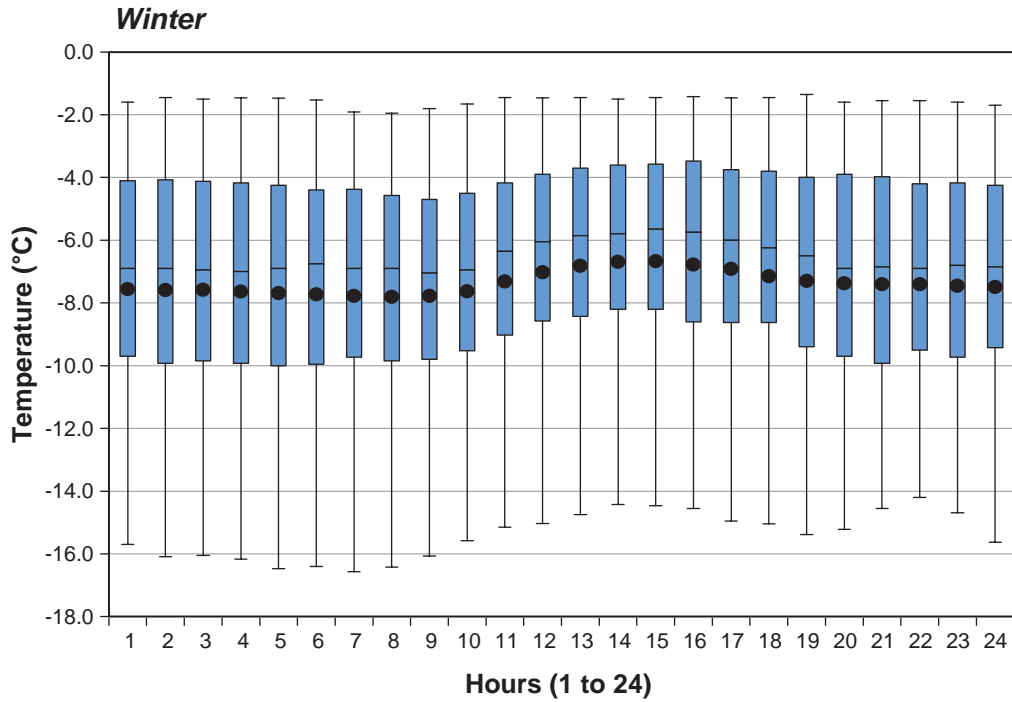
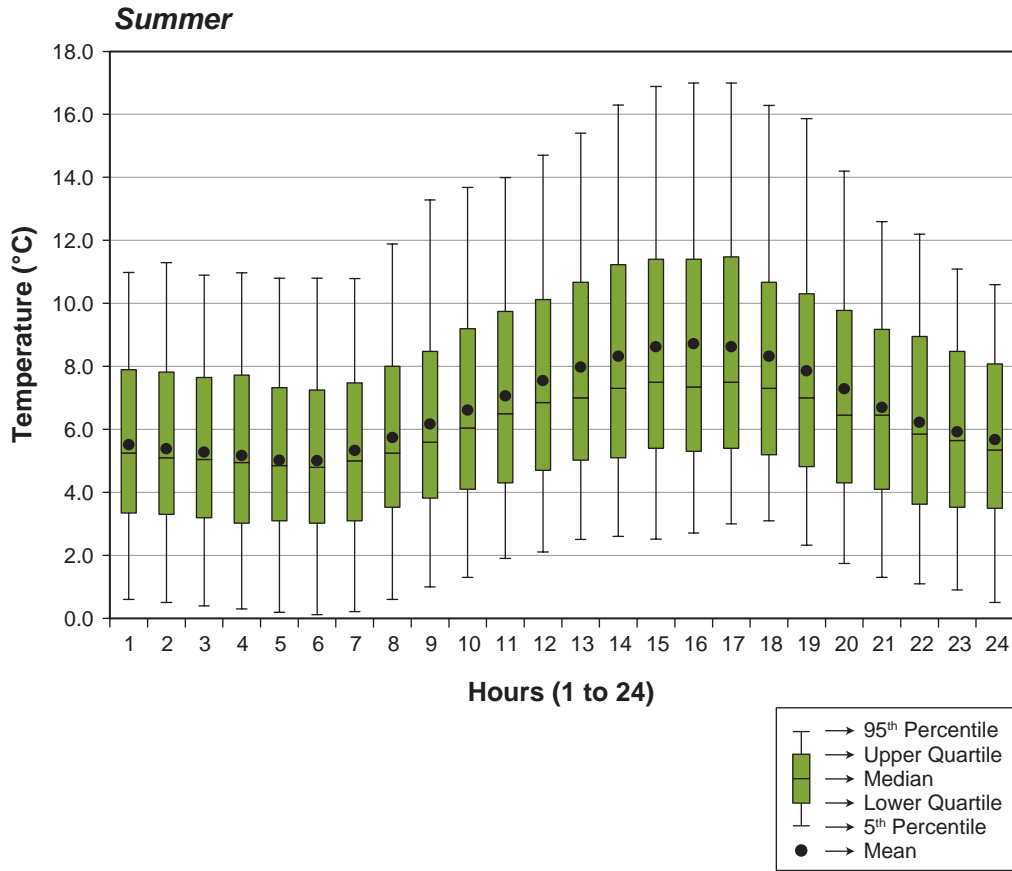


Figure 12
 Brucejack Gold Mine Project: 10 m (Layer 1) Wind Speed and Direction, January 01, 2013 - Hour 1

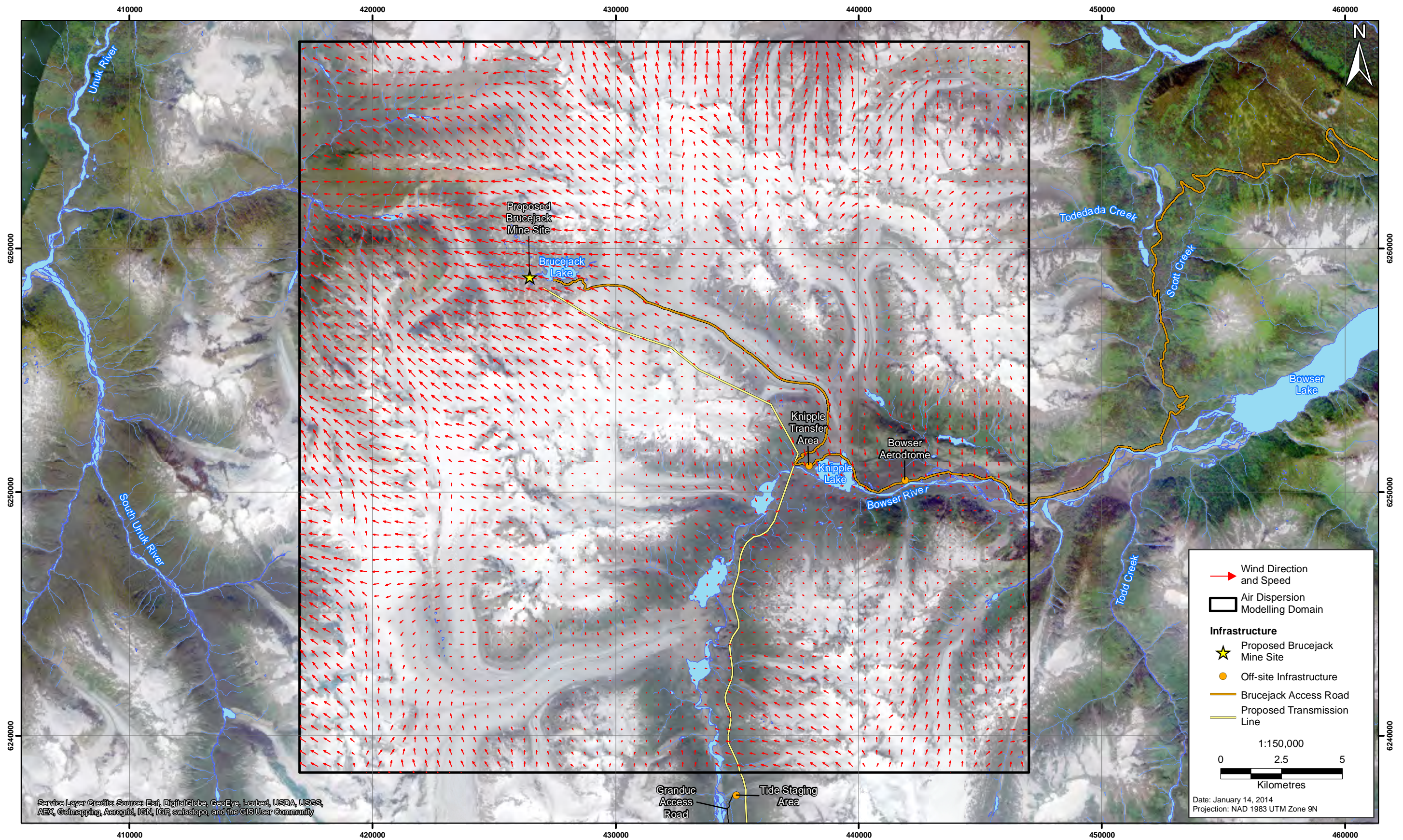


Figure 13
 Brucejack Gold Mine Project: 10 m (Layer 1) Wind Speed and Direction, January 01, 2013 - Hour 2

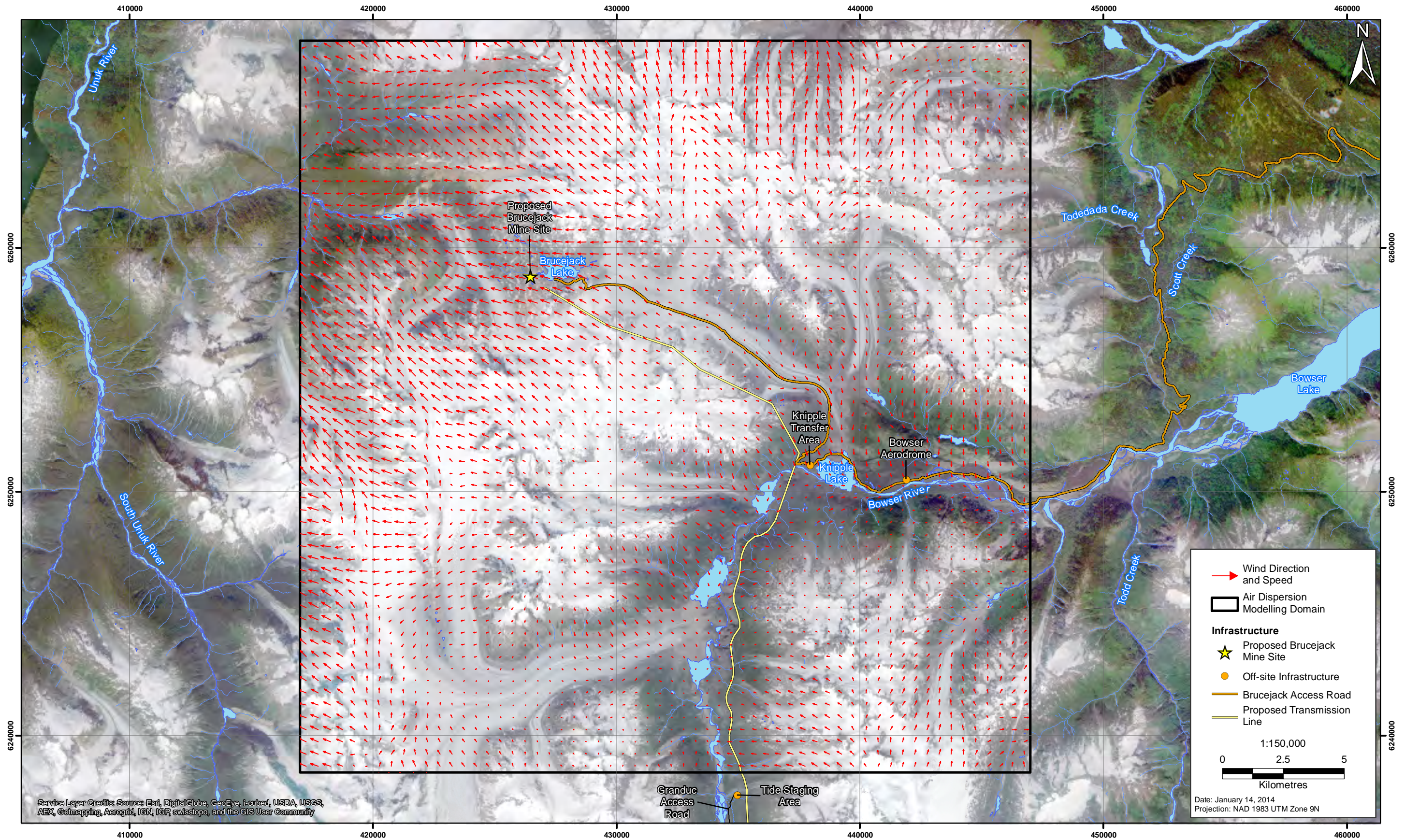
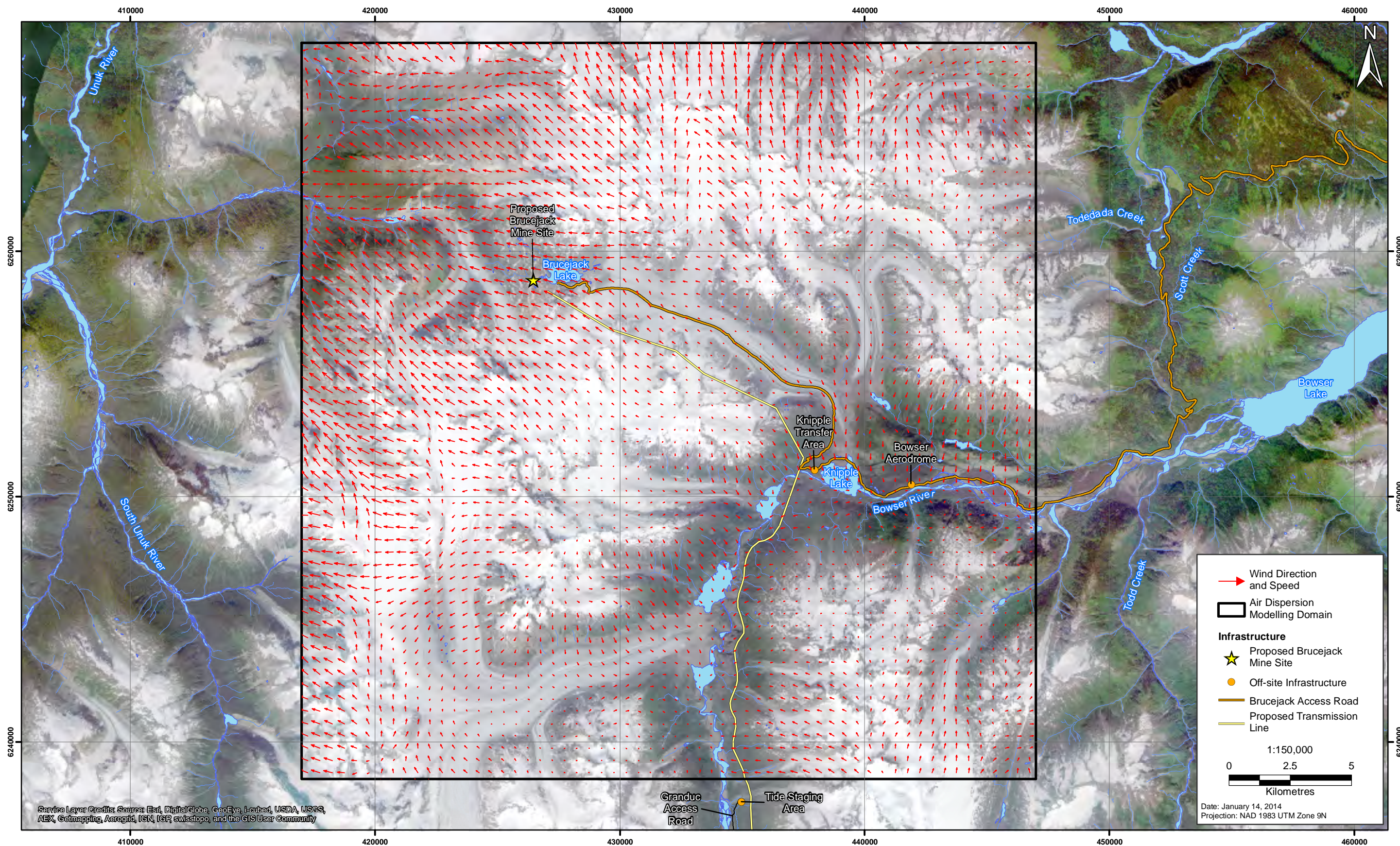
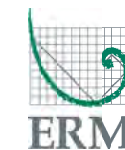
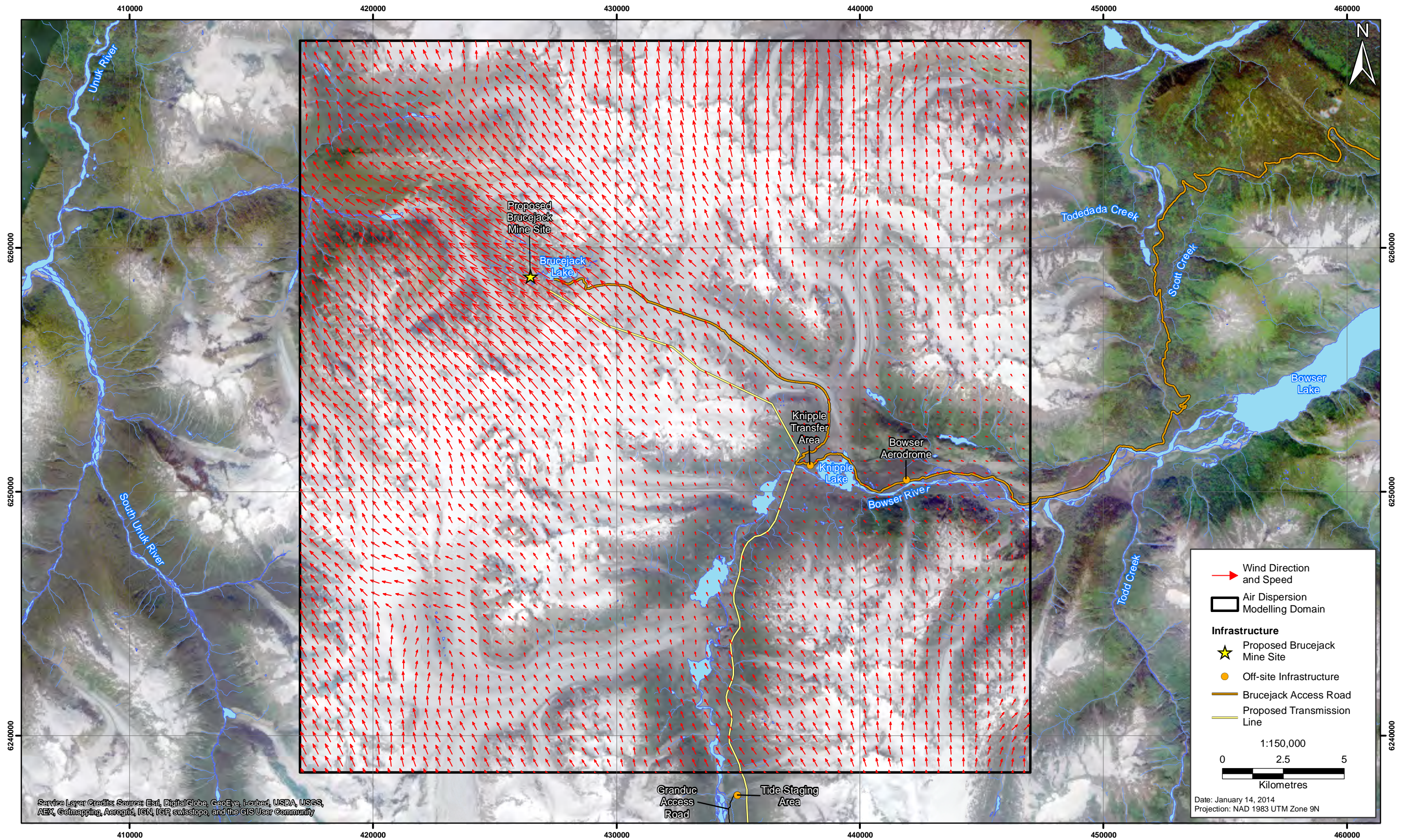


Figure 14
 Brucejack Gold Mine Project: 10 m (Layer 1) Wind Speed and Direction, January 01, 2013 - Hour 3



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Geomapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 15
 Brucejack Gold Mine Project: 300 m (Layer 5) Wind Speed and Direction, January 01, 2013 - Hour 1



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Geomapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 16
 Brucejack Gold Mine Project: 300 m (Layer 5) Wind Speed and Direction, January 01, 2013 - Hour 2

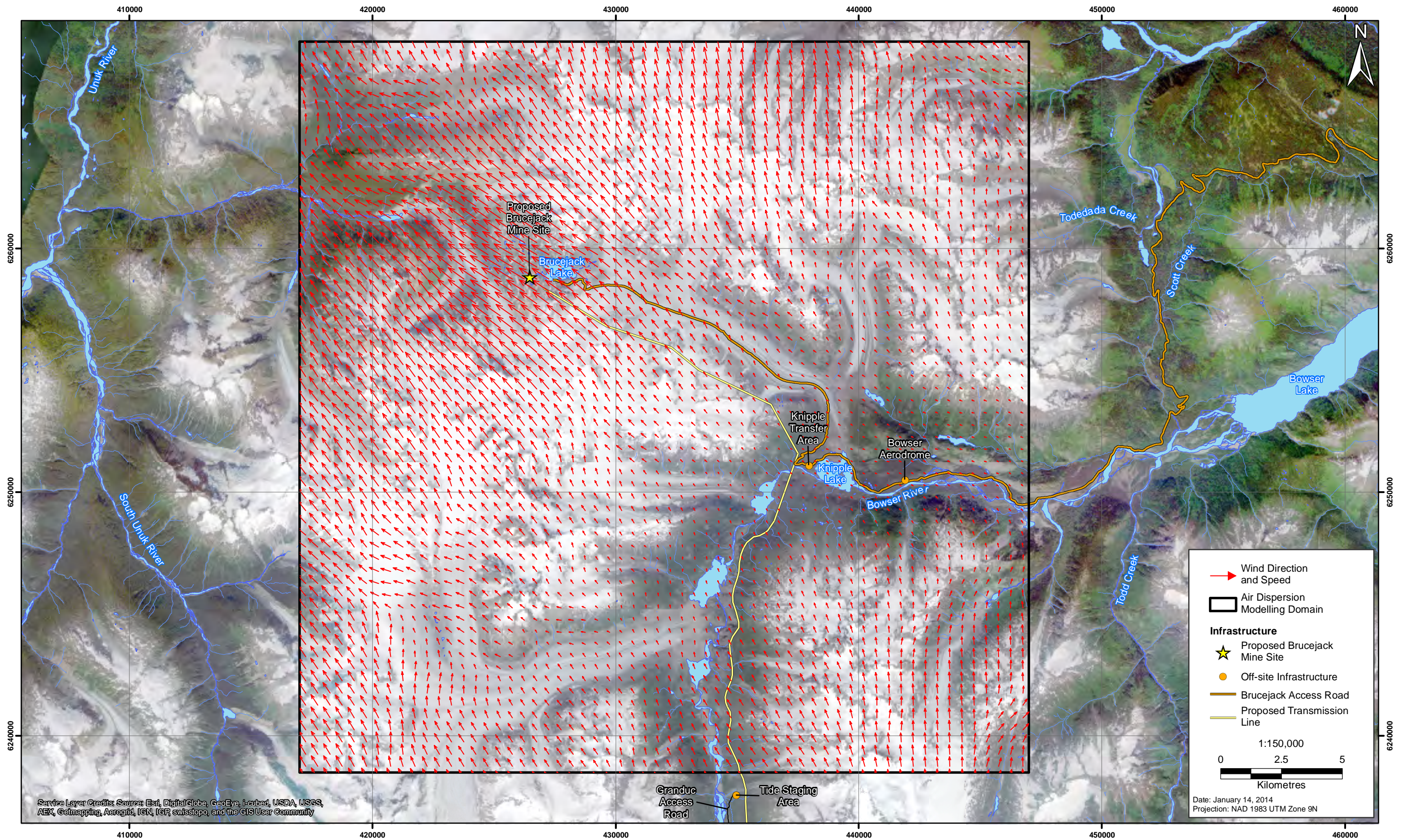
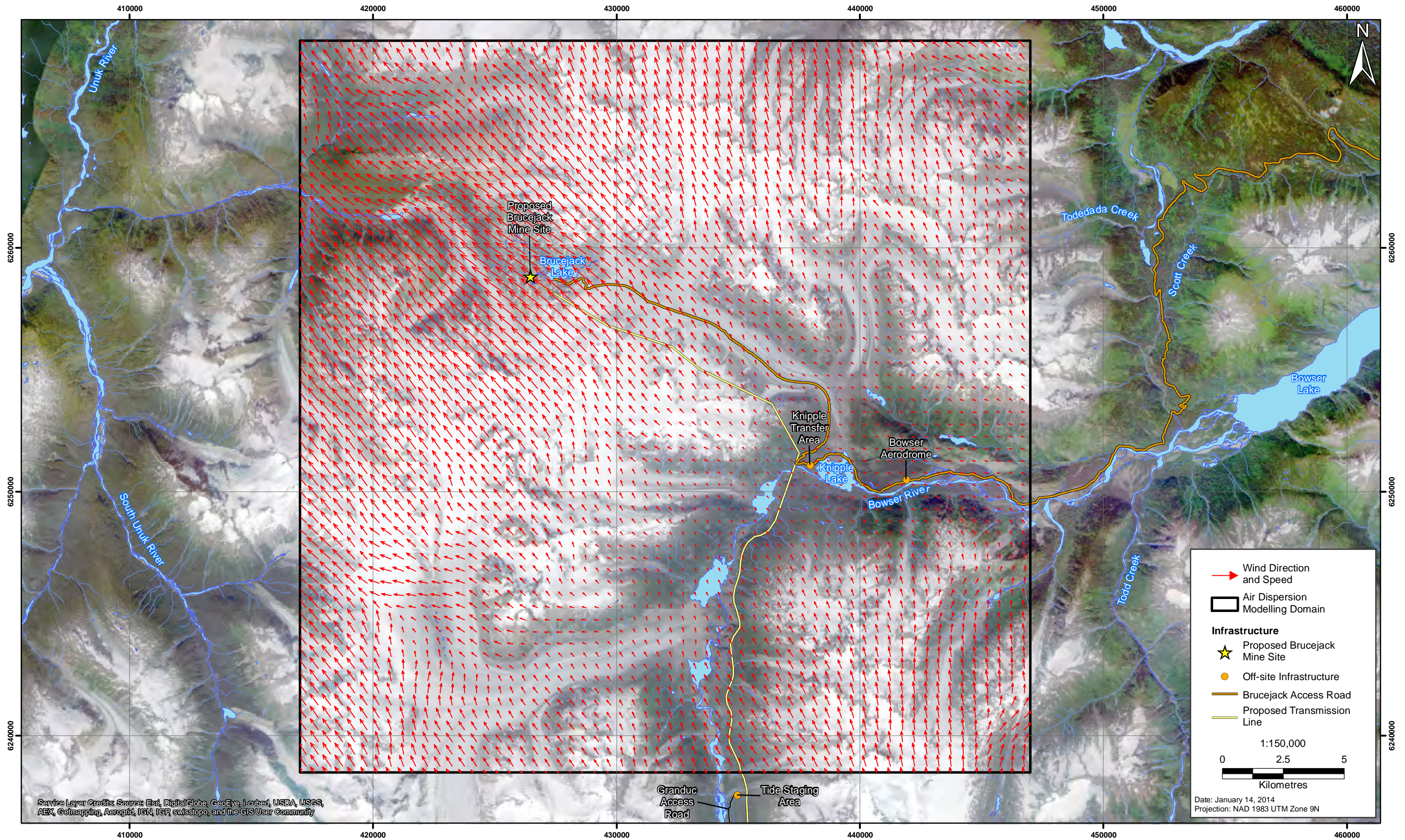


Figure 17
 Brucejack Gold Mine Project: 300 m (Layer 5) Wind Speed and Direction, January 01, 2013 - Hour 3



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 18
 Brucejack Gold Mine Project: 1000 m (Layer 7) Wind Speed and Direction, January 01, 2013 - Hour 1

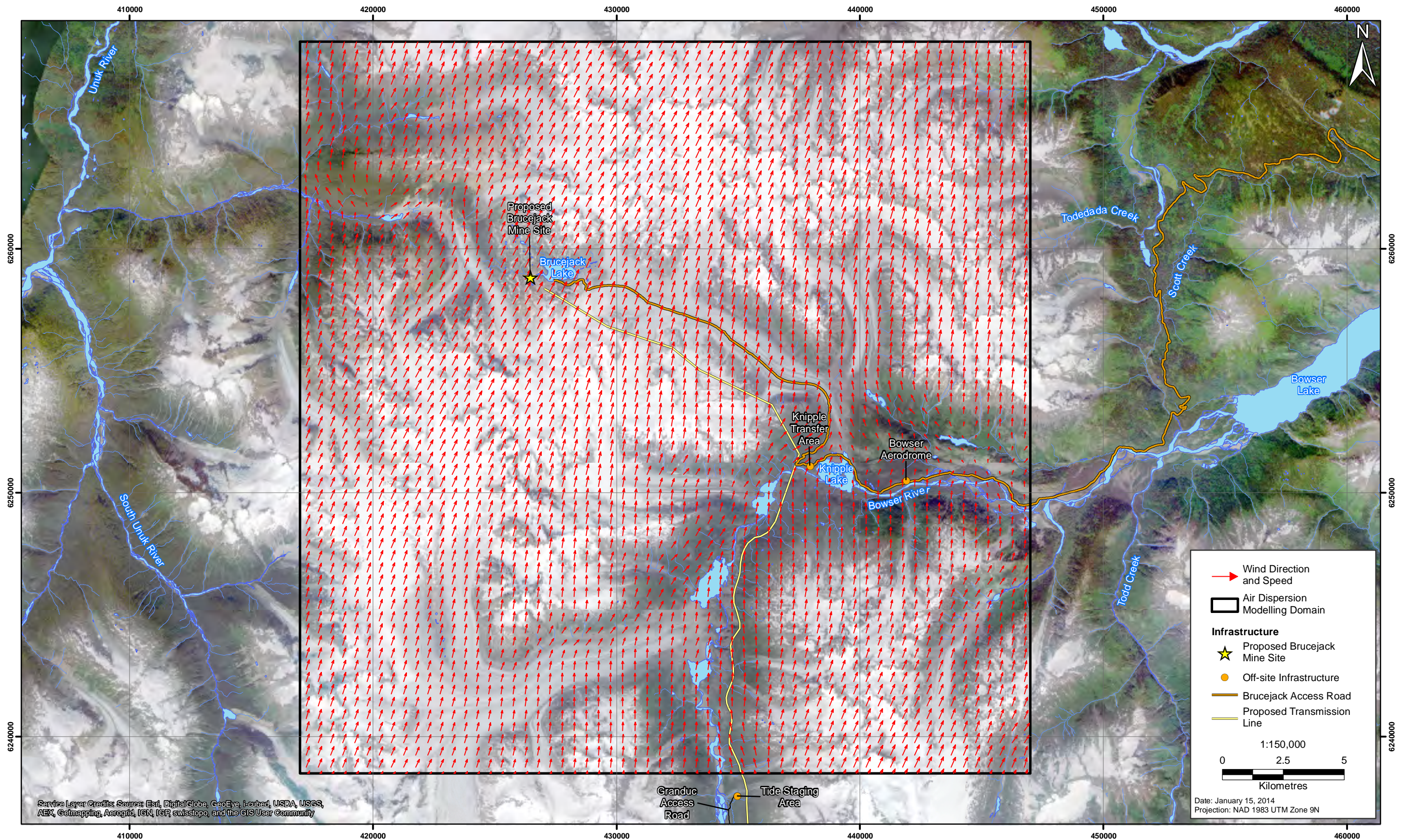
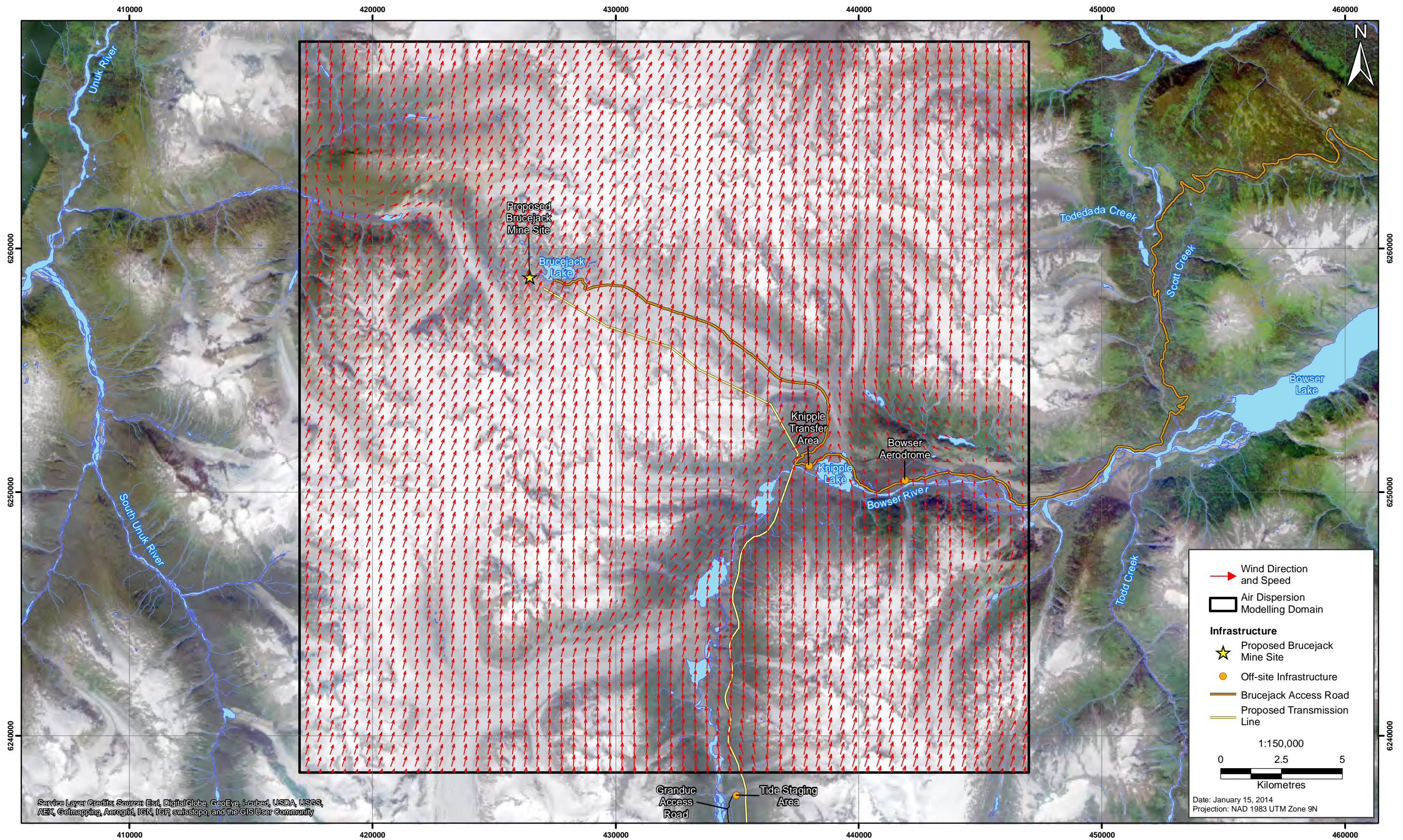
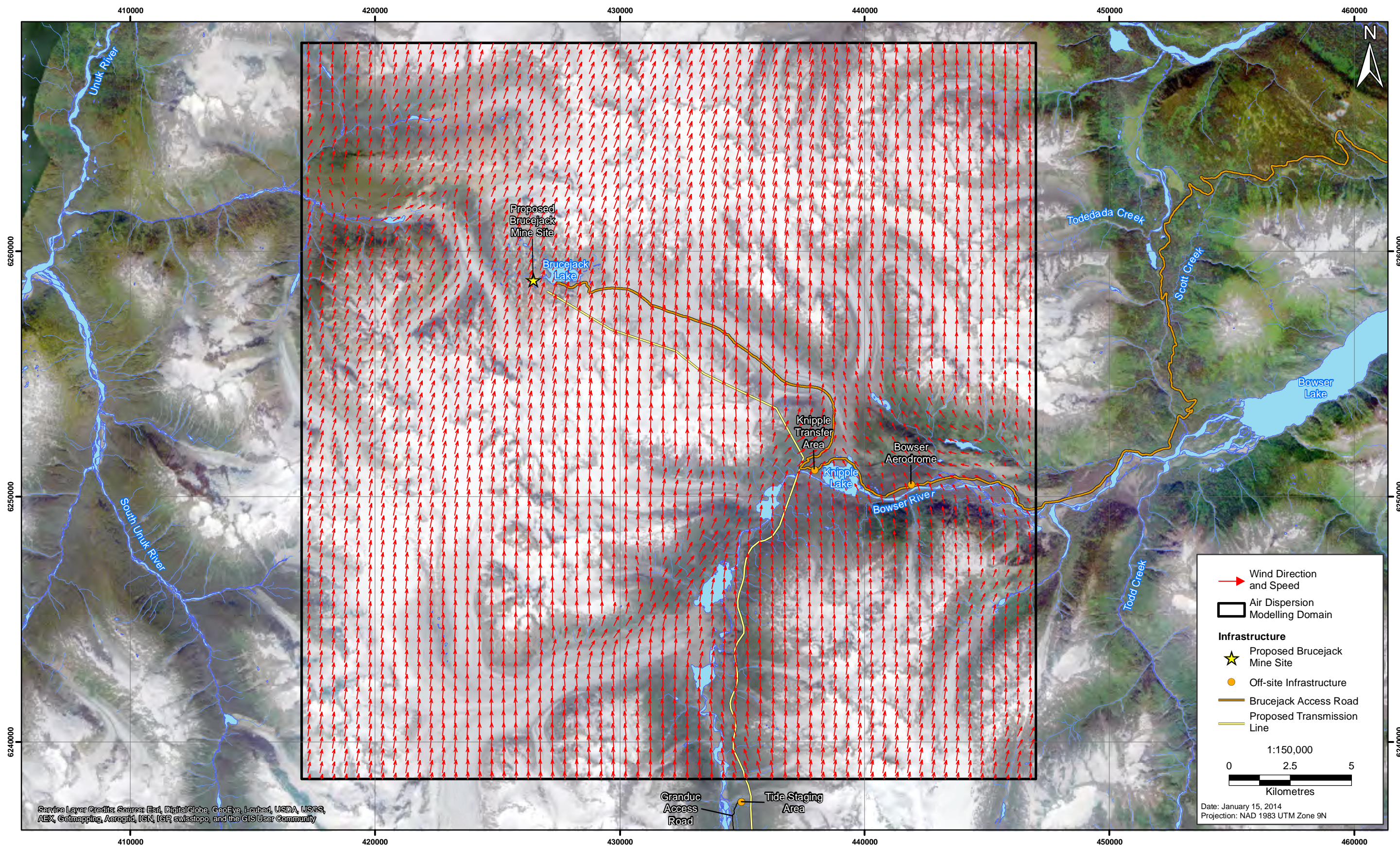
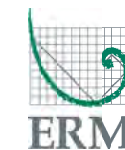


Figure 19
 Brucejack Gold Mine Project: 1000 m (Layer 7) Wind Speed and Direction, January 01, 2013 - Hour 2



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Geomapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 20
 Brucejack Gold Mine Project: 1000 m (Layer 7) Wind Speed and Direction, January 01, 2013 - Hour 3



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Granduc Access Road
 Tide Staging Area

Figure 21
 Brucejack Gold Mine Project: 10 m (Layer 1) Wind Speed and Direction, July 01, 2013 - Hour 12

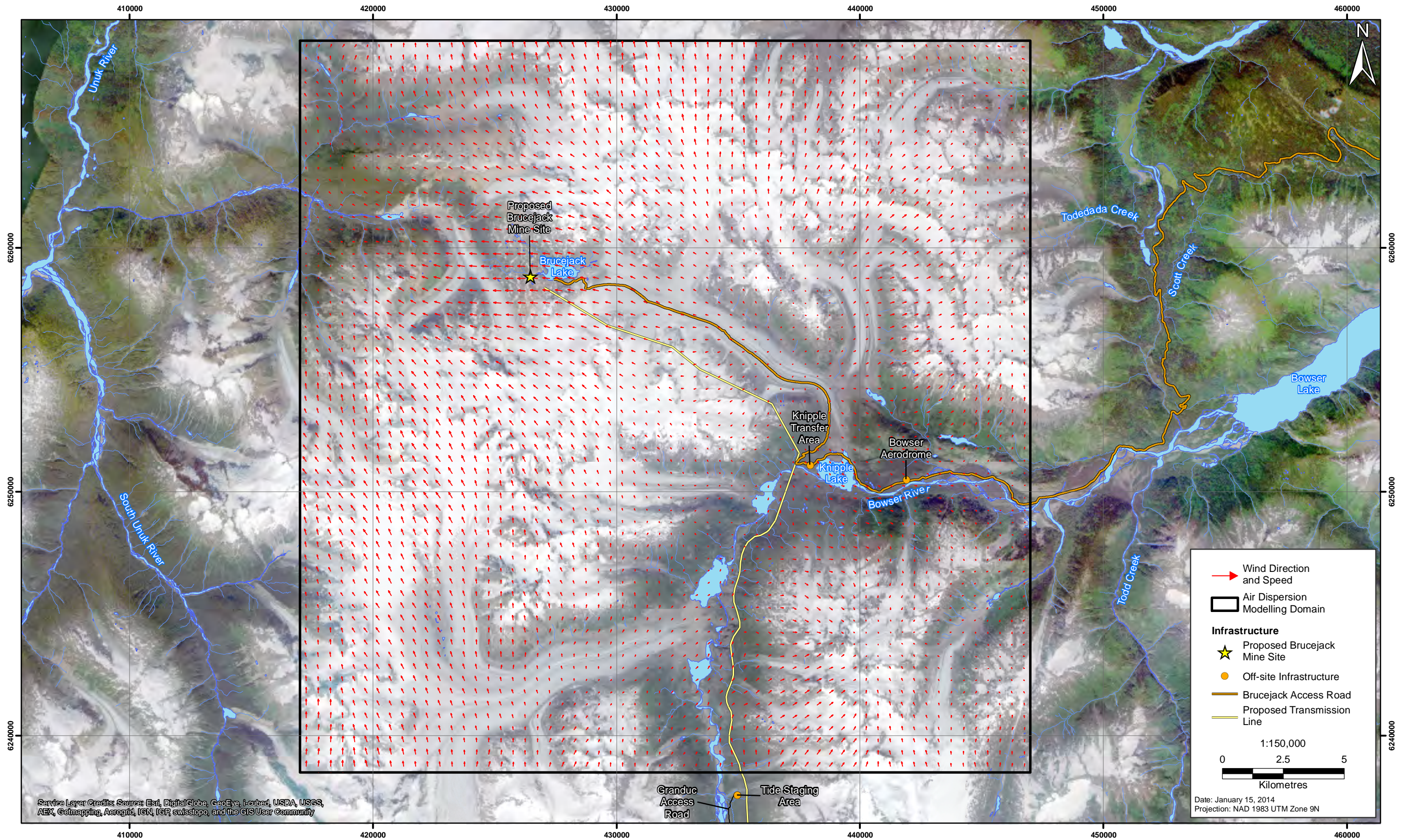


Figure 22
 Brucejack Gold Mine Project: 10 m (Layer 1) Wind Speed and Direction, July 01, 2013 - Hour 13

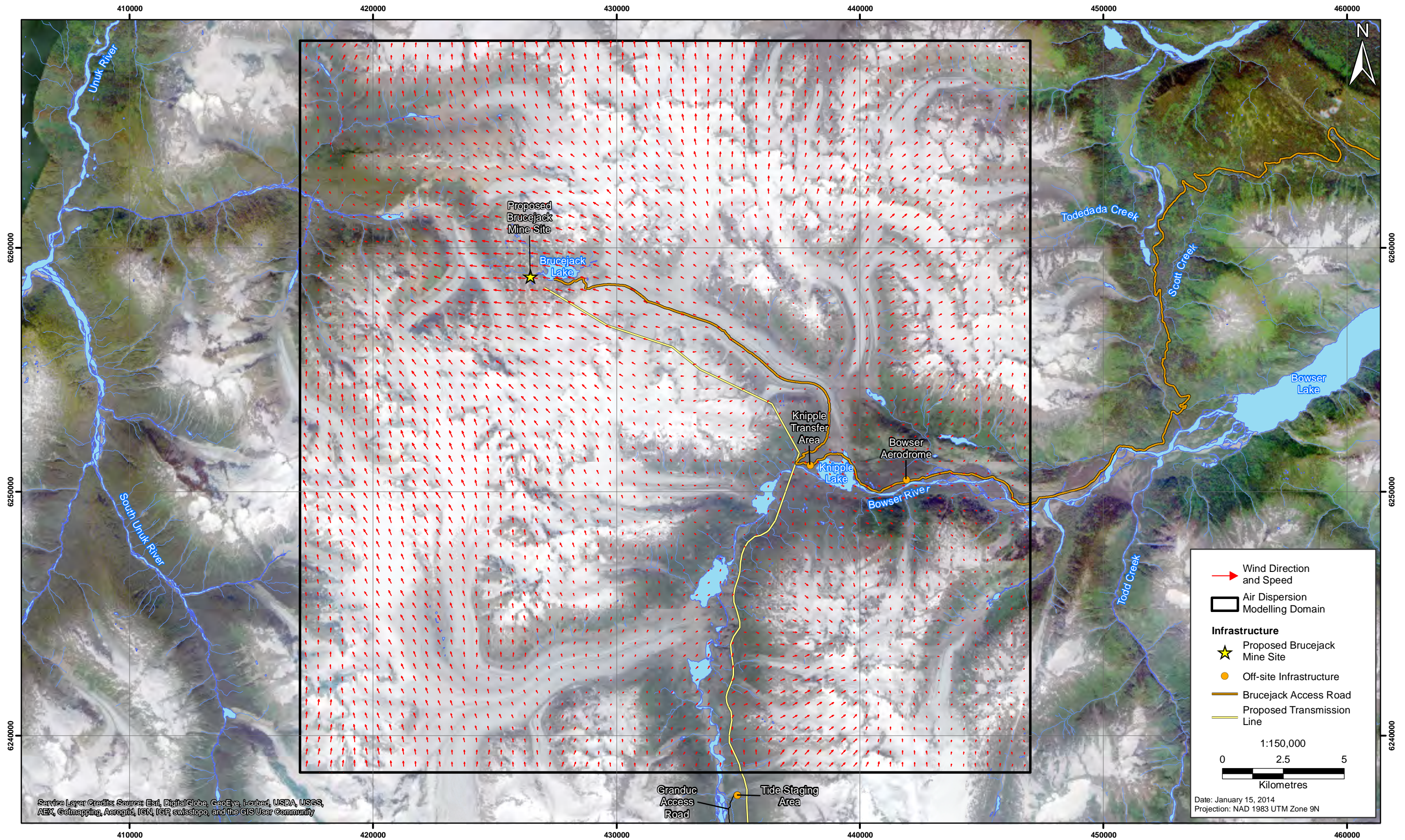
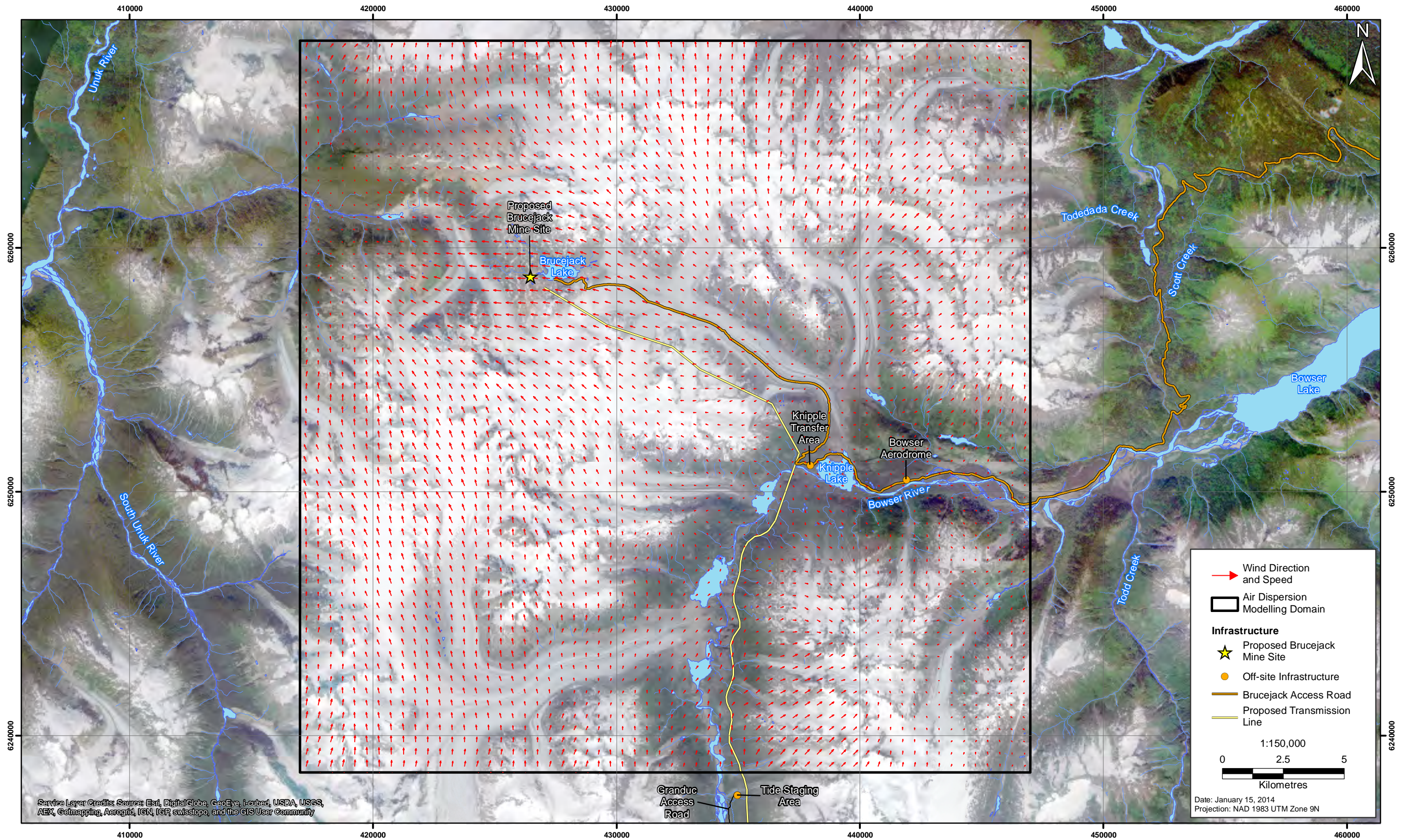
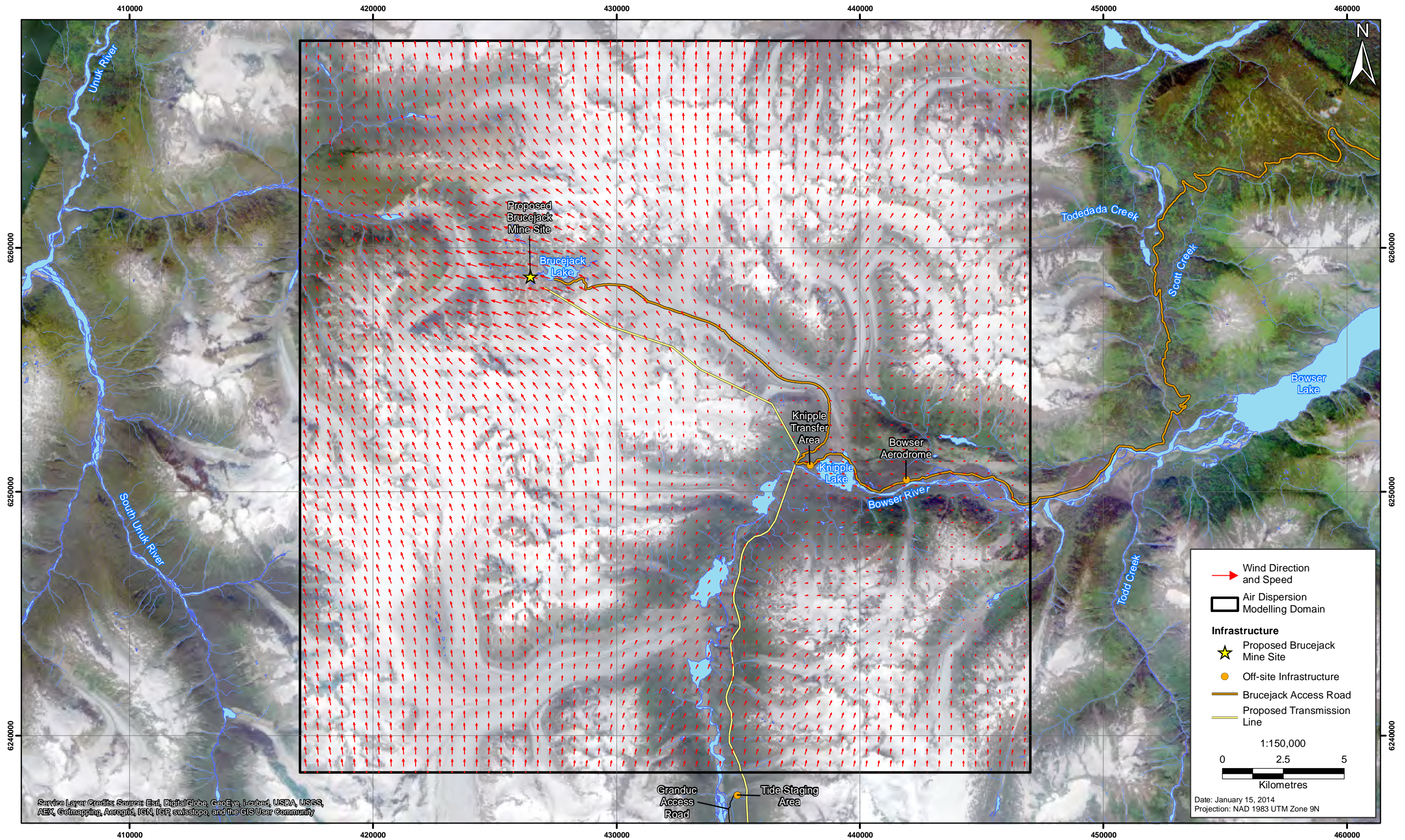


Figure 23
 Brucejack Gold Mine Project: 10 m (Layer 1) Wind Speed and Direction, July 01, 2013 - Hour 14



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 24
 Brucejack Gold Mine Project: 300 m (Layer 5) Wind Speed and Direction, July 01, 2013 - Hour 12



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 25
 Brucejack Gold Mine Project: 300 m (Layer 5) Wind Speed and Direction, July 01, 2013 - Hour 13

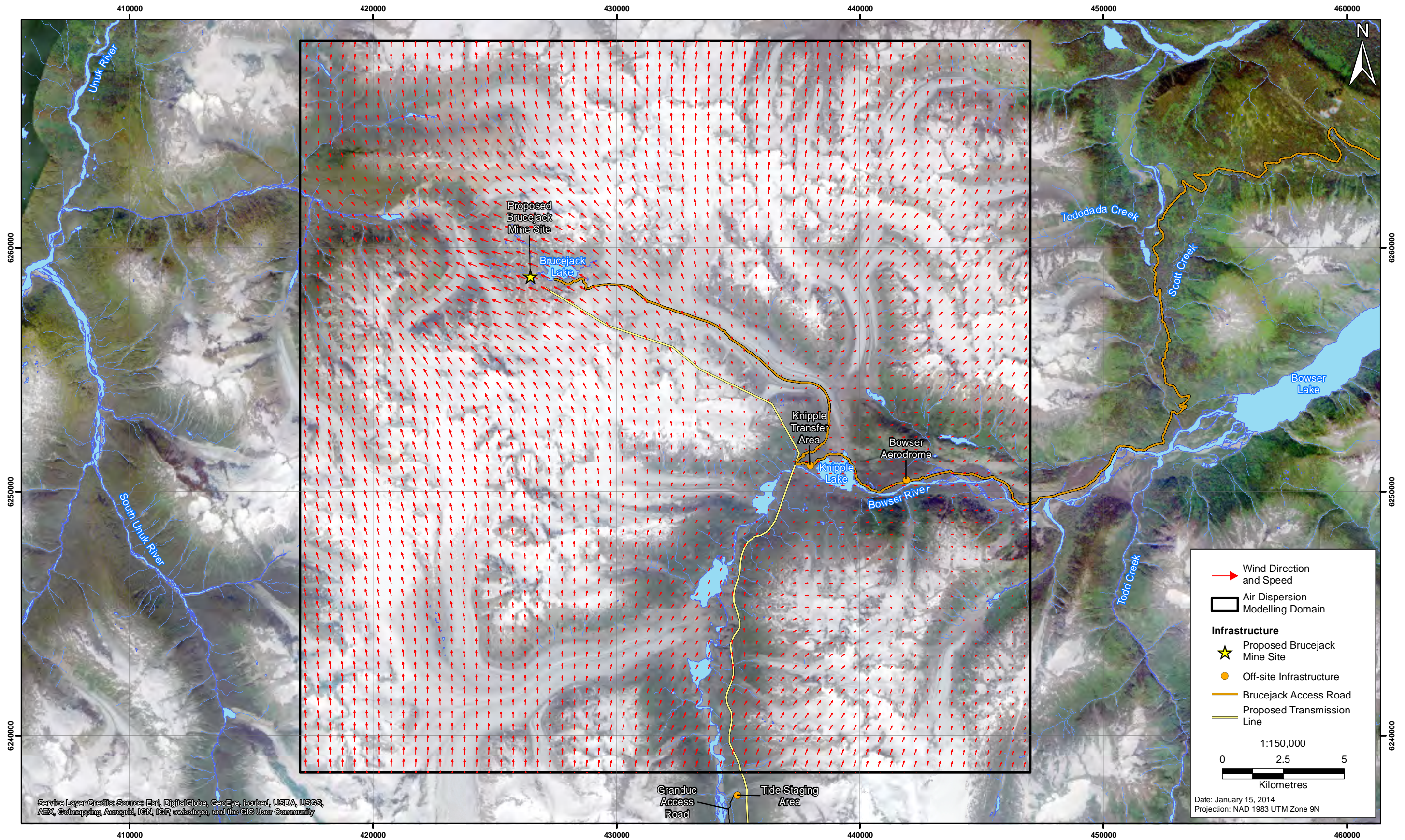


Figure 26
 Brucejack Gold Mine Project: 300 m (Layer 5) Wind Speed and Direction, July 01, 2013 - Hour 14

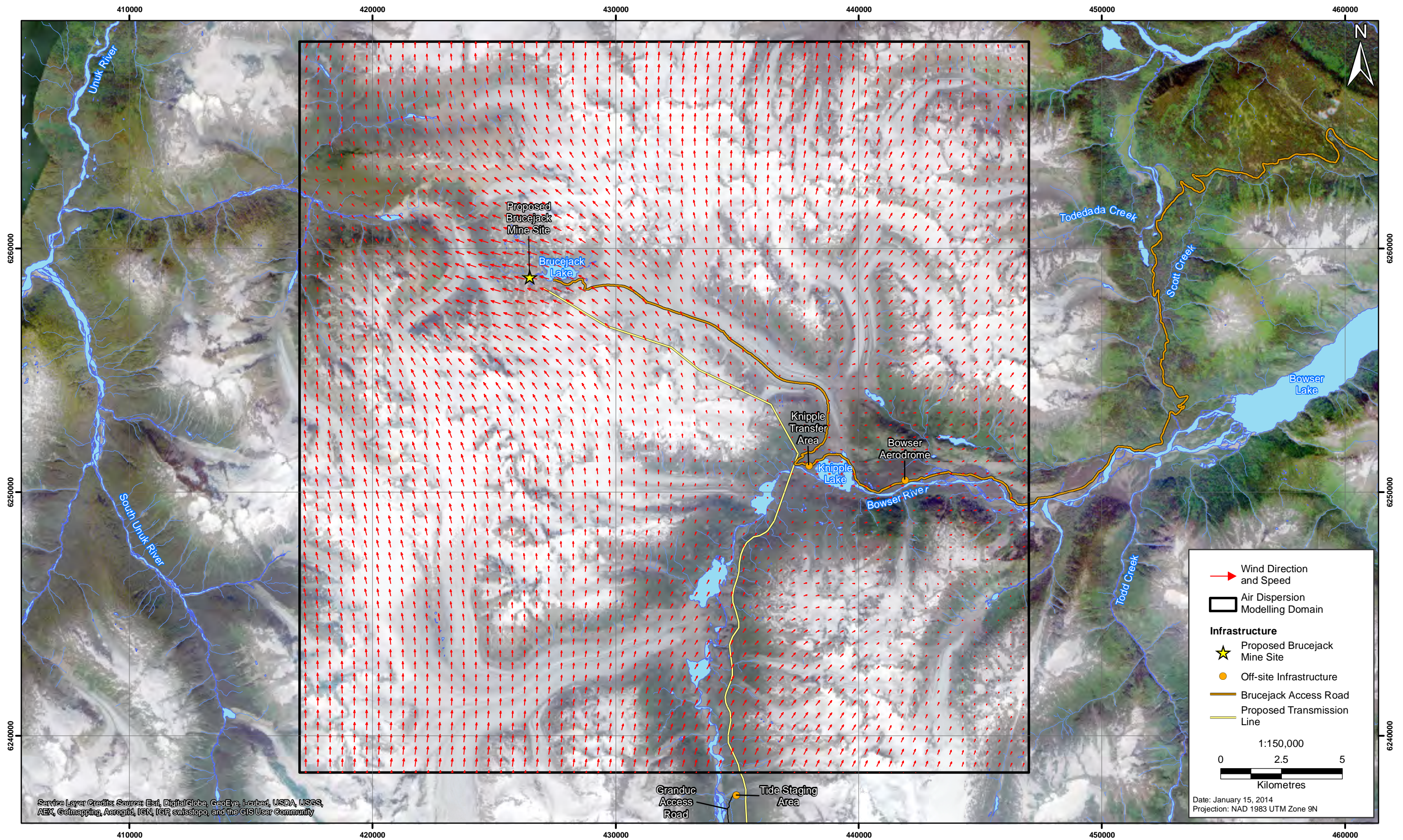
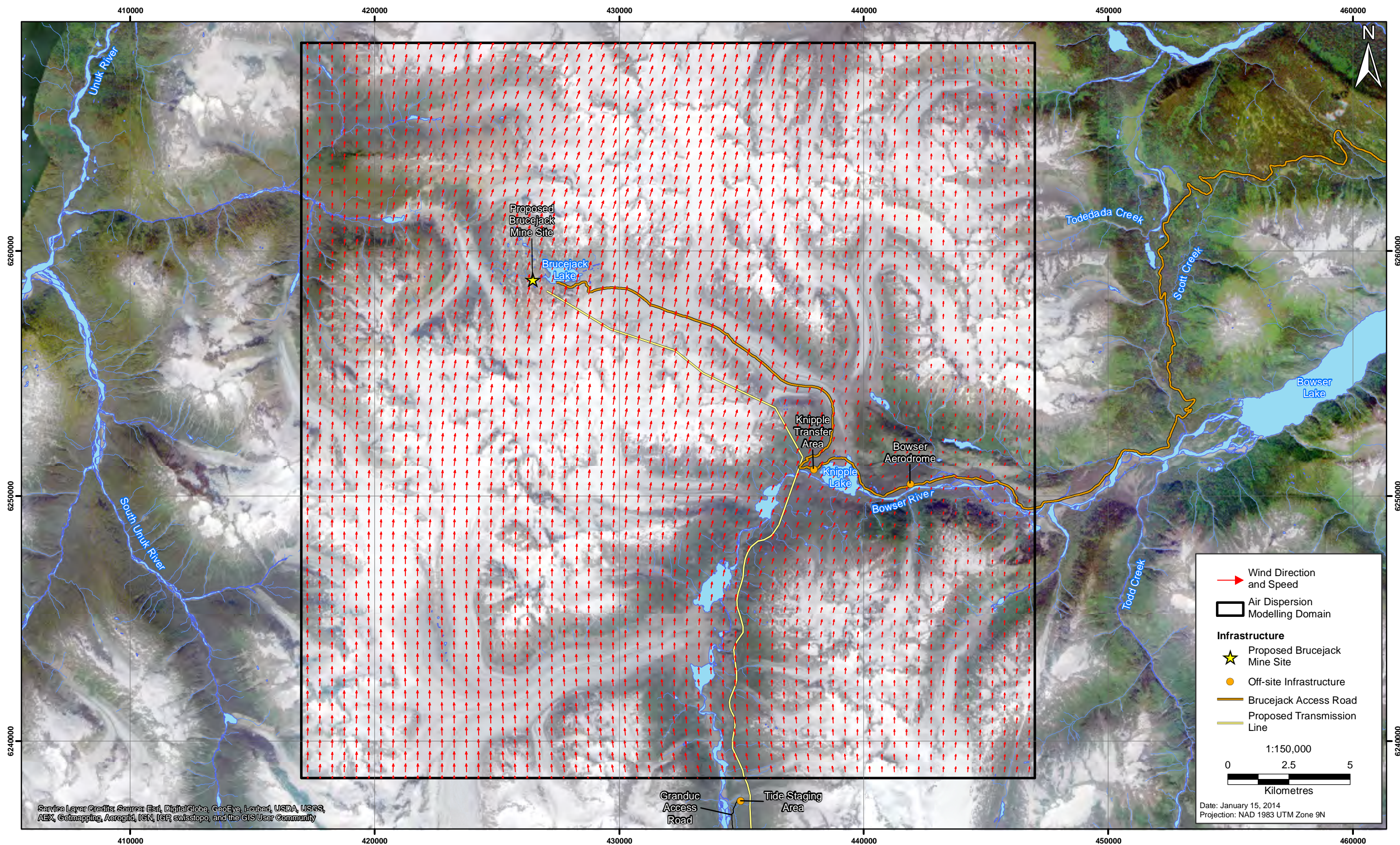


Figure 27
 Brucejack Gold Mine Project: 1000 m (Layer 7) Wind Speed and Direction, July 01, 2013 - Hour 12



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 28
 Brucejack Gold Mine Project: 1000 m (Layer 7) Wind Speed and Direction, July 01, 2013 - Hour 13

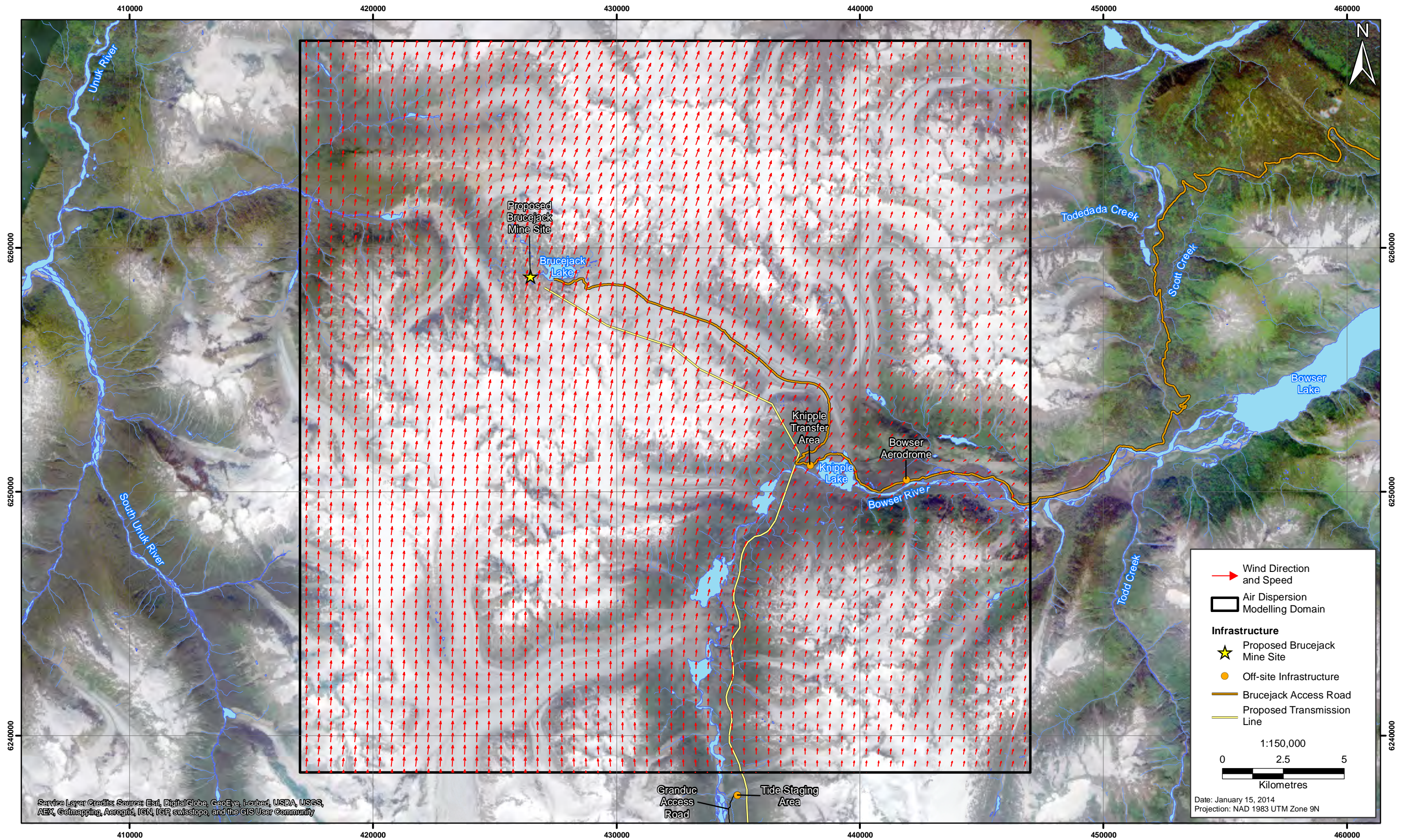
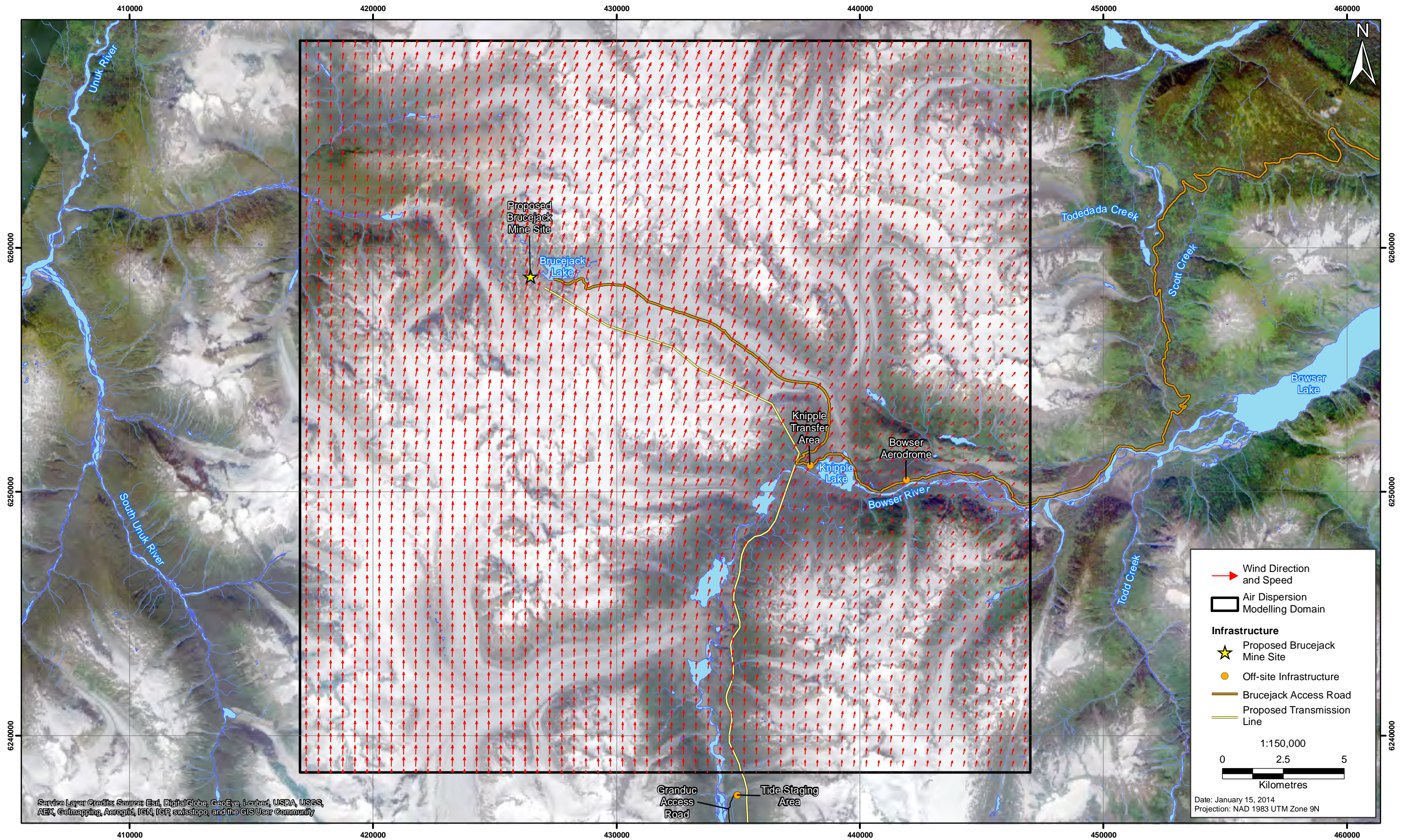


Figure 29
 Brucejack Gold Mine Project: 1000 m (Layer 7) Wind Speed and Direction, July 01, 2013 - Hour 14



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 30
SO₂ 1-hour Maximum Concentrations - Point Source

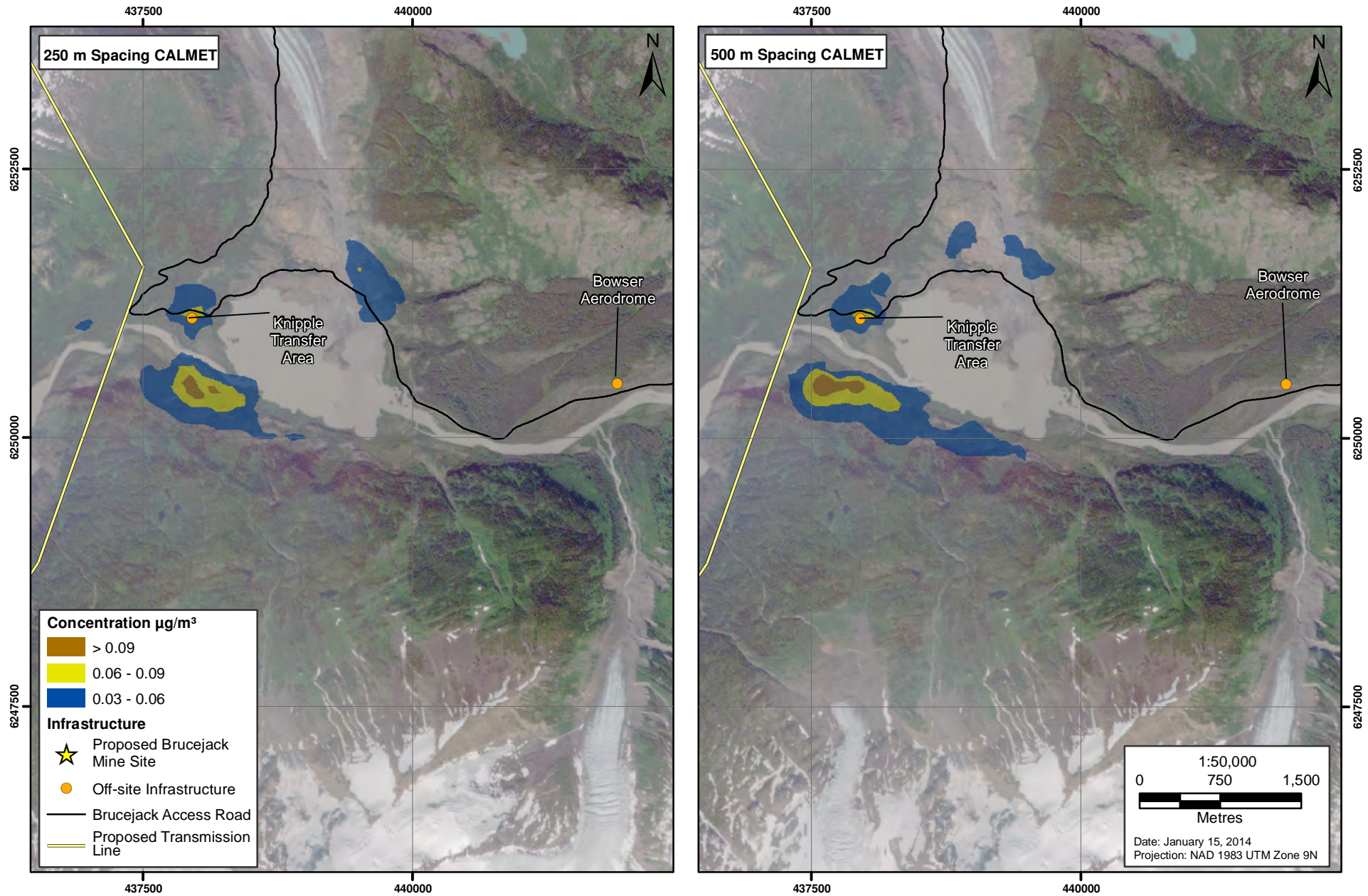


Figure 31
SO₂ 24-hour Maximum Concentrations - Point Source

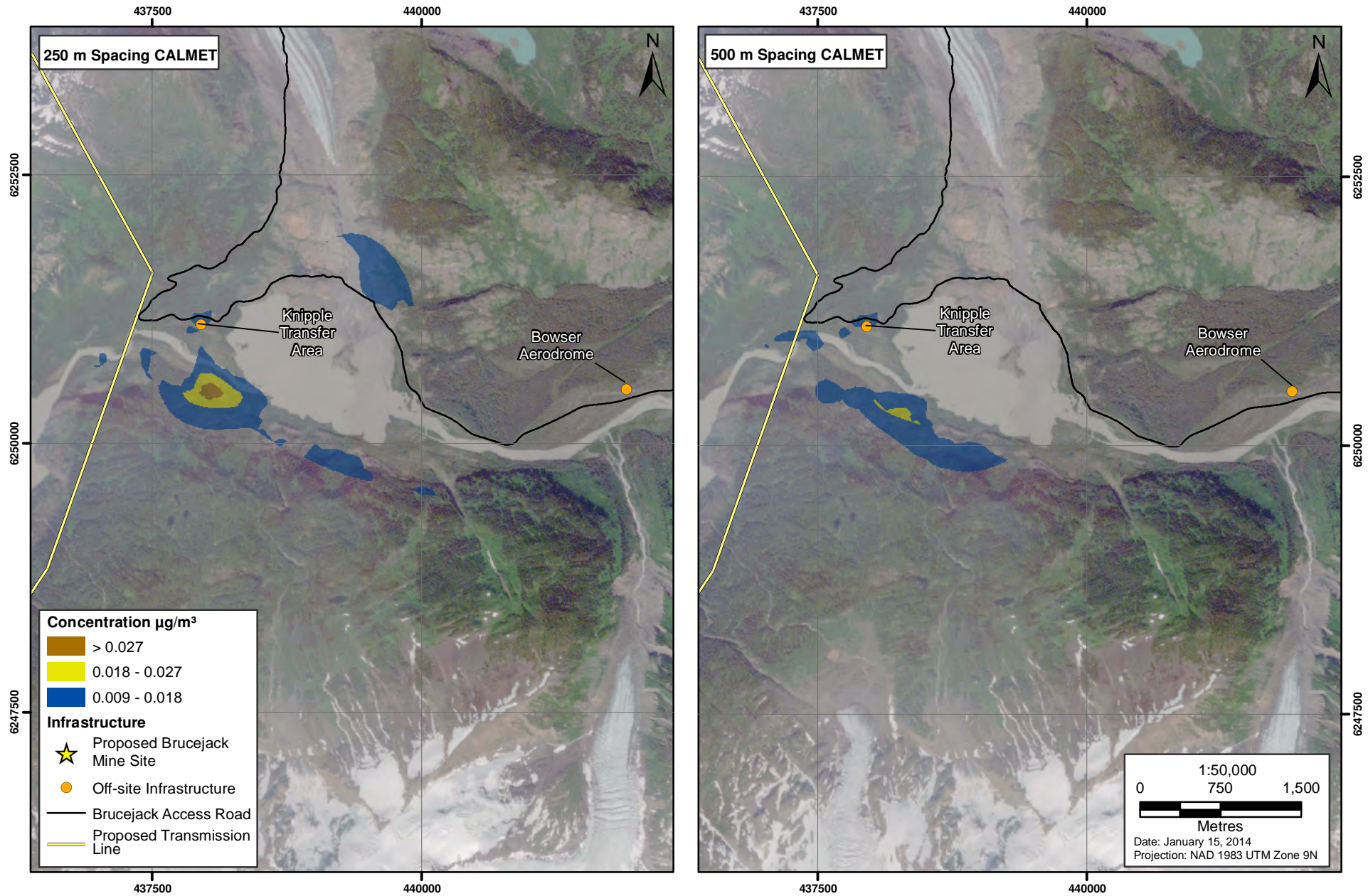


Figure 32
SO₂ Annual Concentrations - Point Source

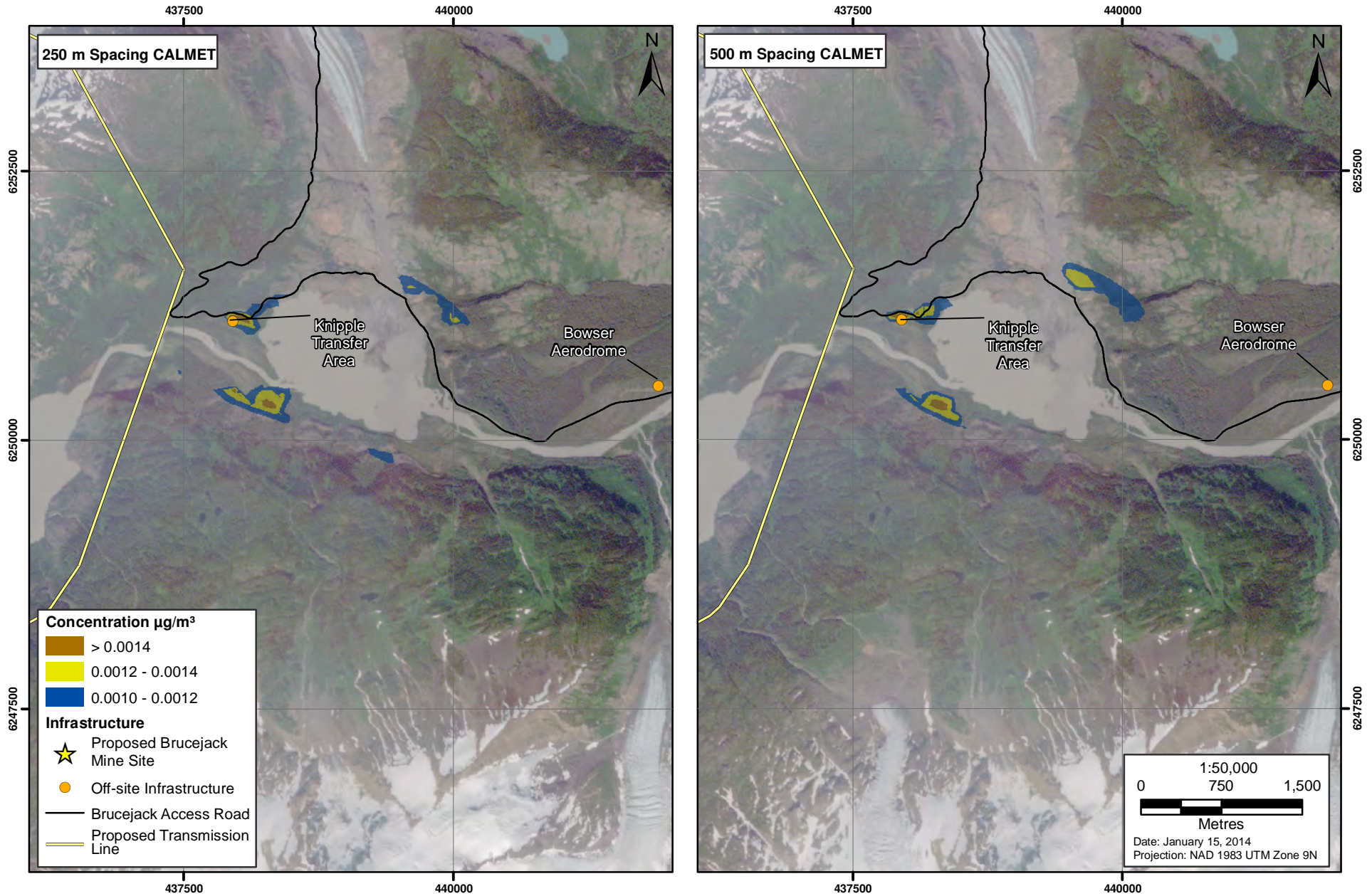


Figure 33
SO₂ 1-hour Maximum Concentrations - Area Source

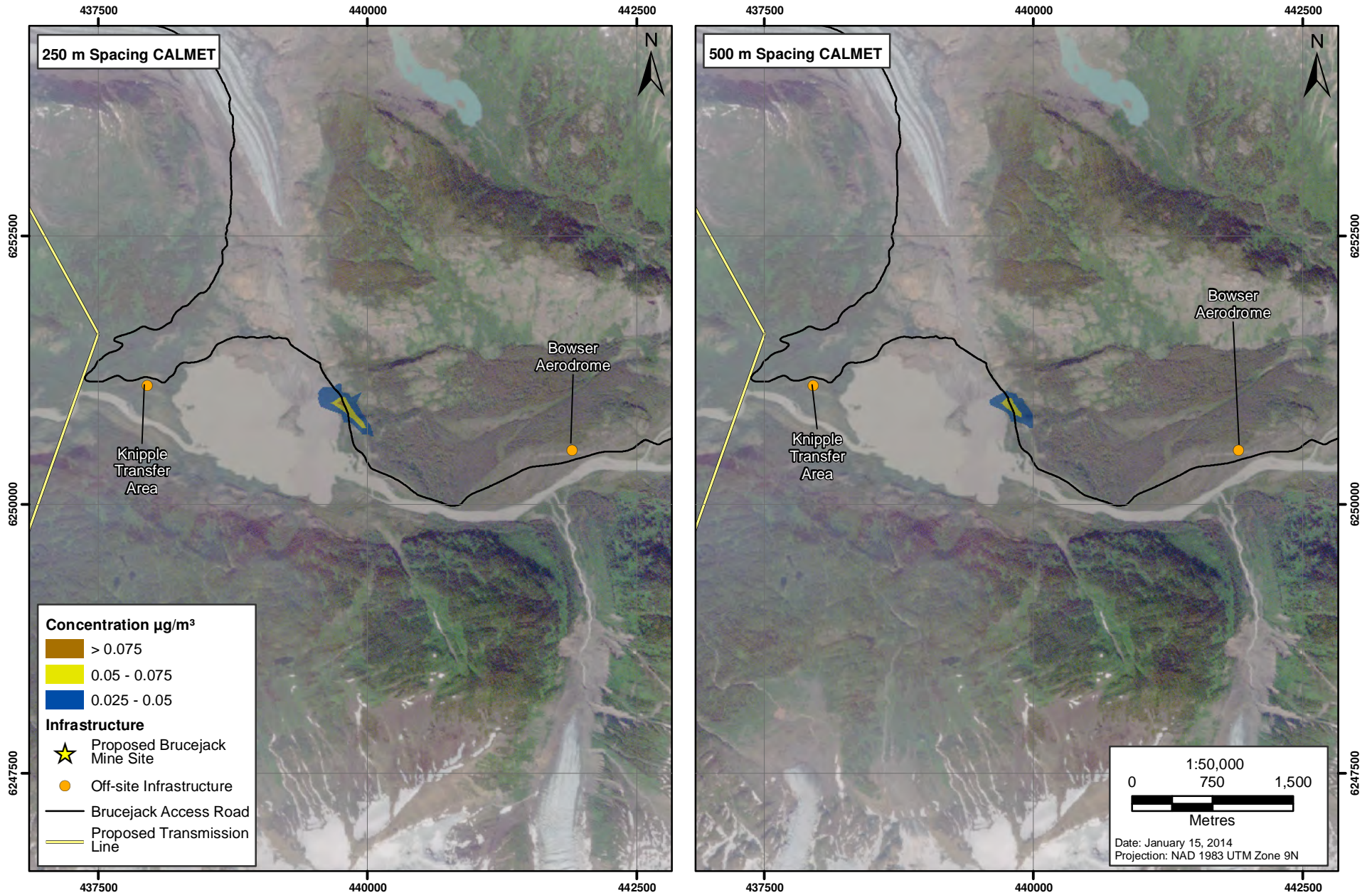


Figure 34
SO₂ 24-hour Maximum Concentrations - Area Source

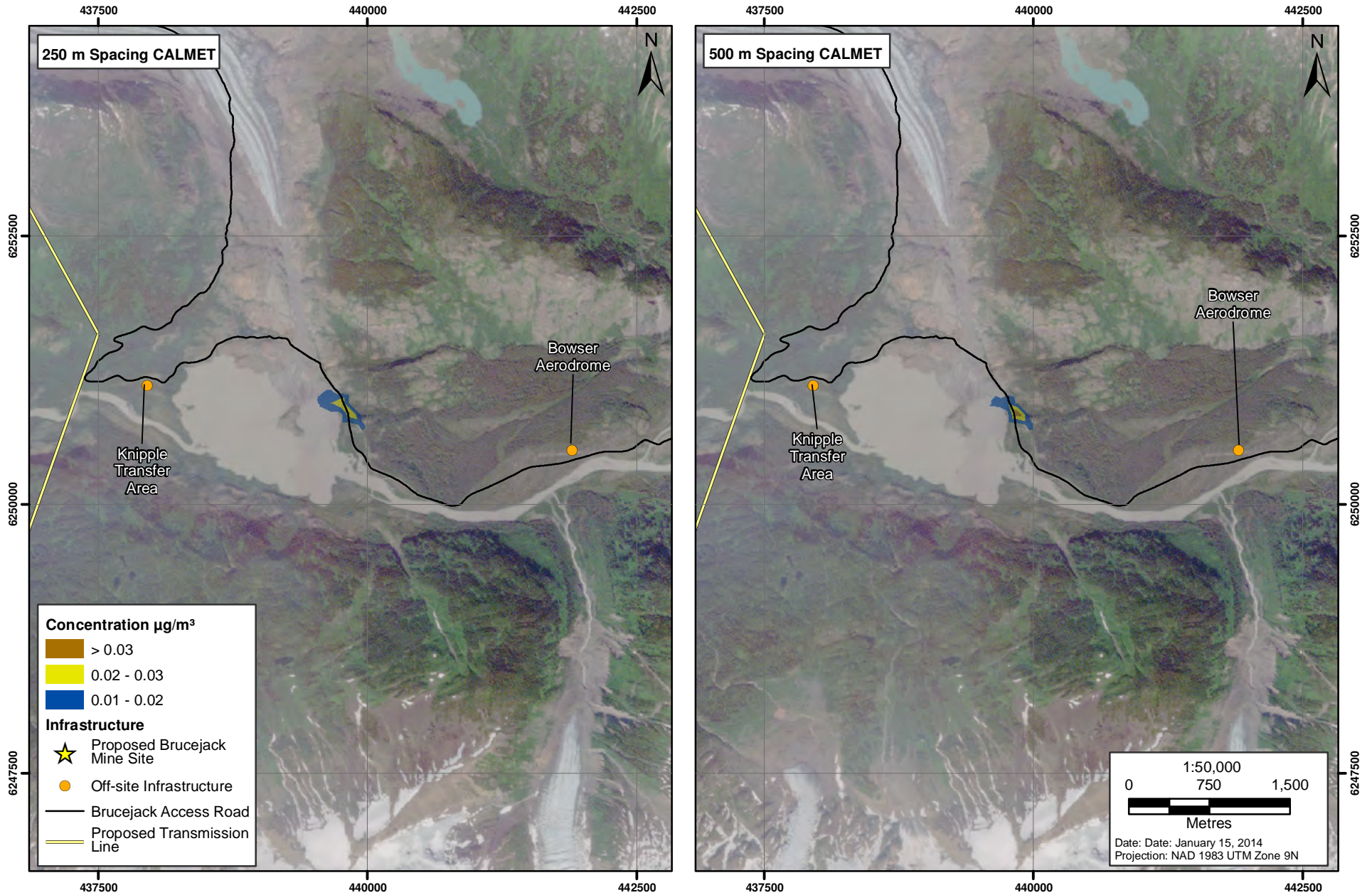
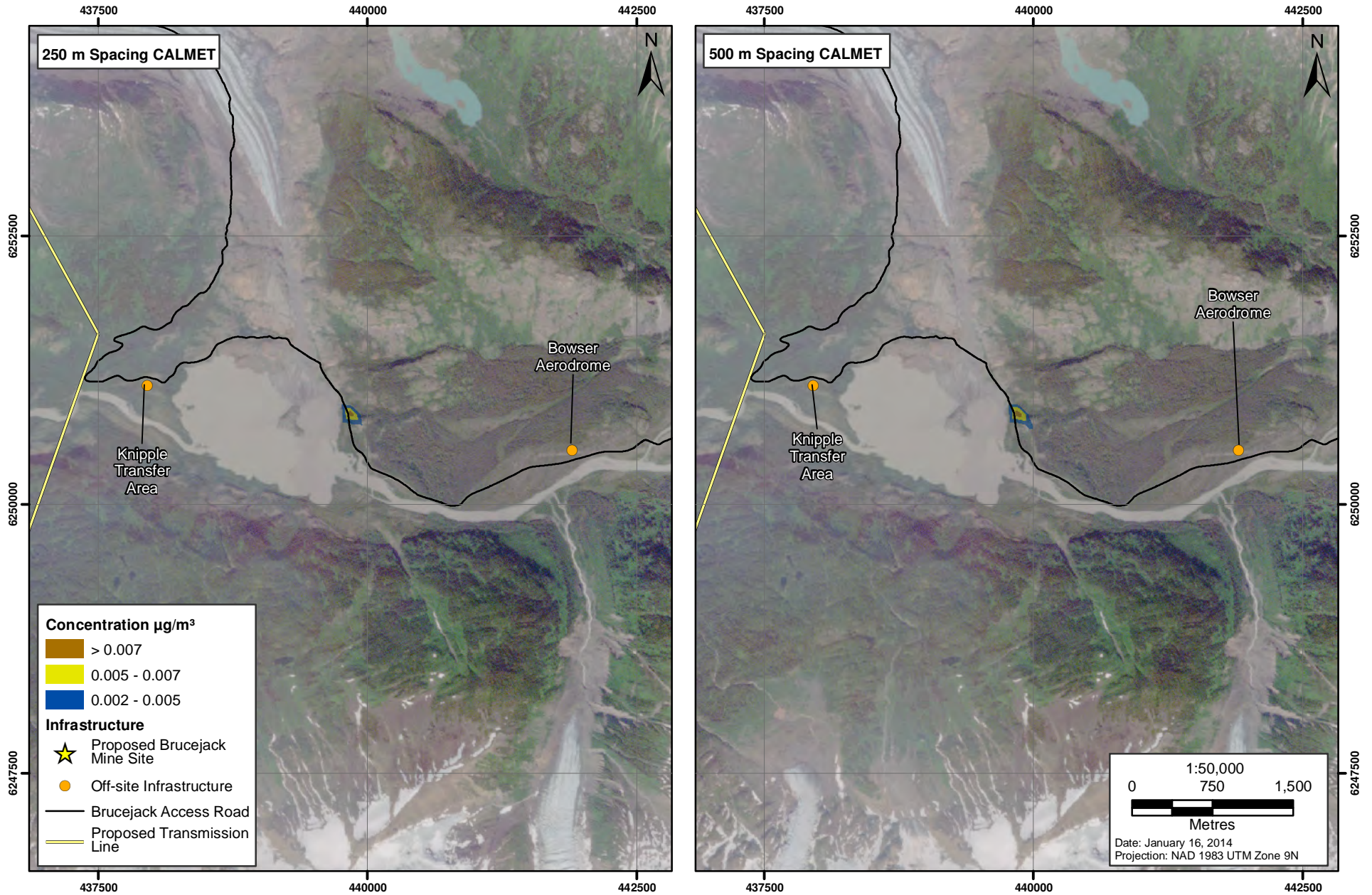


Figure 35
SO₂ Annual Concentrations - Area Source



As part of the model plan, a sensitivity analysis for results obtained with 250m and 500m CALMET spacing were conducted. Both CALMET data were prepared using the same methods described in this model plan. Since the sources included in this assessment are both point and area sources, one of each source type were included in this assessment. The same sources inputs were modelled using the two CALMET datasets for one full complete year of data (2012). Since the results from different pollutants showed similar patterns, only SO₂ results were presented. Figures 30, 31 and 32 show the maximum 1-hour, 24-hour and annual concentrations resulted from a point source with 250 m and 500 m CALMET spacing, while Figures 33, 34, and 35 show the maximum 1-hour, 24-hour and annual concentrations resulting from an area source. The areas presented in these figures have approximately 700 m elevation variations.

For the point source, a diesel generator from the Knipple Transfer Area was used due to the complexity of the terrain (valley on the north and hills immediately northeast and northwest) and landuse (water, forest land and barren land) in this area. The maximum 1-hour concentrations for 250 m and 500 m CALMET spacing showed a similar extent (Figure 30). For the area with elevated concentration south of the source, the 500 m CALMET spacing showed a larger area predicted to be affected by the source. Within close proximity of the source, the 500 m CALMET spacing also showed a slightly larger extent affected. On the northeast side of the Knipple Lake, results from 250 m CALMET showed a larger area that is affected. However, the overall results are similar between the two.

For the point source maximum 24-hour concentrations, the isopleths generated by the 250 m and 500 m CALMET spacing are not identical (Figure 31). The 250 m CALMET spacing predicted a maximum concentration south of the point source higher than the maximum concentration predicted using the 500 m CALMET spacing; however, the extents are not exactly the same. On the northeast side of the source across the Knipple Lake, the 250 m CALMET spacing predicted slightly higher concentrations. However, the isopleths predicted by the two CALMET spacing showed very similar results for the annual SO₂ concentration (Figure 32). The extent and area of the isopleths near and south of the source are almost identical using the two CALMET files. On the area northeast of the source, the results from the 500 m CALMET spacing showed a larger area with elevated concentrations. An area southeast of the Knipple Lake showed elevated concentrations predicted using the 250 m CALMET spacing, but not with the 500 m CALMET spacing; however, these are also largely dependent on the concentration levels selected.

The area source used in the sensitivity analysis is vehicle tailpipe emissions from a section of the access road. The maximum 1-hour (Figure 33), maximum 24-hour (Figure 34) and annual (Figure 35) isopleths from the 250 m and 500 m CALMET spacing are very similar. This is due to the fact that the release height for the area source is low and not as buoyant as the point source. For sources with high buoyancy, the CALMET resolution may cause slightly different results around an area with drastic elevation changes depending on the averaging period. With sources released close to ground level and with lower buoyancy, results predicted using different resolution CALMET spacing are not different from each other. Given that the majority of emissions are from area

sources emitted close to ground level, it is not believed that there will be a significant difference between the results obtained using a 250m or 500m CALMET spacing.

Anticipated ministry review completion date of conceptual model plan:

March 15, 2014

Ministry Acceptance of Plan: _____ Date: _____

References:

EC (Environment Canada). 2004. *Meteorological Services of Canada (MSC) guidelines for co-operative climatological autostations, version 3.0*. N.p.: Environment Canada, MSC, Surface Weather, Climate & Marine Division, Atmospheric Monitoring Water Survey Branch.

US EPA 2012. *Haul Road Workgroup Final Report Submission to EPA-OAQPS, March 2, 2012*. Access link: http://www.epa.gov/scram001/reports/Haul_Road_Workgroup-Final_Report_Package-20120302.pdf. Last accessed October 2013.

Appendix A
Equipment List

Appendix A. Equipment List

CONSTRUCTION PHASE

Source	Source Type (Point, Line, Area, Volume)	Contaminant(s): SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and Dust and Acid Deposition	Basis of Emissions
<i>Mine Site Construction</i>			
30T CAT 730 Haul Trucks	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Dozer CAT D8T	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Loaders CAT 988H	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 11.9
Grader CAT 14M	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 11.9
Drills Atlas ROC L8	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 11.9
Excavators CAT 374D	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Back Hoe CAT 450F	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Mobile Heavy Crane LTM 1160 (160t)	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Mobile light Cranes LTM 1035 (35t)	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Pickers	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Man Lifts (Genie)	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Welding Units	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Pick up trucks	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Quads	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Telehandler CAT TL1255C	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Buses	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Water Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Fuel Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2

Source	Source Type (Point, Line, Area, Volume)	Contaminant(s): SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and Dust and Acid Deposition	Basis of Emissions
Snowmobiles	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Generators	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Compressors	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
<i>Knipple Glacier, Transfer Station, Access Road and Aerodrome Construction</i>			
Husky	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
30T CAT 730 Haul Trucks	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Dozer CAT D8T	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Loaders CAT 988H	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 11.9
Grader CAT 14M	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 11.9
Excavators CAT 374D	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Back Hoe CAT 450F	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Mobile Cranes LTC 1045 (45t)	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Pickers	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Man Lifts (Genie)	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Welding Units	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Pick up trucks	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Quads	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Telehandler CAT TL1255C	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Buses	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Water Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Fuel Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Fire Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Snowmobiles	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Generators	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Compressors	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD

Source	Source Type (Point, Line, Area, Volume)	Contaminant(s): SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and Dust and Acid Deposition	Basis of Emissions
<i>Existing Mine Site Owners Equipment that will Remain on Site During Construction</i>			
Printoh Beast Snowcat #1	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Printoh Beast Snowcat #2	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Bobcat UTV 3400XL	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
T140 Bobcat Surfwood Equipment	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Hitachi 200 Zaxis excavator - Wajax Equipment	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Marooka 2200 - Handlers Equipment - 2007	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Marooka 800 - Handlers Equipment - 1995	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Marooka 4000 - Handlers Equipment - 1996	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Cat D6K LGP Dozer - Finning	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Hitachi 200 Zaxis Excavator - Wajax Equipment	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Pisten Bully 600 Polar 2011 #1 - Oakcreek Golf and Turf	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Pisten Bully 600 Polar 2010 #1 - Oakcreek Golf and Turf	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Caterpillar D8T - Finning Equipment	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
All-Track AT80 - 2012 - All Track Service	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Foremost Chieftan C - 2000	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Formost Nodwell 110 - 2000	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
ATV's - Canam -	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD

Source	Source Type (Point, Line, Area, Volume)	Contaminant(s): SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and Dust and Acid Deposition	Basis of Emissions
24 @ \$17,000 ea			
ATV - Polaris Rangers - 4 @ \$20,000 ea	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
ATV - John Deer Gators - 3 @ \$18,000	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
ATV - Canam Side by side - 1 @ \$19,000	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Snowmobiles - Skidoo Skandiks - 6 @ \$10,000 ea	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Snowmobiles - Skidoo Summits - 2 @ \$12,000 ea	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Kubota RTV 1140 - c/w BC Mines ROPS & Ansul Fire Suppression	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD

OPERATION PHASE

Source	Source Type (Point, Line, Area, Volume)	Contaminant(s) SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and Dust and Acid Deposition	Basis of Emissions
<i>Mine Site</i>			
Backhoe Loader	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 11.9
Dump Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Forklifts	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Mobile Crane - 50T	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Boom Truck -20T	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Loader F/E	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 11.9
Ambulance/Mine Rescue	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2

APPENDIX A. EQUIPMENT LIST

Source	Source Type (Point, Line, Area, Volume)	Contaminant(s) SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and Dust and Acid Deposition	Basis of Emissions
Truck 1/2 Tonne	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
HDPE Fusion Machine	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Flatbed Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Fire Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Forklift (25 t)	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Mechanics Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Welding Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Pick-up Trucks	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Buses - On-Site	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Water Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Sewage Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Foremost Husky 8	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Printoh Beast Snowcat #1	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Printoh Beast Snowcat #2	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Printoh Beast Snowcat #3	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Bobcat UTV 3400XL	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
T140 Bobcat Surfwood Equipment	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Hitachi 200 Zaxis excavator - Wajax Equipment	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Morooka 2200 - Handlers Equipment	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Marooka 800 - Handlers Equipment	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Marooka 4000 - Handlers Equipment	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD

Source	Source Type (Point, Line, Area, Volume)	Contaminant(s) SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and Dust and Acid Deposition	Basis of Emissions
Cat D6K LGP Dozer - Finning	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Hitachi 200 Zaxis Excavator - Wajax Equipment	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Pisten Bully 600 Polar	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
Caterpillar D8T	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
All-Track AT80	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Foremost Chieftain C	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Formost Nodwell 110	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
ATV's - Canam	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
ATV - Polaris Rangers	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
ATV - John Deer Gators	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
ATV - Canam Side by Side	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Snowmobiles - Skidoo Skandiks	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Snowmobiles - Skidoo Summits	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
<i>Transfer Station</i>			
Mobile Crane - 50T	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Forklift	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Forklift (25 t)	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Water Truck	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 13.2.2
<i>Airstrip</i>			
Forklift	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Forklift (10t)	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD
Grader CAT 14 M	Area	SO ₂ , NO ₂ , CO, TSP, PM ₁₀ , PM _{2.5} , and dust and acid deposition	NONROAD and AP-42 11.9

Appendix B

*Brucejack Gold Mine Project Ambient Air Quality
Background Concentrations Memorandum*

Memorandum



DATE: May 15, 2013 Refer to File No.: N:\1042 Pretium\1042-009 Brucejack Project\Word Processing\Memo - Ambient Background\A.1_Memo RE Ambient Background.docx

TO: Ben Weinstein, Air Quality Meteorologist, BC Ministry of Environment
Yota Hatziantoniou, Acting EA Coordinator for BC Region, Health Canada

FROM: Derek Shaw and Tina Liu, Rescan Environmental Services

CC: Greg Norton, Rescan Environmental Services

SUBJECT: Brucejack Gold Mine Project Ambient Air Quality Background Concentrations

1. Introduction

In order to perform air quality dispersion modelling as part of the environmental assessment, ambient background concentrations of air contaminants must be considered (BC MOE 2008).

The order of priority of information sources used to establish the background concentration levels is stated in the *Guidelines for Air Quality Dispersion Modelling in British Columbia* (BC MOE 2008):

1. A network of long-term ambient monitoring stations near the source under study.
2. Long-term ambient monitoring at a different location that is adequately representative.
3. Modelled background.

2. Project Site Specific Monitoring Stations

Since the Brucejack Gold Mine Project (the Project) is located in an area that is remote and with few anthropogenic sources, there is little or no background air quality information readily available. In order to obtain background concentrations from a network of long-term monitoring stations near the Project area, long-term Project specific air quality monitoring stations would have been required.

The installation of a complete set of ambient air quality monitoring devices would include all of the criteria air contaminants to be assessed for the Project. For this Project, this includes nitrogen dioxide (NO₂), sulphur dioxide (SO₂), carbon monoxide (CO), volatile organic compounds (VOCs), total suspended particulate (TSP), and particulates with smaller diameters (PM₁₀ and PM_{2.5}).

Data collection methods can generally be classified as active or passive. Active methods require air pumped through collection or analytical devices and require continuous power supplies. If the power to the active sampling device is supplied by a generator, the collected data could potentially be affected by fuel combustion exhaust. The power generator would also require refuelling on a regular basis. For these reasons, active sampling is often not practical in remote areas without continuous electric power supplies, which is the case for this Project. A passive method was adopted to measure ambient concentrations of NO₂, SO₂ and O₃ (Passive Air Sampling System, PASS). The PASS measures concentrations by diffusion through a membrane to the sampling media and the samples are analyzed

by Maxxam Analytics Inc. in Edmonton, AB on a monthly basis. The results from the analysis represents ambient background concentrations averaged over approximately 30 days.

This method, unfortunately, is not suitable for suspended particulate. Since there is currently no accurate passive method to measure suspended particulate concentrations and active methods are not feasible, background concentrations for suspended particulates are obtained from other ambient monitoring locations representative of the Project area. Moreover, since there is currently no air quality objectives or standards for Canada or British Columbia with 30-day averaging period, representative background concentrations with hourly, daily and annual averaging period are still required for SO₂ and NO₂.

3. Other Monitoring Stations Representative of Project Area

The best available estimates of ambient background concentrations are published by the Canadian Air and Precipitation Monitoring Network (CAPMoN). CAPMoN is a non-urban air quality monitoring network, with siting criterion designed to ensure that the measurement locations are regionally representative (i.e., not affected by local sources of air pollution). There are currently 28 measurement sites in Canada and one in the United States. The closest CAPMoN site to the Project is the Saturna station, off the southern tip of Vancouver Island in the middle of the Strait of Georgia. Although the station is almost 1,000 km southeast of Project, it provides the best estimate of background concentration available for British Columbia. Daily measurements of SO₂ concentrations are available from the Saturna monitoring station from 1996 to 2002 (1997 missing). The average annual SO₂ concentration for that period was reported as 2.3 µg/m³. However, ambient NO₂ concentrations were not measured at the Saturna station.

The Diavik Diamond Mine (Diavik) is in the Northwest Territories, located about 300 km northeast of Yellowknife. In the Diavik Diamond Mine Environmental Assessment (Cirrus Consultants 1998), ambient background concentrations for NO_x, SO₂ and particulates were estimated based on surveys and assumptions. These ambient concentrations have been considered to be typical background concentrations for remote areas with few anthropogenic sources. The Galore Greek Mine Project (Galore) is located approximately 100 km northwest of the Brucejack Project. The baseline monitoring conducted in 2005 included measurements of ambient PM₁₀ and PM_{2.5} concentrations (Rescan 2006). The Kitsault Mine Project (Kitsault) is located on the northwest coast of British Columbia, approximately 140 km north of Prince Rupert and 130 km south of the Brucejack Gold Mine Project, and TSP, PM₁₀ and PM_{2.5} were measured on site (AMEC 2011).

4. Results

The ambient concentrations collected from sources previously mentioned are presented in Table 4-1.

The only available 1-hour and 24-hour SO₂ concentrations of 4.0 µg/m³ are from the Diavik Diamond Mine Environmental Assessment. Comparing the Project 30-day SO₂ concentration of 0.13 µg/m³ to the annual concentrations of 2.3 and 2.0 µg/m³ from Saturna and Diavik, ambient SO₂ concentrations at the Project area are much lower. The concentrations from Diavik are conservatively assumed to represent the Project area.

The 30-day NO₂ concentrations of 0.09 µg/m³ was collected at the Project's proposed Mine Site while the concentration of 4.1 µg/m³ was collected within 5 km from HWY 37. Comparing with the background concentrations from Diavik, the NO₂ concentrations at the Project area are also much lower. The concentrations from Diavik are conservatively assumed to represent the Project area.

Table 4-1. Summary of Ambient Air Quality Concentrations Representative of the Project Area

Pollutant	Averaging Period	Concentration ($\mu\text{g}/\text{m}^3$)					
		Brucejack	Saturna	Diavik	Galore	Kitsault	Baseline representing Brucejack
SO ₂	1-hour	-	-	4.0	-	-	4.0
	24-hour	-	-	4.0	-	-	4.0
	30-day	0.13 ^a	-	-	-	-	-
	Annual	-	2.3	2.0	-	-	2.0
NO ₂	1-hour	-	-	21	-	-	21
	24-hour	-	-	21	-	-	21
	30-day	0.09 ^b to 4.1 ^c	-	-	-	-	-
	Annual	-	-	5.0	-	-	5.0
CO	1-hour	-	-	100	-	-	100
	8-hour	-	-	100	-	-	100
TSP	24-hour	-	-	10	-	3.5	10
	Annual	-	-	10	-	-	10
PM ₁₀	24-hour	-	-	10	3.4	2.5	3.4
PM _{2.5}	24-hour	-	-	-	1.3	2.3	1.3
	Annual	-	-	-	-	-	1.3

Notes:

^a All samples analyzed were below detection limits ($0.26 \mu\text{g}/\text{m}^3$). Results were assumed to be half of the detection limit.

^b Result obtained from PASS station representing the proposed Mine Site at the Brucejack Lake area.

^c Result obtained from PASS station representing the area where the exploration road and HWY 37 cross.

There are currently no CO ambient concentrations available other than Diavik and therefore the background concentrations of $100 \mu\text{g}/\text{m}^3$ from Diavik are assumed to represent the Project area.

For suspended particulates, a wider range of concentration variation was observed between Diavik and Kitsault. Thirty 24-hour samples were collected at Diavik, while for Kitsault the monitoring durations for TSP, PM₁₀ and PM_{2.5} were each approximately 7.5 hours. Data collected from Diavik is deemed to be a more accurate representation of the 24-hour averages and is used to represent the Project area. The Diavik study did not provide clear information on whether the PM₁₀ concentration was collected or assumed to be the same as TSP. Since the latter is more likely, PM₁₀ concentration from Galore are assumed to be representative of the Project area. Concentration of PM_{2.5} from Galore is also selected to represent the Project area. With the absence of available annual PM_{2.5} concentrations, 24-hour PM_{2.5} concentrations from Galore are conservatively assumed to represent PM_{2.5} annual concentration.

In British Columbia, the average concentration of VOCs in the air for 2010 was 104 ppbC (parts per billion carbon), which is 19% lower than that in 2009 (EC 2013). The data provided were based on two monitoring stations located in Burnaby and Port Moody. Since the Project location is much more remote than these two stations, the VOC concentration at the Project area is expected to be lower than the average listed above. Sources of VOCs include industrial processes, vehicles and fuel combustion. According to NPRI 2010, the closest industrial source with reported emissions of VOCs is the Terrace Terminal of Suncor Energy Inc., which is located over 200 km south-southeast of the Project area. Therefore, the background VOC concentration level is assumed to be minimal. A VOC emission inventory will be estimated. If the amount of VOC emissions are deemed to be significant, modelling of VOCs may be included in the assessment.

We believe the background concentrations discussed above represent remote areas similar to the Project setting. Please confirm our approach is acceptable.

Prepared By:



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Reviewed By:



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Appendix C

*Hourly Wind Speed and Direction from Brucejack
Meteorological Stations*

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	1	0	18.1	90	1.6	358	3.2	88
2012	1	1	1	18.2	93	1.8	10	3.1	89
2012	1	1	2	16.7	96	2.0	3	3.2	88
2012	1	1	3	15.3	101	2.4	7	3.0	93
2012	1	1	4	16.0	96	2.4	5	3.1	83
2012	1	1	5	16.0	99	2.5	5	3.2	74
2012	1	1	6	15.1	97	3.0	12	3.2	78
2012	1	1	7	15.9	104	2.1	8	2.4	84
2012	1	1	8	17.7	93	2.9	14	2.4	88
2012	1	1	9	19.7	94	3.0	4	2.5	84
2012	1	1	10	18.3	99	2.9	6	2.2	76
2012	1	1	11	17.9	104	2.6	354	3.6	89
2012	1	1	12	16.8	104	2.6	345	4.1	93
2012	1	1	13	18.2	103	3.5	44	4.2	95
2012	1	1	14	20.6	93	3.8	54	5.5	95
2012	1	1	15	20.2	93	2.3	16	4.9	92
2012	1	1	16	18.5	92	2.0	349	4.7	91
2012	1	1	17	17.5	97	2.0	8	4.4	83
2012	1	1	18	16.7	98	1.6	13	5.5	78
2012	1	1	19	15.6	99	1.7	317	5.5	82
2012	1	1	20	14.1	106	1.6	350	6.2	82
2012	1	1	21	13.5	106	1.2	350	6.0	82
2012	1	1	22	11.8	103	1.6	231	5.7	85
2012	1	1	23	11.5	97	2.4	206	6.4	90
2012	1	2	0	11.3	85	1.7	204	6.2	96
2012	1	2	1	12.4	85	1.2	237	6.4	104
2012	1	2	2	10.6	82	1.2	223	6.6	100
2012	1	2	3	9.0	84	1.2	229	6.9	93
2012	1	2	4	6.9	99	1.2	138	6.1	101
2012	1	2	5	6.7	94	1.0	195	5.8	102
2012	1	2	6	4.3	81	1.3	213	6.1	102
2012	1	2	7	3.1	297	1.1	282	6.8	104
2012	1	2	8	3.8	323	1.2	223	6.5	111
2012	1	2	9	3.6	317	1.6	201	5.7	113
2012	1	2	10	4.5	311	1.9	194	7.2	113
2012	1	2	11	4.5	316	1.6	175	5.8	116
2012	1	2	12	4.4	328	1.7	187	3.4	119
2012	1	2	13	4.6	312	1.3	267	3.4	113
2012	1	2	14	3.7	303	1.5	277	3.3	100
2012	1	2	15	1.5	110	1.4	234	1.7	117
2012	1	2	16	1.9	271	1.5	186	1.8	63
2012	1	2	17	1.4	111	1.8	352	1.2	101
2012	1	2	18	1.6	78	1.7	341	1.0	45
2012	1	2	19	5.9	96	2.0	9	0.9	352
2012	1	2	20	9.5	101	1.9	358	0.9	322
2012	1	2	21	11.4	96	1.7	350	1.3	336
2012	1	2	22	11.5	102	1.0	210	0.6	55
2012	1	2	23	10.5	103	1.0	227	0.7	47

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	3	0	9.7	106	1.2	341	0.4	308
2012	1	3	1	9.4	103	1.3	10	0.6	5
2012	1	3	2	8.5	103	1.6	17	1.1	13
2012	1	3	3	7.7	103	1.7	22	0.9	358
2012	1	3	4	10.6	97	0.7	50	1.1	6
2012	1	3	5	10.6	103	1.0	214	0.9	23
2012	1	3	6	10.1	104	0.5	259	0.3	59
2012	1	3	7	12.0	96	0.7	5	0.2	352
2012	1	3	8	12.6	99	1.9	14	0.1	120
2012	1	3	9	14.1	100	2.1	14	NAN	NAN
2012	1	3	10	13.9	102	2.0	13	NAN	NAN
2012	1	3	11	14.3	102	1.3	339	NAN	NAN
2012	1	3	12	15.2	98	0.9	138	NAN	NAN
2012	1	3	13	14.5	92	1.1	134	1.7	95
2012	1	3	14	9.9	96	1.4	208	2.0	86
2012	1	3	15	9.3	96	1.1	214	2.4	97
2012	1	3	16	8.7	93	0.8	162	3.3	110
2012	1	3	17	5.5	112	0.5	226	4.4	106
2012	1	3	18	8.1	96	0.7	200	4.0	117
2012	1	3	19	9.7	93	0.6	180	4.4	112
2012	1	3	20	10.6	101	1.0	195	4.0	110
2012	1	3	21	11.0	101	1.5	346	3.4	105
2012	1	3	22	11.1	97	1.9	37	2.1	117
2012	1	3	23	13.4	101	2.7	11	2.6	88
2012	1	4	0	13.3	105	2.6	5	1.4	67
2012	1	4	1	16.8	110	2.1	341	1.6	103
2012	1	4	2	18.3	109	1.8	9	2.1	86
2012	1	4	3	16.8	104	2.5	343	1.9	101
2012	1	4	4	18.0	92	1.9	26	4.1	99
2012	1	4	5	16.0	85	2.1	218	4.3	104
2012	1	4	6	14.3	93	2.2	200	6.8	116
2012	1	4	7	8.3	112	3.5	188	7.6	117
2012	1	4	8	5.3	94	2.7	193	7.6	113
2012	1	4	9	4.5	102	2.1	224	7.3	103
2012	1	4	10	5.1	90	1.6	211	6.4	113
2012	1	4	11	7.6	88	2.6	176	6.8	114
2012	1	4	12	9.1	87	2.1	207	6.3	107
2012	1	4	13	8.0	95	2.8	189	5.1	108
2012	1	4	14	6.7	103	2.0	173	4.3	108
2012	1	4	15	9.7	95	2.6	184	4.9	120
2012	1	4	16	9.3	96	1.4	210	4.7	106
2012	1	4	17	9.7	87	1.7	235	3.1	99
2012	1	4	18	7.7	90	0.6	199	3.6	108
2012	1	4	19	5.3	76	NAN	NAN	5.0	118
2012	1	4	20	5.1	80	NAN	NAN	4.7	119
2012	1	4	21	5.4	102	NAN	NAN	5.9	113
2012	1	4	22	5.3	92	NAN	NAN	6.3	106
2012	1	4	23	4.7	124	NAN	NAN	5.9	106

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	5	0	6.1	90	NAN	NAN	5.0	114
2012	1	5	1	7.5	81	NAN	NAN	5.4	113
2012	1	5	2	7.7	91	NAN	NAN	4.6	108
2012	1	5	3	8.4	75	NAN	NAN	5.0	105
2012	1	5	4	8.7	77	NAN	NAN	5.0	108
2012	1	5	5	9.1	79	NAN	NAN	5.2	111
2012	1	5	6	7.4	96	NAN	NAN	5.0	115
2012	1	5	7	6.2	93	NAN	NAN	5.0	112
2012	1	5	8	7.6	95	NAN	NAN	4.7	115
2012	1	5	9	6.0	94	NAN	NAN	4.9	116
2012	1	5	10	3.2	90	NAN	NAN	5.1	120
2012	1	5	11	4.5	311	NAN	NAN	4.3	126
2012	1	5	12	3.8	313	NAN	NAN	4.6	119
2012	1	5	13	3.6	309	1.9	237	3.8	119
2012	1	5	14	4.2	297	5.1	246	0.3	109
2012	1	5	15	3.1	296	5.7	251	NAN	NAN
2012	1	5	16	2.7	283	5.0	236	NAN	NAN
2012	1	5	17	5.9	298	4.7	232	NAN	NAN
2012	1	5	18	5.3	311	6.1	236	NAN	NAN
2012	1	5	19	3.1	304	3.2	242	NAN	NAN
2012	1	5	20	1.3	295	1.5	285	NAN	NAN
2012	1	5	21	1.7	256	2.6	240	NAN	NAN
2012	1	5	22	1.2	293	1.1	352	NAN	NAN
2012	1	5	23	2.9	111	1.4	323	NAN	NAN
2012	1	6	0	5.2	104	1.1	357	NAN	NAN
2012	1	6	1	5.7	105	1.2	242	NAN	NAN
2012	1	6	2	7.6	94	0.9	317	NAN	NAN
2012	1	6	3	7.8	108	1.1	228	NAN	NAN
2012	1	6	4	9.0	88	1.3	188	NAN	NAN
2012	1	6	5	7.9	100	1.1	214	NAN	NAN
2012	1	6	6	8.2	93	1.5	348	NAN	NAN
2012	1	6	7	8.9	97	1.6	0	NAN	NAN
2012	1	6	8	8.7	99	1.8	11	NAN	NAN
2012	1	6	9	10.6	97	1.4	20	NAN	NAN
2012	1	6	10	11.3	102	0.6	93	NAN	NAN
2012	1	6	11	11.6	97	0.9	36	NAN	NAN
2012	1	6	12	11.8	98	1.7	14	NAN	NAN
2012	1	6	13	12.2	98	1.3	20	NAN	NAN
2012	1	6	14	12.4	99	0.6	179	NAN	NAN
2012	1	6	15	11.6	108	1.2	205	NAN	NAN
2012	1	6	16	11.5	106	1.6	214	NAN	NAN
2012	1	6	17	11.5	104	1.4	219	NAN	NAN
2012	1	6	18	10.1	104	1.5	209	NAN	NAN
2012	1	6	19	8.1	110	0.8	227	NAN	NAN
2012	1	6	20	6.8	113	0.5	204	NAN	NAN
2012	1	6	21	6.6	107	0.9	203	NAN	NAN
2012	1	6	22	4.1	93	0.6	208	NAN	NAN
2012	1	6	23	4.3	93	0.7	219	NAN	NAN

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	7	0	4.8	86	0.9	346	NAN	NAN
2012	1	7	1	7.0	100	1.0	344	NAN	NAN
2012	1	7	2	8.2	96	1.4	1	NAN	NAN
2012	1	7	3	8.9	86	0.7	10	NAN	NAN
2012	1	7	4	10.6	84	0.8	223	NAN	NAN
2012	1	7	5	11.0	86	1.2	172	NAN	NAN
2012	1	7	6	12.8	85	1.2	209	NAN	NAN
2012	1	7	7	15.0	92	1.2	210	NAN	NAN
2012	1	7	8	12.9	107	1.5	175	NAN	NAN
2012	1	7	9	12.5	108	1.5	225	NAN	NAN
2012	1	7	10	13.4	109	2.1	234	NAN	NAN
2012	1	7	11	12.5	107	2.2	236	NAN	NAN
2012	1	7	12	12.2	102	1.3	215	NAN	NAN
2012	1	7	13	13.8	99	1.7	220	NAN	NAN
2012	1	7	14	12.9	92	2.1	226	NAN	NAN
2012	1	7	15	10.6	100	1.8	203	NAN	NAN
2012	1	7	16	11.6	81	1.8	211	NAN	NAN
2012	1	7	17	9.4	93	1.5	196	NAN	NAN
2012	1	7	18	5.8	98	1.2	218	NAN	NAN
2012	1	7	19	5.0	283	1.0	203	NAN	NAN
2012	1	7	20	5.4	211	1.0	169	NAN	NAN
2012	1	7	21	7.0	106	0.9	210	NAN	NAN
2012	1	7	22	6.1	20	1.2	211	NAN	NAN
2012	1	7	23	5.5	297	1.4	199	NAN	NAN
2012	1	8	0	6.2	268	1.3	192	2.7	118
2012	1	8	1	9.8	273	1.7	214	6.1	120
2012	1	8	2	5.4	271	1.2	210	7.0	115
2012	1	8	3	4.8	82	1.9	216	6.0	114
2012	1	8	4	4.3	302	1.7	208	5.0	100
2012	1	8	5	4.7	285	1.5	217	5.3	111
2012	1	8	6	4.6	302	1.6	201	6.3	111
2012	1	8	7	3.6	93	2.6	208	5.2	115
2012	1	8	8	4.4	9	2.8	218	4.4	114
2012	1	8	9	2.9	292	2.3	200	4.0	116
2012	1	8	10	4.8	264	2.7	201	3.7	124
2012	1	8	11	3.1	88	2.5	182	2.3	126
2012	1	8	12	4.9	85	2.4	175	3.9	88
2012	1	8	13	6.3	272	2.5	191	3.0	95
2012	1	8	14	3.6	281	1.9	206	4.2	110
2012	1	8	15	4.5	115	1.6	182	3.9	99
2012	1	8	16	5.6	104	1.7	170	3.5	109
2012	1	8	17	6.7	92	1.8	185	5.2	108
2012	1	8	18	5.5	82	1.4	209	4.5	104
2012	1	8	19	1.8	50	1.5	204	4.3	107
2012	1	8	20	4.6	97	1.6	203	3.9	110
2012	1	8	21	3.4	82	0.9	211	3.7	112
2012	1	8	22	1.6	305	0.8	198	3.0	103
2012	1	8	23	0.8	260	0.8	231	3.2	108

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	9	0	0.6	248	0.8	230	2.3	119
2012	1	9	1	1.5	258	0.3	60	1.0	112
2012	1	9	2	2.9	277	0.4	341	0.4	292
2012	1	9	3	3.4	292	0.3	311	1.3	306
2012	1	9	4	3.1	282	0.6	306	2.3	299
2012	1	9	5	4.6	298	2.1	247	2.3	304
2012	1	9	6	3.9	279	3.7	267	1.6	287
2012	1	9	7	3.9	279	3.6	217	2.2	263
2012	1	9	8	5.8	289	3.7	209	1.3	109
2012	1	9	9	6.2	302	3.3	200	0.6	106
2012	1	9	10	8.4	293	2.3	191	0.7	206
2012	1	9	11	9.5	299	6.1	253	0.6	293
2012	1	9	12	8.8	301	8.1	254	1.4	251
2012	1	9	13	10.8	288	4.7	255	3.6	248
2012	1	9	14	11.5	279	5.0	249	4.3	241
2012	1	9	15	10.3	288	5.9	249	3.5	240
2012	1	9	16	9.3	285	6.9	254	2.6	252
2012	1	9	17	8.2	291	6.8	248	1.8	280
2012	1	9	18	6.2	300	4.1	239	1.8	272
2012	1	9	19	6.6	305	4.1	255	2.1	308
2012	1	9	20	7.0	301	1.3	313	2.3	287
2012	1	9	21	6.3	301	1.4	297	1.9	316
2012	1	9	22	5.1	308	3.3	269	2.0	344
2012	1	9	23	4.7	308	2.6	254	1.1	334
2012	1	10	0	5.4	307	2.4	282	2.0	324
2012	1	10	1	3.1	288	1.7	340	1.9	322
2012	1	10	2	3.0	294	1.1	330	1.6	328
2012	1	10	3	2.2	199	1.3	303	1.4	310
2012	1	10	4	1.4	93	1.2	159	1.3	316
2012	1	10	5	2.8	90	0.8	353	1.2	309
2012	1	10	6	3.8	91	1.3	4	1.3	284
2012	1	10	7	3.7	90	0.7	51	2.1	350
2012	1	10	8	4.9	106	1.0	356	1.7	342
2012	1	10	9	5.9	107	1.2	29	1.5	358
2012	1	10	10	3.8	106	1.0	64	1.3	357
2012	1	10	11	4.7	104	0.7	41	1.4	2
2012	1	10	12	4.9	107	0.5	26	0.6	22
2012	1	10	13	6.2	107	1.0	3	0.2	176
2012	1	10	14	8.6	108	0.9	2	0.2	5
2012	1	10	15	7.4	105	0.7	144	0.4	32
2012	1	10	16	5.8	102	1.5	206	0.1	230
2012	1	10	17	4.1	98	0.7	10	0.3	138
2012	1	10	18	3.9	95	0.5	1	0.1	355
2012	1	10	19	3.4	91	0.5	356	0.4	1
2012	1	10	20	3.9	100	1.6	357	0.2	18
2012	1	10	21	7.1	101	1.4	20	0.4	287
2012	1	10	22	8.8	99	0.8	115	0.6	55
2012	1	10	23	8.0	107	0.8	208	0.4	215

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	11	0	7.2	109	1.1	210	0.4	24
2012	1	11	1	7.3	104	0.8	339	0.5	104
2012	1	11	2	7.2	107	0.9	42	0.2	128
2012	1	11	3	8.2	105	0.7	195	0.4	106
2012	1	11	4	7.0	104	1.3	214	0.3	169
2012	1	11	5	6.5	106	0.5	201	0.5	103
2012	1	11	6	7.6	94	0.7	223	0.8	63
2012	1	11	7	6.8	105	0.7	186	0.9	123
2012	1	11	8	9.9	107	0.5	154	0.4	136
2012	1	11	9	10.2	98	1.0	211	0.5	141
2012	1	11	10	10.2	108	1.1	203	0.5	50
2012	1	11	11	9.3	105	0.9	170	0.8	131
2012	1	11	12	9.8	102	0.8	211	0.9	107
2012	1	11	13	10.4	102	0.9	185	1.0	100
2012	1	11	14	10.0	97	0.6	219	1.1	110
2012	1	11	15	10.0	98	0.2	224	1.0	85
2012	1	11	16	10.3	94	0.6	234	0.8	99
2012	1	11	17	10.3	102	0.5	194	0.3	288
2012	1	11	18	10.8	99	0.5	37	0.3	264
2012	1	11	19	11.9	99	0.8	231	0.2	231
2012	1	11	20	12.0	102	0.5	159	0.5	110
2012	1	11	21	12.3	99	1.1	211	0.5	119
2012	1	11	22	10.1	105	1.1	220	0.4	309
2012	1	11	23	10.4	103	0.4	219	0.3	127
2012	1	12	0	11.5	99	1.3	221	0.3	192
2012	1	12	1	10.6	101	1.0	209	0.2	130
2012	1	12	2	9.8	95	0.7	224	0.4	220
2012	1	12	3	12.0	79	0.8	192	0.5	182
2012	1	12	4	13.0	100	1.1	206	0.8	124
2012	1	12	5	11.9	101	1.2	189	3.8	98
2012	1	12	6	11.7	105	1.2	144	4.6	98
2012	1	12	7	12.1	97	1.6	187	4.0	108
2012	1	12	8	12.5	100	1.3	296	3.2	118
2012	1	12	9	11.9	103	1.1	180	3.9	118
2012	1	12	10	12.6	92	0.9	144	4.4	108
2012	1	12	11	10.7	90	1.6	134	5.7	117
2012	1	12	12	9.1	99	1.5	147	6.2	97
2012	1	12	13	4.8	68	1.3	179	6.2	94
2012	1	12	14	5.2	112	0.4	115	6.4	97
2012	1	12	15	5.5	297	1.3	223	4.9	112
2012	1	12	16	4.6	317	2.4	329	2.6	132
2012	1	12	17	2.3	335	1.3	285	2.3	114
2012	1	12	18	4.3	112	1.0	272	2.8	106
2012	1	12	19	5.2	288	1.1	324	2.1	102
2012	1	12	20	4.6	283	1.0	227	2.5	103
2012	1	12	21	4.9	321	1.3	203	1.7	106
2012	1	12	22	4.5	325	1.0	326	1.6	119
2012	1	12	23	5.2	325	1.1	186	1.5	88

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	13	0	6.1	316	2.0	197	2.1	107
2012	1	13	1	5.3	315	3.5	220	1.3	87
2012	1	13	2	3.3	292	2.8	198	2.0	36
2012	1	13	3	3.7	314	2.0	189	1.4	68
2012	1	13	4	3.9	317	1.3	146	1.4	58
2012	1	13	5	2.5	292	1.6	176	0.3	122
2012	1	13	6	2.2	308	1.6	195	1.2	83
2012	1	13	7	3.7	270	2.1	182	1.4	105
2012	1	13	8	3.1	59	2.0	195	2.1	102
2012	1	13	9	2.5	298	2.3	202	2.7	107
2012	1	13	10	2.8	249	1.9	206	2.9	111
2012	1	13	11	2.9	125	1.0	182	2.0	107
2012	1	13	12	6.1	96	0.9	220	2.9	103
2012	1	13	13	8.6	90	0.7	249	3.0	108
2012	1	13	14	11.8	85	1.1	190	2.9	108
2012	1	13	15	11.4	90	0.8	298	3.6	102
2012	1	13	16	11.3	88	0.9	271	2.7	84
2012	1	13	17	10.5	91	1.0	3	3.0	105
2012	1	13	18	9.9	97	1.3	359	2.9	98
2012	1	13	19	8.3	98	1.6	351	2.0	82
2012	1	13	20	6.3	104	1.7	18	1.9	79
2012	1	13	21	6.0	101	1.4	13	0.7	78
2012	1	13	22	5.6	105	1.9	22	0.3	306
2012	1	13	23	5.2	107	2.2	22	0.7	330
2012	1	14	0	3.2	129	2.2	10	0.7	341
2012	1	14	1	1.6	94	1.8	3	0.8	351
2012	1	14	2	2.1	87	1.5	345	0.8	351
2012	1	14	3	1.0	106	2.1	1	1.2	318
2012	1	14	4	0.9	137	1.6	4	1.6	310
2012	1	14	5	1.0	90	2.2	5	2.0	304
2012	1	14	6	0.6	115	3.2	8	1.7	293
2012	1	14	7	1.2	102	3.3	6	2.5	307
2012	1	14	8	1.1	94	2.6	358	2.6	306
2012	1	14	9	0.9	89	3.8	7	2.5	307
2012	1	14	10	0.9	101	4.6	12	2.4	304
2012	1	14	11	0.6	99	4.4	12	2.8	302
2012	1	14	12	1.0	108	4.5	13	3.6	307
2012	1	14	13	0.9	103	4.6	11	3.5	307
2012	1	14	14	1.7	95	4.6	10	3.4	299
2012	1	14	15	1.1	92	4.6	11	3.4	302
2012	1	14	16	0.5	80	4.9	13	3.2	312
2012	1	14	17	1.2	100	5.4	13	3.9	317
2012	1	14	18	0.9	89	5.4	12	4.2	321
2012	1	14	19	0.8	107	5.5	13	4.3	318
2012	1	14	20	1.1	270	5.9	13	4.5	321
2012	1	14	21	0.7	286	6.1	10	4.6	318
2012	1	14	22	1.2	266	6.8	12	4.1	304
2012	1	14	23	1.5	99	6.6	12	4.1	309

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	15	0	0.8	71	7.1	15	4.2	308
2012	1	15	1	1.3	89	7.5	14	4.2	304
2012	1	15	2	0.8	83	7.3	12	4.9	304
2012	1	15	3	1.4	101	7.1	11	4.7	303
2012	1	15	4	1.4	102	6.6	9	5.7	314
2012	1	15	5	1.3	100	7.5	12	5.2	311
2012	1	15	6	0.8	88	7.5	9	5.2	310
2012	1	15	7	0.9	272	7.2	7	5.4	310
2012	1	15	8	1.1	90	7.4	8	5.4	313
2012	1	15	9	1.0	249	7.3	9	5.2	309
2012	1	15	10	0.8	138	7.0	12	5.1	311
2012	1	15	11	0.9	105	6.2	10	4.7	309
2012	1	15	12	1.1	218	6.6	15	4.7	307
2012	1	15	13	1.1	105	6.6	18	5.3	307
2012	1	15	14	0.6	170	6.6	14	5.2	309
2012	1	15	15	1.2	103	7.1	14	5.4	312
2012	1	15	16	1.7	97	7.0	18	5.1	313
2012	1	15	17	1.6	102	6.9	18	4.7	307
2012	1	15	18	1.8	97	6.3	20	4.1	306
2012	1	15	19	2.4	89	6.1	16	4.0	303
2012	1	15	20	2.5	98	5.9	16	3.3	303
2012	1	15	21	1.8	269	6.6	19	3.9	308
2012	1	15	22	2.6	89	6.6	22	4.7	312
2012	1	15	23	5.4	76	6.5	20	5.5	318
2012	1	16	0	1.9	274	6.0	23	5.1	307
2012	1	16	1	2.2	5	6.6	23	4.5	306
2012	1	16	2	2.5	83	6.7	24	4.0	308
2012	1	16	3	9.5	118	7.1	22	3.4	305
2012	1	16	4	11.5	122	6.7	19	3.6	309
2012	1	16	5	12.9	125	6.7	20	3.7	313
2012	1	16	6	10.3	112	6.1	23	4.4	315
2012	1	16	7	13.2	90	5.9	23	4.6	326
2012	1	16	8	14.2	101	4.9	28	4.0	328
2012	1	16	9	15.8	100	4.1	35	3.6	343
2012	1	16	10	16.5	104	3.9	30	3.5	355
2012	1	16	11	16.3	109	4.2	33	3.0	3
2012	1	16	12	17.0	111	4.9	29	3.8	360
2012	1	16	13	14.5	99	5.4	28	3.7	7
2012	1	16	14	13.4	100	4.8	19	4.2	9
2012	1	16	15	13.0	98	5.2	19	3.7	14
2012	1	16	16	13.9	98	4.2	25	3.6	19
2012	1	16	17	13.7	109	3.9	32	3.6	21
2012	1	16	18	13.3	113	3.5	46	3.2	19
2012	1	16	19	13.5	118	3.9	33	2.6	13
2012	1	16	20	13.0	119	4.1	28	2.0	1
2012	1	16	21	14.4	117	4.2	26	2.5	360
2012	1	16	22	13.4	116	4.0	25	3.0	356
2012	1	16	23	12.4	122	4.2	24	2.8	12

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	17	0	11.6	126	4.1	17	1.3	350
2012	1	17	1	9.5	134	4.2	13	1.0	324
2012	1	17	2	10.9	121	4.8	16	2.9	337
2012	1	17	3	10.0	137	4.6	11	3.0	331
2012	1	17	4	9.5	137	4.5	13	3.2	338
2012	1	17	5	9.8	133	4.7	18	3.4	322
2012	1	17	6	9.6	128	4.7	19	3.8	324
2012	1	17	7	8.9	110	5.1	17	3.8	322
2012	1	17	8	8.8	84	5.3	15	3.0	327
2012	1	17	9	8.8	118	5.1	14	3.3	329
2012	1	17	10	8.7	111	5.0	14	3.4	319
2012	1	17	11	9.2	113	4.1	17	3.0	317
2012	1	17	12	8.6	109	4.0	14	3.0	312
2012	1	17	13	9.6	83	3.6	15	3.2	310
2012	1	17	14	7.3	106	3.4	14	3.3	312
2012	1	17	15	6.7	102	4.2	16	3.3	312
2012	1	17	16	8.0	103	4.4	13	3.5	314
2012	1	17	17	8.1	106	4.0	9	3.3	309
2012	1	17	18	9.5	108	4.1	9	3.2	320
2012	1	17	19	9.5	106	4.6	9	4.0	321
2012	1	17	20	9.7	108	4.1	15	3.6	323
2012	1	17	21	9.5	106	3.9	10	2.8	337
2012	1	17	22	9.1	102	4.2	11	2.1	352
2012	1	17	23	8.9	105	4.1	10	2.4	4
2012	1	18	0	8.9	106	4.4	15	2.1	3
2012	1	18	1	8.1	93	4.7	21	2.2	2
2012	1	18	2	8.1	87	4.7	19	2.7	352
2012	1	18	3	8.0	91	5.4	23	2.0	331
2012	1	18	4	10.4	99	4.6	16	2.3	343
2012	1	18	5	9.8	102	4.2	20	1.8	322
2012	1	18	6	8.5	97	3.6	26	0.6	348
2012	1	18	7	8.7	103	3.4	30	1.2	316
2012	1	18	8	9.7	103	2.8	31	0.7	297
2012	1	18	9	10.4	104	3.1	32	0.8	277
2012	1	18	10	11.2	103	1.6	28	0.7	162
2012	1	18	11	13.4	104	1.7	27	0.4	188
2012	1	18	12	13.3	103	1.2	25	0.3	183
2012	1	18	13	11.7	96	0.9	53	0.3	168
2012	1	18	14	10.6	98	1.3	44	0.6	136
2012	1	18	15	12.0	97	0.8	40	0.9	146
2012	1	18	16	13.2	96	1.1	42	0.9	118
2012	1	18	17	11.8	101	1.2	23	0.8	53
2012	1	18	18	12.3	95	2.0	31	0.3	92
2012	1	18	19	12.1	91	1.7	39	0.7	40
2012	1	18	20	11.3	96	1.8	28	0.6	358
2012	1	18	21	12.3	92	1.9	17	0.4	342
2012	1	18	22	10.1	96	0.9	48	0.4	93
2012	1	18	23	10.1	96	1.1	25	0.5	118

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	19	0	9.8	99	0.8	57	0.5	106
2012	1	19	1	11.0	101	0.5	57	0.2	114
2012	1	19	2	11.3	100	0.8	27	0.3	285
2012	1	19	3	11.0	106	1.3	32	0.4	282
2012	1	19	4	11.1	104	1.2	28	0.2	92
2012	1	19	5	11.7	98	0.9	44	0.3	90
2012	1	19	6	12.3	101	1.2	47	0.1	273
2012	1	19	7	12.5	101	2.1	15	0.3	346
2012	1	19	8	13.8	98	1.0	43	0.3	139
2012	1	19	9	13.5	96	0.8	60	0.2	260
2012	1	19	10	13.6	94	0.9	44	0.2	317
2012	1	19	11	14.1	96	0.8	35	0.2	151
2012	1	19	12	13.4	97	0.4	91	0.2	179
2012	1	19	13	13.6	94	0.5	1	0.4	134
2012	1	19	14	13.0	100	0.9	6	0.4	168
2012	1	19	15	12.6	100	1.8	358	0.3	139
2012	1	19	16	13.6	99	1.9	14	0.4	149
2012	1	19	17	14.0	97	2.8	2	0.3	10
2012	1	19	18	13.5	101	3.0	8	0.3	245
2012	1	19	19	13.6	97	2.9	5	0.3	313
2012	1	19	20	15.6	97	2.7	9	0.3	8
2012	1	19	21	15.4	101	3.4	4	0.4	20
2012	1	19	22	16.3	102	2.5	5	0.3	123
2012	1	19	23	15.8	104	2.4	6	1.0	82
2012	1	20	0	15.5	104	2.4	27	1.1	100
2012	1	20	1	16.5	92	2.2	24	1.1	76
2012	1	20	2	16.4	97	2.9	21	0.2	351
2012	1	20	3	16.4	99	3.8	26	1.1	73
2012	1	20	4	17.9	103	3.9	17	0.8	75
2012	1	20	5	17.7	96	3.4	28	1.6	83
2012	1	20	6	18.7	103	3.1	34	2.1	83
2012	1	20	7	18.4	101	3.1	28	1.4	86
2012	1	20	8	19.0	107	3.6	31	0.2	14
2012	1	20	9	18.1	105	3.6	29	0.5	58
2012	1	20	10	18.0	104	3.7	31	1.0	89
2012	1	20	11	18.3	105	4.0	30	1.4	93
2012	1	20	12	19.1	107	3.6	34	1.0	100
2012	1	20	13	17.7	106	4.1	29	1.7	100
2012	1	20	14	16.1	100	4.1	22	1.0	98
2012	1	20	15	16.1	100	4.2	13	0.7	60
2012	1	20	16	17.8	100	4.9	10	0.3	78
2012	1	20	17	17.4	103	4.1	11	0.5	46
2012	1	20	18	18.8	108	3.4	19	0.3	70
2012	1	20	19	17.9	108	3.3	22	0.5	93
2012	1	20	20	18.1	108	2.8	18	0.7	108
2012	1	20	21	17.0	105	3.2	11	1.3	90
2012	1	20	22	17.3	101	3.5	360	1.4	87
2012	1	20	23	18.0	99	2.7	13	1.4	98

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	21	0	16.8	98	2.0	18	2.0	90
2012	1	21	1	16.2	99	1.4	305	1.7	90
2012	1	21	2	16.3	103	1.1	239	0.7	99
2012	1	21	3	16.9	99	1.3	234	1.0	96
2012	1	21	4	16.0	101	1.0	231	0.4	113
2012	1	21	5	15.1	101	1.4	213	0.4	141
2012	1	21	6	14.6	102	0.9	207	0.2	271
2012	1	21	7	14.5	101	1.2	218	0.2	163
2012	1	21	8	13.4	97	0.8	162	0.5	139
2012	1	21	9	12.8	101	0.6	182	0.5	230
2012	1	21	10	13.2	104	0.9	205	0.6	260
2012	1	21	11	12.8	104	0.7	95	0.5	223
2012	1	21	12	12.7	103	0.7	166	1.1	96
2012	1	21	13	12.2	104	0.8	197	1.7	102
2012	1	21	14	12.3	103	0.7	199	1.9	114
2012	1	21	15	11.8	101	0.8	183	2.3	115
2012	1	21	16	11.3	97	0.7	156	2.3	114
2012	1	21	17	11.0	98	0.7	174	2.9	108
2012	1	21	18	11.1	92	0.9	147	3.3	113
2012	1	21	19	11.2	103	1.3	196	4.3	115
2012	1	21	20	10.4	99	1.3	188	4.0	108
2012	1	21	21	7.7	117	1.1	167	4.6	96
2012	1	21	22	7.9	111	1.1	180	4.5	98
2012	1	21	23	7.2	100	1.0	186	5.1	101
2012	1	22	0	8.0	79	1.0	217	3.6	102
2012	1	22	1	7.2	87	0.7	209	1.0	122
2012	1	22	2	7.3	94	0.8	211	1.3	119
2012	1	22	3	8.0	97	0.7	194	0.8	136
2012	1	22	4	7.8	89	0.5	43	1.1	96
2012	1	22	5	7.7	101	0.7	22	1.5	77
2012	1	22	6	7.5	102	1.2	360	1.0	65
2012	1	22	7	7.9	102	0.6	77	0.4	122
2012	1	22	8	9.1	104	0.5	170	0.8	199
2012	1	22	9	8.9	106	0.9	229	0.8	264
2012	1	22	10	10.8	103	0.6	211	0.6	241
2012	1	22	11	10.6	103	0.7	108	0.6	89
2012	1	22	12	9.8	105	1.2	42	0.4	175
2012	1	22	13	12.1	109	1.4	30	0.3	226
2012	1	22	14	13.1	110	3.0	12	0.4	65
2012	1	22	15	14.2	110	2.8	3	0.2	119
2012	1	22	16	14.0	110	2.7	6	0.4	54
2012	1	22	17	12.3	102	2.8	9	0.4	339
2012	1	22	18	10.5	104	2.7	16	0.5	17
2012	1	22	19	10.1	99	2.1	22	0.9	1
2012	1	22	20	11.6	90	2.0	18	0.2	303
2012	1	22	21	11.1	95	2.0	13	0.2	281
2012	1	22	22	10.3	102	1.5	20	0.4	118
2012	1	22	23	9.7	96	1.0	217	0.3	102

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	23	0	9.8	100	1.6	236	0.5	130
2012	1	23	1	9.3	103	1.8	211	1.4	90
2012	1	23	2	7.8	102	1.0	188	0.6	153
2012	1	23	3	7.8	106	1.0	191	0.3	277
2012	1	23	4	7.4	106	1.5	182	0.4	150
2012	1	23	5	6.5	104	1.1	188	0.8	118
2012	1	23	6	7.1	96	0.8	167	1.6	117
2012	1	23	7	7.8	93	0.9	229	2.7	118
2012	1	23	8	9.9	88	0.9	4	2.9	102
2012	1	23	9	9.7	92	1.1	152	1.4	101
2012	1	23	10	10.3	87	1.1	97	3.0	99
2012	1	23	11	11.8	95	1.1	31	3.4	108
2012	1	23	12	11.0	100	0.9	117	3.7	107
2012	1	23	13	11.5	92	1.4	186	4.1	101
2012	1	23	14	8.8	105	1.4	209	4.6	97
2012	1	23	15	8.0	99	1.6	219	4.2	101
2012	1	23	16	8.2	93	1.6	221	4.1	110
2012	1	23	17	5.9	105	1.3	200	4.6	111
2012	1	23	18	5.6	113	1.4	194	4.9	104
2012	1	23	19	6.5	107	1.1	191	3.8	113
2012	1	23	20	4.9	135	0.8	201	3.5	105
2012	1	23	21	5.6	113	1.2	202	4.4	113
2012	1	23	22	9.1	101	1.1	183	4.2	109
2012	1	23	23	11.3	89	1.0	223	4.5	110
2012	1	24	0	12.7	90	0.8	285	4.0	113
2012	1	24	1	14.5	89	0.9	268	3.8	111
2012	1	24	2	15.0	100	2.0	353	3.7	103
2012	1	24	3	14.0	109	1.8	350	2.9	94
2012	1	24	4	15.6	110	2.2	11	2.8	93
2012	1	24	5	16.7	111	2.2	339	1.6	77
2012	1	24	6	17.1	109	2.1	336	2.3	94
2012	1	24	7	16.5	110	2.4	349	3.1	79
2012	1	24	8	14.9	100	2.0	346	2.8	72
2012	1	24	9	15.1	98	1.6	331	2.3	68
2012	1	24	10	15.4	91	0.9	223	2.7	79
2012	1	24	11	14.8	91	2.3	235	3.9	96
2012	1	24	12	12.8	106	2.0	226	4.6	107
2012	1	24	13	11.1	90	1.7	216	4.5	106
2012	1	24	14	9.7	95	0.8	207	4.2	111
2012	1	24	15	9.6	96	0.9	256	4.3	117
2012	1	24	16	9.5	100	0.9	276	4.1	118
2012	1	24	17	9.8	100	0.9	338	3.9	114
2012	1	24	18	12.5	93	0.6	291	3.4	112
2012	1	24	19	13.8	85	1.0	165	2.9	104
2012	1	24	20	12.8	97	0.9	298	3.7	110
2012	1	24	21	13.2	98	1.0	301	4.1	104
2012	1	24	22	12.7	100	1.0	203	4.0	96
2012	1	24	23	14.1	90	1.3	165	4.5	98

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	25	0	12.8	97	1.4	356	4.8	97
2012	1	25	1	13.1	97	1.5	222	4.6	102
2012	1	25	2	10.5	103	2.8	209	5.0	111
2012	1	25	3	8.4	263	7.8	207	6.4	119
2012	1	25	4	5.9	270	6.2	204	3.2	138
2012	1	25	5	8.4	262	6.4	201	4.9	129
2012	1	25	6	7.1	253	6.1	220	2.7	150
2012	1	25	7	9.0	262	3.4	216	1.1	210
2012	1	25	8	3.2	339	1.7	157	1.2	279
2012	1	25	9	4.4	261	2.4	185	1.3	66
2012	1	25	10	4.4	301	3.2	190	2.7	115
2012	1	25	11	2.6	271	2.5	175	4.0	117
2012	1	25	12	3.8	272	1.5	195	3.9	114
2012	1	25	13	4.0	312	2.1	191	4.9	118
2012	1	25	14	4.2	302	1.9	194	4.7	112
2012	1	25	15	4.5	257	1.7	198	3.3	121
2012	1	25	16	2.9	243	2.5	201	4.2	114
2012	1	25	17	2.8	255	2.5	206	4.3	113
2012	1	25	18	5.5	96	2.1	175	3.9	117
2012	1	25	19	7.0	116	2.4	178	5.0	112
2012	1	25	20	8.3	109	2.4	165	4.9	114
2012	1	25	21	6.8	113	1.9	164	5.6	116
2012	1	25	22	5.1	116	1.1	185	5.2	114
2012	1	25	23	4.1	85	1.4	158	5.9	105
2012	1	26	0	4.8	132	1.5	184	6.2	117
2012	1	26	1	5.4	248	1.5	188	5.4	121
2012	1	26	2	6.6	249	1.4	189	6.1	115
2012	1	26	3	4.2	278	2.2	213	4.5	117
2012	1	26	4	4.3	302	2.1	198	4.7	107
2012	1	26	5	5.6	288	1.9	213	1.8	103
2012	1	26	6	8.4	287	4.3	240	0.9	114
2012	1	26	7	9.2	284	5.5	235	1.1	5
2012	1	26	8	7.0	282	4.1	247	2.0	257
2012	1	26	9	4.6	264	1.8	212	1.8	252
2012	1	26	10	4.8	292	2.4	214	1.0	296
2012	1	26	11	5.6	292	2.5	212	0.7	98
2012	1	26	12	7.0	305	2.2	199	0.8	100
2012	1	26	13	8.0	283	1.5	184	1.0	105
2012	1	26	14	10.1	282	1.7	188	0.8	290
2012	1	26	15	7.8	294	4.4	233	1.7	112
2012	1	26	16	8.2	289	2.8	220	1.5	91
2012	1	26	17	3.1	340	2.8	213	1.3	70
2012	1	26	18	7.2	88	2.5	195	1.4	101
2012	1	26	19	11.4	91	1.9	195	3.5	112
2012	1	26	20	7.9	88	1.5	200	4.2	115
2012	1	26	21	6.3	244	1.7	174	4.4	116
2012	1	26	22	4.3	267	1.4	168	3.9	118
2012	1	26	23	3.9	330	1.4	170	5.0	120

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	27	0	3.7	334	1.3	207	5.7	116
2012	1	27	1	4.6	278	1.3	204	5.3	117
2012	1	27	2	7.3	288	1.4	212	5.3	118
2012	1	27	3	11.4	293	3.1	19	6.1	113
2012	1	27	4	8.7	295	1.2	29	3.5	94
2012	1	27	5	9.2	299	3.5	12	0.7	99
2012	1	27	6	7.9	310	2.7	19	1.7	354
2012	1	27	7	9.3	298	1.2	42	1.3	346
2012	1	27	8	8.0	292	1.3	91	0.8	343
2012	1	27	9	10.4	290	3.0	233	0.0	0
2012	1	27	10	10.0	283	4.0	249	0.1	272
2012	1	27	11	8.4	292	1.7	201	1.6	241
2012	1	27	12	7.6	271	1.5	79	0.5	5
2012	1	27	13	8.7	279	1.5	177	1.1	39
2012	1	27	14	7.7	297	1.3	173	1.3	84
2012	1	27	15	4.5	309	1.6	158	1.1	72
2012	1	27	16	3.8	313	1.5	128	1.1	24
2012	1	27	17	4.4	311	1.0	165	0.8	5
2012	1	27	18	3.7	325	1.3	154	0.8	336
2012	1	27	19	3.2	313	1.4	173	0.9	46
2012	1	27	20	3.5	301	1.1	85	1.1	79
2012	1	27	21	4.1	296	1.6	6	1.3	87
2012	1	27	22	2.3	273	1.9	4	0.7	49
2012	1	27	23	1.6	256	1.4	1	0.9	65
2012	1	28	0	1.6	297	1.8	359	0.7	64
2012	1	28	1	2.9	91	1.8	357	0.9	27
2012	1	28	2	5.0	103	1.9	359	1.5	14
2012	1	28	3	7.2	104	1.6	0	1.2	16
2012	1	28	4	9.3	104	1.6	4	1.4	15
2012	1	28	5	10.0	99	1.9	14	1.7	14
2012	1	28	6	11.7	96	2.2	23	1.2	26
2012	1	28	7	11.7	97	2.2	20	1.1	35
2012	1	28	8	12.3	97	2.6	19	1.1	38
2012	1	28	9	12.3	101	2.7	19	1.1	30
2012	1	28	10	12.2	105	2.5	24	0.7	39
2012	1	28	11	12.6	103	1.0	52	0.6	69
2012	1	28	12	12.9	99	0.5	99	0.5	121
2012	1	28	13	13.8	96	0.5	103	0.9	141
2012	1	28	14	11.8	101	0.6	40	1.8	100
2012	1	28	15	12.6	97	0.6	358	2.4	99
2012	1	28	16	12.7	102	0.3	39	1.2	118
2012	1	28	17	13.0	98	0.8	30	0.9	104
2012	1	28	18	12.5	95	0.8	38	0.4	271
2012	1	28	19	12.9	98	0.7	8	0.4	285
2012	1	28	20	12.6	101	0.7	75	0.4	292
2012	1	28	21	11.8	102	0.5	359	0.3	241
2012	1	28	22	11.7	100	1.3	223	0.3	93
2012	1	28	23	11.4	101	1.2	218	0.4	99

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	29	0	11.0	96	0.7	216	0.4	85
2012	1	29	1	10.1	99	0.2	222	0.5	87
2012	1	29	2	8.4	105	0.4	219	0.3	96
2012	1	29	3	8.3	105	0.5	306	0.4	54
2012	1	29	4	7.9	103	0.8	234	0.2	283
2012	1	29	5	7.3	103	0.7	229	NAN	NAN
2012	1	29	6	6.9	98	0.6	299	NAN	NAN
2012	1	29	7	8.0	89	0.6	342	NAN	NAN
2012	1	29	8	8.2	91	1.0	221	NAN	NAN
2012	1	29	9	9.0	87	0.6	191	NAN	NAN
2012	1	29	10	9.6	84	0.4	164	NAN	NAN
2012	1	29	11	9.3	87	0.8	211	NAN	NAN
2012	1	29	12	9.2	86	0.7	214	NAN	NAN
2012	1	29	13	9.3	83	0.7	203	NAN	NAN
2012	1	29	14	8.7	82	0.8	208	0.1	147
2012	1	29	15	8.9	89	0.8	216	1.0	109
2012	1	29	16	8.6	84	1.1	219	1.5	110
2012	1	29	17	8.1	85	1.2	210	1.3	134
2012	1	29	18	8.6	83	1.0	201	1.1	120
2012	1	29	19	8.0	81	0.9	195	2.4	115
2012	1	29	20	7.7	82	1.4	217	2.9	112
2012	1	29	21	5.6	93	1.6	206	2.8	110
2012	1	29	22	8.5	81	1.5	183	3.2	117
2012	1	29	23	8.6	86	1.8	192	3.2	122
2012	1	30	0	6.2	101	2.2	193	3.7	120
2012	1	30	1	3.8	120	2.7	193	4.3	123
2012	1	30	2	3.3	98	2.4	189	4.2	125
2012	1	30	3	3.9	317	2.9	188	3.5	127
2012	1	30	4	4.2	323	3.2	186	2.7	131
2012	1	30	5	4.1	291	3.8	189	2.3	132
2012	1	30	6	3.4	280	3.6	196	2.5	128
2012	1	30	7	2.9	291	3.4	202	2.1	119
2012	1	30	8	1.7	294	3.3	185	3.5	124
2012	1	30	9	6.8	90	2.7	183	4.1	118
2012	1	30	10	9.9	88	2.9	179	3.4	117
2012	1	30	11	10.3	89	2.7	169	3.6	117
2012	1	30	12	10.1	91	2.6	134	4.2	111
2012	1	30	13	9.7	88	2.3	150	3.9	115
2012	1	30	14	8.2	92	1.9	175	3.0	112
2012	1	30	15	5.7	98	2.0	169	3.4	117
2012	1	30	16	5.2	91	1.7	190	3.2	117
2012	1	30	17	5.3	85	1.3	181	4.0	120
2012	1	30	18	4.5	84	1.5	185	2.8	124
2012	1	30	19	6.3	95	1.4	179	3.4	116
2012	1	30	20	6.2	96	1.4	193	4.8	117
2012	1	30	21	6.7	88	1.4	211	5.4	114
2012	1	30	22	6.9	84	1.4	206	5.4	117
2012	1	30	23	4.2	88	1.2	192	4.8	122

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	1	31	0	3.2	53	1.1	201	5.1	115
2012	1	31	1	3.9	286	1.5	194	5.0	115
2012	1	31	2	2.3	40	1.7	179	5.4	113
2012	1	31	3	4.3	82	2.2	198	5.0	118
2012	1	31	4	6.1	84	2.5	180	4.3	123
2012	1	31	5	6.6	85	2.0	184	4.4	119
2012	1	31	6	5.3	84	2.0	197	4.1	118
2012	1	31	7	8.3	85	1.5	180	4.4	118
2012	1	31	8	9.5	84	0.9	188	5.4	116
2012	1	31	9	10.5	88	0.7	233	4.1	108
2012	1	31	10	11.0	88	0.9	41	4.4	115
2012	1	31	11	11.9	90	0.9	144	4.5	115
2012	1	31	12	10.0	99	1.5	222	4.8	110
2012	1	31	13	9.2	92	1.3	206	3.6	109
2012	1	31	14	10.3	91	0.9	221	3.9	110
2012	1	31	15	10.7	85	1.5	230	3.8	106
2012	1	31	16	7.9	107	1.4	201	3.3	111
2012	1	31	17	5.5	97	2.9	177	3.9	104
2012	1	31	18	4.6	87	3.2	195	4.7	112
2012	1	31	19	3.0	142	2.3	167	3.1	121
2012	1	31	20	4.5	257	1.3	228	3.6	121
2012	1	31	21	3.3	314	1.7	228	4.1	111
2012	1	31	22	2.0	50	2.0	216	4.6	112
2012	1	31	23	3.5	110	1.9	199	3.5	103
2012	2	1	0	4.8	102	1.4	163	3.5	108
2012	2	1	1	5.7	102	1.4	184	2.9	115
2012	2	1	2	5.5	98	1.2	174	2.7	105
2012	2	1	3	4.7	101	1.0	189	3.1	107
2012	2	1	4	3.6	101	0.5	202	2.8	112
2012	2	1	5	1.5	147	0.3	219	2.9	109
2012	2	1	6	1.5	231	0.4	219	3.2	115
2012	2	1	7	3.6	101	1.0	220	2.8	100
2012	2	1	8	6.5	108	0.8	220	2.7	101
2012	2	1	9	6.3	108	0.9	220	3.6	111
2012	2	1	10	7.7	97	0.6	220	3.7	110
2012	2	1	11	8.1	91	1.0	204	4.3	112
2012	2	1	12	8.3	89	1.0	156	4.5	111
2012	2	1	13	9.5	89	0.6	193	4.4	112
2012	2	1	14	11.5	89	0.9	138	5.0	107
2012	2	1	15	12.3	90	0.9	204	4.6	112
2012	2	1	16	14.9	83	1.0	221	4.1	116
2012	2	1	17	15.8	90	0.9	268	4.2	103
2012	2	1	18	16.5	90	1.2	123	4.3	85
2012	2	1	19	19.6	85	1.6	99	4.5	111
2012	2	1	20	18.3	87	1.5	287	5.3	125
2012	2	1	21	19.0	87	2.0	104	5.6	117
2012	2	1	22	17.1	85	1.5	131	4.7	112
2012	2	1	23	13.3	102	1.5	130	4.7	107

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	2	0	11.7	90	1.2	206	5.5	108
2012	2	2	1	11.2	84	1.4	185	5.2	107
2012	2	2	2	7.4	97	1.6	154	5.0	114
2012	2	2	3	6.0	119	1.6	213	6.0	115
2012	2	2	4	6.2	105	1.8	210	6.2	115
2012	2	2	5	7.4	88	1.3	204	6.8	112
2012	2	2	6	7.5	91	1.7	198	7.0	111
2012	2	2	7	9.5	85	1.9	206	5.9	113
2012	2	2	8	9.6	82	2.0	195	5.7	114
2012	2	2	9	8.7	90	2.0	217	5.4	116
2012	2	2	10	8.4	87	1.2	220	5.2	110
2012	2	2	11	8.9	96	1.0	223	5.5	110
2012	2	2	12	9.5	101	1.0	343	5.2	110
2012	2	2	13	10.5	98	1.5	343	5.0	113
2012	2	2	14	13.1	90	1.3	173	5.1	113
2012	2	2	15	16.6	84	1.4	146	5.1	108
2012	2	2	16	15.2	96	1.8	202	5.4	102
2012	2	2	17	12.7	95	1.8	236	5.3	102
2012	2	2	18	12.8	84	1.9	244	5.0	103
2012	2	2	19	12.2	94	1.8	207	4.9	110
2012	2	2	20	12.4	93	1.1	261	5.0	109
2012	2	2	21	10.3	108	1.2	171	5.3	100
2012	2	2	22	10.8	108	1.4	208	4.9	93
2012	2	2	23	12.1	101	1.1	180	5.0	95
2012	2	3	0	11.4	101	1.6	225	5.2	96
2012	2	3	1	11.5	102	1.7	223	4.0	88
2012	2	3	2	12.0	102	2.3	206	4.2	84
2012	2	3	3	14.2	99	2.6	211	4.0	95
2012	2	3	4	14.2	103	1.6	267	2.2	122
2012	2	3	5	14.6	101	2.0	153	5.8	100
2012	2	3	6	13.2	89	2.1	225	5.8	100
2012	2	3	7	8.8	96	2.1	212	5.9	109
2012	2	3	8	7.0	111	2.5	176	6.2	110
2012	2	3	9	6.1	129	5.4	184	5.7	112
2012	2	3	10	6.5	123	5.4	206	6.1	110
2012	2	3	11	5.5	136	3.2	191	6.3	109
2012	2	3	12	3.1	122	1.6	177	5.5	110
2012	2	3	13	4.9	107	2.9	199	4.9	108
2012	2	3	14	6.2	112	2.2	213	5.1	102
2012	2	3	15	4.6	105	1.9	197	3.1	107
2012	2	3	16	4.9	101	2.1	216	2.2	94
2012	2	3	17	7.1	102	1.5	222	1.3	81
2012	2	3	18	8.4	102	1.1	233	1.0	24
2012	2	3	19	10.1	103	0.8	5	0.7	54
2012	2	3	20	9.5	107	0.8	348	0.3	12
2012	2	3	21	7.4	108	1.6	357	1.7	6
2012	2	3	22	8.2	113	2.1	10	1.9	343
2012	2	3	23	9.4	102	2.3	15	2.1	4

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	4	0	10.6	102	2.5	10	2.2	5
2012	2	4	1	12.0	100	1.7	359	1.9	351
2012	2	4	2	10.8	96	0.8	20	1.5	0
2012	2	4	3	9.8	106	1.4	14	1.3	349
2012	2	4	4	6.6	109	1.8	5	1.4	0
2012	2	4	5	7.8	105	2.3	11	1.4	2
2012	2	4	6	6.9	110	1.4	10	1.1	14
2012	2	4	7	7.6	108	0.8	346	0.5	357
2012	2	4	8	4.2	108	0.5	332	0.9	354
2012	2	4	9	2.0	93	2.1	4	0.9	0
2012	2	4	10	1.1	112	1.9	4	1.2	1
2012	2	4	11	4.0	106	1.0	346	1.1	3
2012	2	4	12	6.8	107	0.5	20	0.8	9
2012	2	4	13	8.2	103	0.4	306	0.3	308
2012	2	4	14	8.0	102	0.4	181	0.3	246
2012	2	4	15	8.9	98	0.6	341	0.4	301
2012	2	4	16	9.2	98	1.0	357	0.3	227
2012	2	4	17	8.7	96	2.3	11	0.5	311
2012	2	4	18	9.5	98	2.3	7	0.6	335
2012	2	4	19	10.9	103	2.5	20	1.5	7
2012	2	4	20	10.6	97	3.0	14	1.9	10
2012	2	4	21	12.8	103	2.4	19	2.2	9
2012	2	4	22	15.9	109	3.0	17	1.7	4
2012	2	4	23	16.2	112	3.0	15	1.2	339
2012	2	5	0	16.1	113	2.7	16	1.5	17
2012	2	5	1	14.1	117	2.9	8	0.7	74
2012	2	5	2	12.7	122	2.6	15	1.1	38
2012	2	5	3	14.6	118	3.4	17	0.8	0
2012	2	5	4	11.6	125	2.8	23	0.6	27
2012	2	5	5	11.5	122	2.7	10	0.5	103
2012	2	5	6	13.4	117	2.6	14	1.3	91
2012	2	5	7	14.5	113	3.1	4	2.5	91
2012	2	5	8	14.1	105	3.1	0	1.5	74
2012	2	5	9	14.2	103	2.8	3	0.8	49
2012	2	5	10	16.0	99	1.4	18	1.1	67
2012	2	5	11	13.7	108	1.3	46	1.4	90
2012	2	5	12	12.1	107	1.4	98	1.2	85
2012	2	5	13	11.0	107	1.8	94	1.6	75
2012	2	5	14	9.3	109	2.1	45	1.5	84
2012	2	5	15	10.8	112	1.9	3	1.0	63
2012	2	5	16	10.5	108	1.9	44	1.6	97
2012	2	5	17	11.5	96	1.2	69	1.6	91
2012	2	5	18	10.7	96	1.0	125	2.5	91
2012	2	5	19	11.9	100	1.4	14	2.9	79
2012	2	5	20	9.9	108	2.3	11	1.3	47
2012	2	5	21	10.0	107	1.4	37	0.9	56
2012	2	5	22	9.8	104	1.1	136	0.9	84
2012	2	5	23	9.4	101	1.3	5	3.2	100

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	6	0	10.1	99	1.7	24	2.8	93
2012	2	6	1	9.8	99	1.9	19	3.0	90
2012	2	6	2	11.0	99	1.2	10	2.2	84
2012	2	6	3	11.5	97	1.1	347	1.6	83
2012	2	6	4	11.8	100	1.7	346	3.6	109
2012	2	6	5	11.4	102	2.0	69	2.8	96
2012	2	6	6	11.8	94	1.5	34	2.2	83
2012	2	6	7	10.6	100	2.5	75	2.0	75
2012	2	6	8	12.4	108	2.3	68	2.8	81
2012	2	6	9	14.8	103	2.3	53	3.4	95
2012	2	6	10	14.0	101	2.4	72	3.8	99
2012	2	6	11	14.1	97	2.3	68	3.6	91
2012	2	6	12	14.1	89	1.9	65	3.1	90
2012	2	6	13	13.3	97	1.6	9	2.7	87
2012	2	6	14	13.3	101	1.3	5	2.8	99
2012	2	6	15	13.3	107	1.7	26	2.6	95
2012	2	6	16	11.9	104	2.5	6	2.3	65
2012	2	6	17	13.0	96	2.5	23	2.3	74
2012	2	6	18	12.7	98	2.6	21	1.8	58
2012	2	6	19	13.4	100	2.1	21	1.0	30
2012	2	6	20	13.7	99	1.8	24	1.5	65
2012	2	6	21	12.8	102	1.2	14	0.7	63
2012	2	6	22	13.7	101	1.7	5	0.4	301
2012	2	6	23	14.1	99	1.8	7	0.5	348
2012	2	7	0	13.4	103	1.6	21	0.5	289
2012	2	7	1	12.6	101	1.7	15	0.7	27
2012	2	7	2	13.2	100	1.5	31	0.4	254
2012	2	7	3	14.3	102	0.8	31	0.2	179
2012	2	7	4	13.7	104	0.8	104	0.3	310
2012	2	7	5	13.7	103	1.1	59	0.6	100
2012	2	7	6	13.9	101	1.0	40	1.2	83
2012	2	7	7	14.3	102	2.1	14	0.4	27
2012	2	7	8	15.2	99	1.2	24	0.8	67
2012	2	7	9	14.5	98	0.7	10	0.4	336
2012	2	7	10	13.6	106	0.7	42	0.3	297
2012	2	7	11	13.9	107	1.2	20	0.3	109
2012	2	7	12	12.9	103	0.8	51	0.5	139
2012	2	7	13	12.5	106	1.2	44	0.5	127
2012	2	7	14	12.7	109	1.6	22	0.3	202
2012	2	7	15	12.9	105	1.9	33	0.6	151
2012	2	7	16	13.1	106	1.8	25	0.7	132
2012	2	7	17	13.5	106	1.1	41	0.8	94
2012	2	7	18	13.1	104	0.8	95	0.6	71
2012	2	7	19	12.9	104	0.9	83	0.6	126
2012	2	7	20	12.4	105	1.1	59	0.2	70
2012	2	7	21	13.5	105	1.7	40	0.4	311
2012	2	7	22	13.7	106	1.4	52	0.5	87
2012	2	7	23	12.5	102	0.7	47	0.1	342

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	8	0	13.7	97	0.5	22	0.9	10
2012	2	8	1	14.1	95	0.9	215	0.2	73
2012	2	8	2	12.7	94	0.5	276	0.2	205
2012	2	8	3	12.6	107	1.5	3	0.4	48
2012	2	8	4	12.3	99	1.8	14	0.5	339
2012	2	8	5	13.7	96	2.7	14	0.5	4
2012	2	8	6	14.0	100	1.5	10	1.0	4
2012	2	8	7	12.5	101	1.7	11	1.7	26
2012	2	8	8	12.8	102	0.8	297	0.7	71
2012	2	8	9	12.3	101	0.7	8	0.6	34
2012	2	8	10	11.8	97	0.7	12	0.4	84
2012	2	8	11	12.2	96	1.3	0	0.2	183
2012	2	8	12	11.9	100	1.1	17	0.7	98
2012	2	8	13	11.5	102	0.8	78	0.5	140
2012	2	8	14	12.1	101	0.8	157	0.6	154
2012	2	8	15	12.4	99	1.1	220	0.8	115
2012	2	8	16	12.6	102	1.4	202	0.6	138
2012	2	8	17	12.3	96	0.7	171	0.6	142
2012	2	8	18	11.5	99	0.6	168	1.3	77
2012	2	8	19	11.2	101	0.6	197	0.4	234
2012	2	8	20	11.4	97	1.1	221	0.4	245
2012	2	8	21	11.3	94	0.5	322	0.6	326
2012	2	8	22	11.2	99	0.9	231	0.4	58
2012	2	8	23	9.9	99	1.0	343	0.8	354
2012	2	9	0	9.2	98	1.6	9	0.5	354
2012	2	9	1	8.0	105	1.6	6	0.5	351
2012	2	9	2	9.1	101	1.4	21	0.3	74
2012	2	9	3	10.4	98	1.5	19	0.4	52
2012	2	9	4	10.8	100	1.3	315	0.7	349
2012	2	9	5	11.3	98	1.1	14	0.7	74
2012	2	9	6	12.1	96	2.7	12	0.6	6
2012	2	9	7	14.3	114	3.5	7	0.8	16
2012	2	9	8	17.6	111	2.9	16	0.9	333
2012	2	9	9	17.4	112	1.8	8	0.6	85
2012	2	9	10	18.6	112	2.1	17	1.0	136
2012	2	9	11	17.4	112	1.2	38	1.3	109
2012	2	9	12	14.8	106	1.7	28	2.3	98
2012	2	9	13	14.5	105	3.0	357	2.0	87
2012	2	9	14	14.7	104	1.9	17	1.8	91
2012	2	9	15	16.9	95	1.5	336	0.9	125
2012	2	9	16	17.2	93	2.0	46	2.0	85
2012	2	9	17	16.2	94	1.8	54	2.2	109
2012	2	9	18	14.8	93	1.5	218	2.1	94
2012	2	9	19	13.9	103	2.0	175	3.5	103
2012	2	9	20	12.4	96	1.2	203	3.9	97
2012	2	9	21	12.4	92	2.2	223	3.6	88
2012	2	9	22	10.5	92	1.5	255	3.4	91
2012	2	9	23	9.3	106	2.7	229	3.0	90

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	10	0	8.7	99	2.4	216	2.3	89
2012	2	10	1	10.2	94	1.6	197	2.3	58
2012	2	10	2	7.6	105	0.9	200	3.0	89
2012	2	10	3	6.6	117	0.8	208	1.2	76
2012	2	10	4	8.8	100	0.7	341	0.6	307
2012	2	10	5	8.4	101	1.1	259	0.9	93
2012	2	10	6	6.7	99	1.3	227	0.5	328
2012	2	10	7	7.3	103	0.9	212	0.6	339
2012	2	10	8	7.9	98	0.5	262	0.7	290
2012	2	10	9	6.9	110	0.6	216	0.4	281
2012	2	10	10	6.1	111	0.4	289	0.3	254
2012	2	10	11	6.5	107	0.7	20	0.7	355
2012	2	10	12	9.0	105	0.6	114	0.3	280
2012	2	10	13	7.6	105	0.9	121	0.4	232
2012	2	10	14	6.5	113	0.8	100	0.4	230
2012	2	10	15	5.3	113	0.6	96	0.6	206
2012	2	10	16	6.3	109	0.4	156	0.4	205
2012	2	10	17	6.8	107	0.2	346	0.4	209
2012	2	10	18	6.6	101	0.2	44	0.4	124
2012	2	10	19	9.1	104	0.5	291	0.3	327
2012	2	10	20	10.0	101	0.9	237	0.3	88
2012	2	10	21	10.7	102	0.5	341	0.5	36
2012	2	10	22	11.0	106	0.5	297	0.2	304
2012	2	10	23	10.5	109	0.6	3	0.3	15
2012	2	11	0	9.2	109	0.6	350	0.5	16
2012	2	11	1	9.2	106	0.6	334	0.6	359
2012	2	11	2	11.0	91	0.5	47	1.1	2
2012	2	11	3	11.0	91	0.8	219	0.7	91
2012	2	11	4	9.1	104	1.0	199	0.4	243
2012	2	11	5	10.3	94	0.6	355	0.7	106
2012	2	11	6	10.0	93	0.9	225	0.8	18
2012	2	11	7	9.4	91	1.2	194	0.5	120
2012	2	11	8	8.8	99	0.6	211	0.2	220
2012	2	11	9	8.1	102	0.8	233	0.2	344
2012	2	11	10	9.2	92	0.4	210	0.8	31
2012	2	11	11	7.9	102	0.7	162	0.3	155
2012	2	11	12	9.2	99	0.6	152	0.3	166
2012	2	11	13	9.4	101	0.9	197	0.9	148
2012	2	11	14	9.1	101	0.9	187	2.8	106
2012	2	11	15	8.6	99	1.0	179	1.7	127
2012	2	11	16	9.2	95	1.2	213	2.1	134
2012	2	11	17	10.9	97	1.1	224	3.0	113
2012	2	11	18	10.3	94	1.1	203	3.4	113
2012	2	11	19	10.7	84	1.1	226	3.7	91
2012	2	11	20	10.1	79	1.3	204	3.8	94
2012	2	11	21	12.7	85	1.2	225	4.1	100
2012	2	11	22	13.8	87	1.1	229	4.4	100
2012	2	11	23	12.7	84	1.4	208	4.1	109

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	12	0	10.9	85	1.5	192	4.6	107
2012	2	12	1	9.7	79	1.8	191	4.4	109
2012	2	12	2	8.5	81	1.7	161	4.6	114
2012	2	12	3	7.2	80	1.9	158	4.6	117
2012	2	12	4	4.8	47	1.7	188	5.4	114
2012	2	12	5	3.9	299	1.6	204	5.6	119
2012	2	12	6	4.3	297	1.9	184	4.9	122
2012	2	12	7	3.6	274	0.7	263	3.2	133
2012	2	12	8	2.0	304	1.2	257	1.0	137
2012	2	12	9	0.9	281	3.1	240	0.9	26
2012	2	12	10	2.8	274	1.5	245	0.9	3
2012	2	12	11	3.5	303	3.4	221	0.5	222
2012	2	12	12	5.4	307	4.9	230	0.4	226
2012	2	12	13	3.6	303	4.8	224	0.9	213
2012	2	12	14	3.0	299	6.6	243	1.7	262
2012	2	12	15	3.5	301	5.9	247	1.6	269
2012	2	12	16	2.6	267	6.1	250	2.2	239
2012	2	12	17	4.1	282	3.8	241	2.5	243
2012	2	12	18	3.4	304	4.1	252	2.7	251
2012	2	12	19	3.7	309	3.7	256	2.5	253
2012	2	12	20	3.6	272	2.6	254	2.0	275
2012	2	12	21	3.0	269	1.2	320	1.5	311
2012	2	12	22	3.2	262	3.7	238	1.0	323
2012	2	12	23	3.0	252	3.2	218	1.7	258
2012	2	13	0	2.6	257	3.6	210	1.5	284
2012	2	13	1	2.4	266	3.9	214	0.7	351
2012	2	13	2	2.1	257	2.3	224	0.6	338
2012	2	13	3	1.6	236	3.1	225	0.9	52
2012	2	13	4	2.1	264	2.0	245	0.9	96
2012	2	13	5	1.7	259	1.2	346	0.9	102
2012	2	13	6	2.5	261	1.0	4	0.6	116
2012	2	13	7	3.0	233	0.8	46	0.5	126
2012	2	13	8	2.9	211	0.9	161	0.3	75
2012	2	13	9	3.9	100	0.6	170	0.7	50
2012	2	13	10	6.1	108	0.8	145	0.2	60
2012	2	13	11	4.5	108	1.0	143	0.5	117
2012	2	13	12	5.0	103	1.7	162	0.4	190
2012	2	13	13	5.6	102	1.1	161	0.6	186
2012	2	13	14	3.5	107	1.0	98	0.6	182
2012	2	13	15	2.1	89	0.6	38	0.6	205
2012	2	13	16	2.5	97	0.7	319	0.7	209
2012	2	13	17	4.2	97	1.5	352	0.3	271
2012	2	13	18	5.1	104	1.4	9	0.7	284
2012	2	13	19	6.3	105	1.5	351	1.4	352
2012	2	13	20	8.6	108	2.3	4	1.7	2
2012	2	13	21	8.0	110	2.3	10	2.0	6
2012	2	13	22	7.5	109	2.6	6	1.8	347
2012	2	13	23	7.4	107	2.3	358	2.0	352

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	14	0	7.3	107	2.3	3	2.0	2
2012	2	14	1	7.5	107	1.2	344	1.8	1
2012	2	14	2	6.6	105	0.9	221	2.0	336
2012	2	14	3	8.3	104	0.7	334	1.8	336
2012	2	14	4	8.2	101	0.8	295	2.0	355
2012	2	14	5	7.7	107	1.1	352	1.8	8
2012	2	14	6	3.9	97	1.1	11	1.5	7
2012	2	14	7	1.7	96	1.0	224	0.3	275
2012	2	14	8	2.8	93	1.2	185	0.3	231
2012	2	14	9	3.2	89	0.4	124	0.2	126
2012	2	14	10	1.2	41	0.4	94	0.5	59
2012	2	14	11	2.6	225	0.6	99	0.4	219
2012	2	14	12	2.1	238	0.8	137	0.5	211
2012	2	14	13	2.2	222	1.1	131	0.6	200
2012	2	14	14	3.3	114	1.3	183	0.6	182
2012	2	14	15	2.1	232	1.7	208	0.9	155
2012	2	14	16	3.1	223	1.3	225	0.6	211
2012	2	14	17	2.7	87	1.0	195	0.7	228
2012	2	14	18	2.2	288	0.9	190	0.4	170
2012	2	14	19	2.3	239	1.8	345	0.9	317
2012	2	14	20	2.0	246	1.1	241	1.5	347
2012	2	14	21	2.4	255	0.9	56	1.3	349
2012	2	14	22	2.8	226	1.0	8	1.3	348
2012	2	14	23	2.0	199	1.4	359	1.1	322
2012	2	15	0	3.1	87	1.5	23	1.7	3
2012	2	15	1	1.4	81	0.8	189	1.4	350
2012	2	15	2	4.2	94	0.9	14	1.4	356
2012	2	15	3	6.5	108	1.3	12	1.5	360
2012	2	15	4	4.7	96	1.2	248	1.1	340
2012	2	15	5	3.5	87	1.1	207	0.6	20
2012	2	15	6	3.6	87	1.6	354	0.5	36
2012	2	15	7	7.0	104	2.3	8	1.2	15
2012	2	15	8	6.4	99	1.3	1	1.3	351
2012	2	15	9	9.0	102	0.9	336	1.0	12
2012	2	15	10	8.4	103	0.7	191	0.5	341
2012	2	15	11	5.7	102	0.4	148	0.5	120
2012	2	15	12	5.1	106	0.6	103	0.3	203
2012	2	15	13	6.2	96	0.8	175	0.4	177
2012	2	15	14	5.9	109	1.0	180	0.4	169
2012	2	15	15	6.9	100	0.8	186	0.5	217
2012	2	15	16	9.4	93	0.7	170	0.4	209
2012	2	15	17	11.2	99	1.1	195	0.6	108
2012	2	15	18	11.2	97	1.1	192	1.0	105
2012	2	15	19	9.7	96	1.0	219	0.7	270
2012	2	15	20	8.8	98	0.9	201	0.5	100
2012	2	15	21	7.6	100	1.1	205	0.2	185
2012	2	15	22	8.9	101	0.4	243	0.4	54
2012	2	15	23	9.0	104	0.3	45	0.4	66

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	16	0	8.3	102	0.3	225	0.7	106
2012	2	16	1	8.4	105	0.6	188	0.2	61
2012	2	16	2	7.5	104	0.9	184	0.3	232
2012	2	16	3	5.8	105	0.8	211	0.4	153
2012	2	16	4	4.5	103	1.0	218	0.5	252
2012	2	16	5	4.0	103	0.7	214	0.5	100
2012	2	16	6	3.7	107	0.3	280	0.9	58
2012	2	16	7	3.0	101	0.3	312	0.4	233
2012	2	16	8	0.9	93	0.7	249	0.3	321
2012	2	16	9	0.6	246	0.6	15	0.3	316
2012	2	16	10	1.8	252	0.4	55	0.6	350
2012	2	16	11	1.9	223	0.5	165	0.2	274
2012	2	16	12	1.0	199	0.7	349	0.3	198
2012	2	16	13	1.4	131	0.7	16	0.5	187
2012	2	16	14	2.8	104	0.6	41	0.4	182
2012	2	16	15	3.8	104	0.4	112	0.4	182
2012	2	16	16	5.7	93	0.6	50	0.4	180
2012	2	16	17	7.9	92	0.9	126	0.4	144
2012	2	16	18	6.2	96	1.5	224	0.6	302
2012	2	16	19	7.2	102	0.7	17	0.7	348
2012	2	16	20	9.5	92	0.7	189	0.7	359
2012	2	16	21	9.6	89	0.8	202	0.3	155
2012	2	16	22	7.1	99	1.2	217	0.4	348
2012	2	16	23	7.6	102	0.7	309	0.6	116
2012	2	17	0	9.4	96	0.8	199	0.7	92
2012	2	17	1	8.9	98	0.6	199	0.8	137
2012	2	17	2	8.6	101	0.6	220	0.4	22
2012	2	17	3	8.7	100	0.3	180	0.4	94
2012	2	17	4	8.7	102	0.3	117	0.5	125
2012	2	17	5	8.9	101	0.6	216	0.4	277
2012	2	17	6	9.1	97	0.4	188	0.8	128
2012	2	17	7	9.1	103	0.5	88	0.6	224
2012	2	17	8	9.2	104	0.5	82	0.4	285
2012	2	17	9	9.0	96	0.6	73	0.4	180
2012	2	17	10	8.3	101	0.6	38	0.3	99
2012	2	17	11	9.0	94	1.0	46	0.1	142
2012	2	17	12	9.0	101	1.6	37	0.1	224
2012	2	17	13	8.3	96	2.7	21	0.2	288
2012	2	17	14	8.6	105	2.6	24	0.5	278
2012	2	17	15	9.1	91	2.5	12	0.6	96
2012	2	17	16	7.9	85	3.0	19	0.7	24
2012	2	17	17	7.2	100	3.2	11	0.4	259
2012	2	17	18	4.7	104	3.2	9	1.4	326
2012	2	17	19	6.7	105	2.7	3	1.7	328
2012	2	17	20	7.6	110	3.1	7	1.2	23
2012	2	17	21	6.9	104	3.4	9	1.5	11
2012	2	17	22	8.1	94	3.2	10	1.6	11
2012	2	17	23	6.4	102	2.6	1	1.7	14

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	18	0	5.7	104	2.2	7	2.2	17
2012	2	18	1	4.3	102	1.6	4	2.3	9
2012	2	18	2	2.0	93	0.7	172	2.0	15
2012	2	18	3	0.5	77	1.0	256	1.2	348
2012	2	18	4	0.7	254	0.7	22	1.6	10
2012	2	18	5	1.2	286	0.8	332	1.0	356
2012	2	18	6	1.2	262	0.8	345	0.7	326
2012	2	18	7	1.7	282	0.6	214	0.7	57
2012	2	18	8	2.0	273	1.0	323	0.4	292
2012	2	18	9	1.7	249	0.6	244	0.3	106
2012	2	18	10	2.1	259	0.5	216	0.3	41
2012	2	18	11	3.1	272	0.6	60	0.3	267
2012	2	18	12	3.3	278	0.7	83	0.5	183
2012	2	18	13	3.2	295	0.8	171	0.6	182
2012	2	18	14	3.4	291	0.6	170	0.6	192
2012	2	18	15	3.7	291	0.9	172	0.6	166
2012	2	18	16	2.9	289	1.2	150	0.7	205
2012	2	18	17	1.8	287	0.9	191	1.0	111
2012	2	18	18	1.5	288	1.5	232	1.0	100
2012	2	18	19	1.2	294	2.3	237	1.1	71
2012	2	18	20	1.2	290	3.2	231	0.6	58
2012	2	18	21	1.4	122	3.2	222	0.6	279
2012	2	18	22	3.6	101	2.2	209	0.7	95
2012	2	18	23	5.5	105	1.4	195	0.6	93
2012	2	19	0	5.5	106	1.5	166	0.9	84
2012	2	19	1	5.3	108	0.7	211	1.5	104
2012	2	19	2	5.6	108	0.5	164	1.3	121
2012	2	19	3	5.8	107	0.4	122	2.5	116
2012	2	19	4	6.4	102	0.3	188	2.1	120
2012	2	19	5	6.3	107	0.8	344	2.4	115
2012	2	19	6	6.8	102	0.8	357	2.3	116
2012	2	19	7	6.7	102	0.9	358	2.6	116
2012	2	19	8	7.2	101	1.1	8	2.3	104
2012	2	19	9	8.0	102	1.3	8	1.9	94
2012	2	19	10	8.8	104	1.4	16	2.2	96
2012	2	19	11	8.5	102	1.4	27	2.3	94
2012	2	19	12	8.7	103	0.9	28	2.3	95
2012	2	19	13	8.7	97	0.9	148	2.2	95
2012	2	19	14	8.7	98	1.0	163	2.6	103
2012	2	19	15	8.9	101	0.8	191	1.9	103
2012	2	19	16	9.5	102	0.7	210	2.1	101
2012	2	19	17	9.5	103	0.6	354	2.5	94
2012	2	19	18	9.6	99	0.5	315	2.7	84
2012	2	19	19	9.6	97	0.5	167	2.6	87
2012	2	19	20	10.5	96	0.5	224	1.7	87
2012	2	19	21	10.1	100	0.5	316	0.4	111
2012	2	19	22	10.9	101	0.7	16	1.5	84
2012	2	19	23	11.2	105	1.8	15	1.7	90

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	20	0	11.8	106	1.9	4	2.2	81
2012	2	20	1	10.9	103	1.8	20	2.6	80
2012	2	20	2	10.8	105	1.7	14	2.2	81
2012	2	20	3	11.1	103	1.2	353	2.3	87
2012	2	20	4	11.4	104	0.5	249	2.1	81
2012	2	20	5	12.0	98	1.0	7	1.4	99
2012	2	20	6	12.5	95	0.5	39	2.5	83
2012	2	20	7	11.7	94	0.8	236	2.3	74
2012	2	20	8	11.7	99	0.6	159	2.9	86
2012	2	20	9	10.4	103	0.8	166	3.1	100
2012	2	20	10	10.9	95	0.3	201	3.4	95
2012	2	20	11	11.5	100	0.5	127	3.1	94
2012	2	20	12	10.2	103	1.8	188	3.2	91
2012	2	20	13	10.8	104	1.7	177	4.4	96
2012	2	20	14	12.2	101	1.6	219	5.2	99
2012	2	20	15	12.5	92	1.8	207	5.4	99
2012	2	20	16	11.1	98	1.8	207	5.0	92
2012	2	20	17	9.7	93	2.0	204	5.5	112
2012	2	20	18	9.5	80	1.8	205	6.0	117
2012	2	20	19	6.3	94	1.6	214	5.3	106
2012	2	20	20	5.1	297	1.5	213	5.9	104
2012	2	20	21	3.8	321	1.6	197	6.0	111
2012	2	20	22	3.9	309	1.9	176	4.1	118
2012	2	20	23	5.4	308	1.7	165	3.7	113
2012	2	21	0	7.1	302	2.5	189	3.0	103
2012	2	21	1	7.2	298	2.1	179	2.9	107
2012	2	21	2	6.4	302	2.3	193	0.9	140
2012	2	21	3	5.2	299	2.7	205	2.0	116
2012	2	21	4	7.6	294	2.8	212	1.8	101
2012	2	21	5	4.6	284	2.8	198	1.7	113
2012	2	21	6	3.5	313	3.2	203	2.3	110
2012	2	21	7	2.8	304	2.7	193	2.2	116
2012	2	21	8	3.0	291	1.5	173	2.0	120
2012	2	21	9	2.7	297	1.8	209	2.4	98
2012	2	21	10	4.4	300	1.4	193	2.3	106
2012	2	21	11	3.7	290	2.6	211	2.0	110
2012	2	21	12	2.3	312	2.1	144	1.9	91
2012	2	21	13	2.8	327	1.6	155	2.1	111
2012	2	21	14	3.1	318	2.0	198	2.6	95
2012	2	21	15	2.5	120	1.7	191	2.9	104
2012	2	21	16	5.3	104	0.5	241	3.1	97
2012	2	21	17	5.8	94	0.8	254	3.5	108
2012	2	21	18	7.8	91	1.3	229	2.6	114
2012	2	21	19	7.0	93	1.3	208	2.7	105
2012	2	21	20	5.6	103	1.1	193	1.7	120
2012	2	21	21	1.9	47	1.8	213	1.6	116
2012	2	21	22	2.7	323	1.8	191	0.9	140
2012	2	21	23	3.8	287	1.9	188	0.4	196

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	22	0	1.9	250	1.4	165	0.8	169
2012	2	22	1	2.9	122	1.6	163	1.6	117
2012	2	22	2	1.8	99	1.2	174	2.8	121
2012	2	22	3	1.8	107	1.7	171	2.3	119
2012	2	22	4	1.9	261	1.0	154	1.7	111
2012	2	22	5	2.0	257	1.2	12	1.1	96
2012	2	22	6	1.9	268	0.5	309	1.1	348
2012	2	22	7	2.4	272	0.5	280	0.5	76
2012	2	22	8	3.0	279	0.7	23	0.3	19
2012	2	22	9	2.5	275	0.7	52	0.5	76
2012	2	22	10	3.3	291	0.4	96	0.1	104
2012	2	22	11	5.0	296	1.0	140	0.5	134
2012	2	22	12	6.5	302	1.0	123	0.8	122
2012	2	22	13	7.4	298	1.9	198	1.3	125
2012	2	22	14	8.4	296	5.3	232	1.2	132
2012	2	22	15	8.5	296	6.5	231	1.0	129
2012	2	22	16	6.6	298	6.5	235	1.7	218
2012	2	22	17	6.5	303	5.7	250	1.7	267
2012	2	22	18	6.6	305	6.0	252	1.5	274
2012	2	22	19	6.5	303	2.1	275	1.2	263
2012	2	22	20	5.4	305	5.0	238	1.9	287
2012	2	22	21	6.8	301	5.0	247	1.1	279
2012	2	22	22	6.1	305	4.5	236	1.8	274
2012	2	22	23	4.5	288	5.7	242	1.2	281
2012	2	23	0	2.6	274	4.3	229	0.6	278
2012	2	23	1	3.1	275	4.3	232	0.7	180
2012	2	23	2	4.6	284	3.3	228	1.6	97
2012	2	23	3	5.2	302	4.3	229	1.4	78
2012	2	23	4	4.1	291	4.7	228	1.4	67
2012	2	23	5	3.1	279	3.1	227	1.5	58
2012	2	23	6	2.8	308	1.4	179	2.0	96
2012	2	23	7	2.5	319	1.9	180	1.7	118
2012	2	23	8	1.7	285	2.3	186	2.1	102
2012	2	23	9	1.8	249	1.2	163	1.6	89
2012	2	23	10	1.7	242	2.5	177	1.5	62
2012	2	23	11	1.9	216	1.8	165	1.1	141
2012	2	23	12	1.6	217	3.3	197	1.4	127
2012	2	23	13	1.2	169	3.4	198	1.1	132
2012	2	23	14	1.6	252	3.6	201	0.9	152
2012	2	23	15	2.0	236	3.7	219	0.8	179
2012	2	23	16	2.0	161	1.6	225	0.9	212
2012	2	23	17	1.9	108	2.7	225	1.4	236
2012	2	23	18	4.0	108	1.2	253	1.8	257
2012	2	23	19	5.0	111	1.3	319	1.6	284
2012	2	23	20	5.2	111	1.2	344	1.8	299
2012	2	23	21	5.9	103	1.5	336	1.7	324
2012	2	23	22	6.9	105	0.5	108	2.1	355
2012	2	23	23	8.6	112	0.8	41	2.1	359

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	24	0	9.1	106	2.1	12	2.1	5
2012	2	24	1	9.2	109	2.2	24	2.4	9
2012	2	24	2	9.0	128	3.1	13	2.3	6
2012	2	24	3	10.8	122	3.6	15	2.4	359
2012	2	24	4	11.4	120	4.0	12	2.4	3
2012	2	24	5	12.3	122	4.3	14	2.1	18
2012	2	24	6	14.2	119	4.5	15	2.2	19
2012	2	24	7	15.1	117	4.2	12	2.0	14
2012	2	24	8	16.1	113	3.7	13	1.7	1
2012	2	24	9	14.9	118	3.2	20	0.6	356
2012	2	24	10	15.2	115	4.1	22	0.5	317
2012	2	24	11	14.8	113	4.0	18	0.5	279
2012	2	24	12	14.4	113	3.8	26	0.7	255
2012	2	24	13	12.4	118	3.9	32	1.1	242
2012	2	24	14	10.7	120	3.9	36	0.6	225
2012	2	24	15	11.1	120	3.9	33	1.4	310
2012	2	24	16	11.1	120	3.6	24	0.8	240
2012	2	24	17	9.9	116	3.9	25	0.9	264
2012	2	24	18	8.9	107	3.6	23	0.9	310
2012	2	24	19	10.2	112	3.4	22	1.7	336
2012	2	24	20	7.4	118	3.6	21	1.5	331
2012	2	24	21	7.0	105	4.0	20	1.8	302
2012	2	24	22	6.8	98	4.4	16	2.1	305
2012	2	24	23	2.7	55	3.7	13	2.4	303
2012	2	25	0	0.8	68	3.2	10	2.4	312
2012	2	25	1	1.0	181	3.1	15	2.7	319
2012	2	25	2	2.7	228	2.6	14	2.7	319
2012	2	25	3	2.1	260	3.1	12	1.9	306
2012	2	25	4	1.5	265	3.2	10	2.0	299
2012	2	25	5	1.0	88	3.4	13	2.1	300
2012	2	25	6	1.6	232	3.6	9	2.5	300
2012	2	25	7	1.9	252	4.1	10	2.5	297
2012	2	25	8	1.3	198	3.4	4	2.9	303
2012	2	25	9	1.0	85	3.0	9	2.9	303
2012	2	25	10	1.2	213	3.4	9	2.7	297
2012	2	25	11	2.8	243	3.2	18	2.6	296
2012	2	25	12	3.0	235	4.1	30	3.2	302
2012	2	25	13	2.5	238	3.9	31	3.3	288
2012	2	25	14	3.1	245	3.7	19	2.9	277
2012	2	25	15	3.4	235	2.8	356	3.1	279
2012	2	25	16	2.7	266	2.6	340	2.8	283
2012	2	25	17	1.4	246	2.2	340	2.2	286
2012	2	25	18	1.5	94	1.3	7	2.3	297
2012	2	25	19	1.4	83	2.1	346	2.3	307
2012	2	25	20	1.6	87	2.0	331	2.9	318
2012	2	25	21	1.9	93	2.2	327	3.0	310
2012	2	25	22	2.5	89	2.3	345	2.8	312
2012	2	25	23	3.2	88	2.6	348	2.5	320

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	26	0	3.9	89	2.0	319	2.2	341
2012	2	26	1	3.1	88	1.6	355	2.5	334
2012	2	26	2	1.9	94	2.1	339	2.6	345
2012	2	26	3	2.2	94	1.1	241	2.3	349
2012	2	26	4	3.7	86	2.2	359	2.4	350
2012	2	26	5	3.6	87	1.0	56	2.6	359
2012	2	26	6	4.5	87	0.6	211	2.3	356
2012	2	26	7	4.5	89	0.7	25	2.2	7
2012	2	26	8	4.4	89	0.8	227	1.9	352
2012	2	26	9	4.2	88	1.0	23	1.3	355
2012	2	26	10	2.9	89	1.1	28	0.8	55
2012	2	26	11	2.4	219	0.9	52	0.8	224
2012	2	26	12	2.0	94	0.7	145	0.8	197
2012	2	26	13	1.5	87	0.9	150	0.6	189
2012	2	26	14	2.4	236	1.1	112	0.6	212
2012	2	26	15	3.5	230	0.8	141	0.7	205
2012	2	26	16	2.9	236	0.6	208	0.4	165
2012	2	26	17	3.5	214	0.6	99	0.4	206
2012	2	26	18	3.2	225	0.8	160	0.3	320
2012	2	26	19	3.5	225	0.6	129	0.4	346
2012	2	26	20	3.7	216	0.8	351	0.5	51
2012	2	26	21	3.2	222	0.8	11	0.4	23
2012	2	26	22	2.5	222	0.8	246	0.8	39
2012	2	26	23	3.7	101	1.0	243	0.5	26
2012	2	27	0	3.5	94	0.7	243	0.4	316
2012	2	27	1	3.0	90	0.9	311	0.2	113
2012	2	27	2	2.3	85	0.5	336	0.8	82
2012	2	27	3	3.5	109	0.5	359	0.6	61
2012	2	27	4	3.9	107	0.6	199	0.5	97
2012	2	27	5	6.7	99	1.1	217	0.2	80
2012	2	27	6	7.5	103	1.3	200	0.2	105
2012	2	27	7	9.2	105	1.1	208	0.1	66
2012	2	27	8	10.1	106	0.8	174	0.3	171
2012	2	27	9	10.9	91	0.9	201	0.4	224
2012	2	27	10	11.0	92	0.8	174	2.0	109
2012	2	27	11	11.5	90	0.7	161	3.1	98
2012	2	27	12	11.5	100	0.8	168	2.7	110
2012	2	27	13	11.9	104	0.5	102	3.2	111
2012	2	27	14	11.7	103	0.8	49	4.1	100
2012	2	27	15	12.9	98	1.5	30	4.6	76
2012	2	27	16	12.7	99	1.8	22	4.0	79
2012	2	27	17	14.6	93	2.3	15	4.1	99
2012	2	27	18	15.4	86	2.1	24	4.0	101
2012	2	27	19	16.0	86	2.1	5	3.9	107
2012	2	27	20	14.6	86	1.6	20	4.6	97
2012	2	27	21	12.6	89	1.8	2	4.4	100
2012	2	27	22	11.1	102	1.2	355	4.1	92
2012	2	27	23	10.8	105	1.4	9	3.8	94

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	2	28	0	10.8	103	1.1	47	3.8	97
2012	2	28	1	9.9	107	0.8	37	3.4	110
2012	2	28	2	9.6	105	1.1	43	2.7	105
2012	2	28	3	9.9	104	0.8	36	1.9	95
2012	2	28	4	10.5	102	0.9	64	2.7	100
2012	2	28	5	10.5	103	0.6	136	1.1	96
2012	2	28	6	10.0	103	0.5	154	0.6	127
2012	2	28	7	9.9	99	0.4	198	1.3	87
2012	2	28	8	9.7	99	0.5	319	0.9	121
2012	2	28	9	10.3	99	0.7	36	0.8	89
2012	2	28	10	10.1	101	0.8	80	0.7	113
2012	2	28	11	9.8	101	0.9	127	0.4	154
2012	2	28	12	8.2	107	1.0	116	0.4	165
2012	2	28	13	8.3	101	1.2	151	0.6	188
2012	2	28	14	8.8	100	1.0	121	0.6	170
2012	2	28	15	9.1	92	0.7	116	0.6	210
2012	2	28	16	8.1	100	0.5	15	0.7	245
2012	2	28	17	8.5	103	1.5	17	0.4	253
2012	2	28	18	10.5	114	1.9	9	0.5	334
2012	2	28	19	11.0	109	2.6	7	0.8	359
2012	2	28	20	8.9	110	2.5	9	1.2	20
2012	2	28	21	8.5	113	2.8	6	2.0	354
2012	2	28	22	8.4	104	2.9	11	2.1	6
2012	2	28	23	8.7	104	2.3	24	1.8	15
2012	2	29	0	10.0	98	2.8	9	1.6	13
2012	2	29	1	9.8	104	2.9	13	1.7	13
2012	2	29	2	8.9	101	2.4	16	1.5	21
2012	2	29	3	9.5	112	2.3	23	1.6	14
2012	2	29	4	9.5	106	2.5	10	1.6	12
2012	2	29	5	8.0	104	2.4	12	1.1	24
2012	2	29	6	7.6	101	2.1	15	1.4	16
2012	2	29	7	7.5	102	2.5	8	1.3	17
2012	2	29	8	7.4	95	2.2	17	1.9	13
2012	2	29	9	6.5	96	2.2	21	1.7	13
2012	2	29	10	6.3	92	2.2	18	1.5	12
2012	2	29	11	6.4	96	1.9	22	1.0	19
2012	2	29	12	6.2	96	1.5	22	0.5	53
2012	2	29	13	4.7	107	1.0	128	0.5	202
2012	2	29	14	4.4	119	1.5	191	0.6	183
2012	2	29	15	3.7	100	1.5	201	0.6	163
2012	2	29	16	1.0	83	1.6	190	0.5	198
2012	2	29	17	1.2	87	1.2	185	0.6	220
2012	2	29	18	1.7	89	0.7	192	0.3	241
2012	2	29	19	2.8	104	0.8	313	0.3	260
2012	2	29	20	1.9	98	0.7	344	0.1	229
2012	2	29	21	0.6	72	0.9	348	0.4	261
2012	2	29	22	0.8	276	0.7	91	0.9	294
2012	2	29	23	0.9	265	0.8	324	1.0	316

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	1	0	1.9	283	0.7	350	0.8	338
2012	3	1	1	1.6	262	0.7	241	1.1	4
2012	3	1	2	1.6	240	0.6	104	0.3	237
2012	3	1	3	1.8	258	0.9	5	0.6	13
2012	3	1	4	1.5	244	0.8	33	0.8	352
2012	3	1	5	1.1	271	0.4	35	0.5	347
2012	3	1	6	0.9	45	0.9	148	0.5	79
2012	3	1	7	2.4	105	0.4	267	0.4	105
2012	3	1	8	2.8	91	0.4	190	0.4	46
2012	3	1	9	4.7	106	1.0	205	0.6	71
2012	3	1	10	6.5	107	1.0	133	0.3	150
2012	3	1	11	6.3	108	1.2	172	0.9	126
2012	3	1	12	7.2	99	1.6	189	1.4	132
2012	3	1	13	8.2	90	1.5	203	2.2	113
2012	3	1	14	8.0	83	1.4	210	2.3	114
2012	3	1	15	6.9	90	1.1	213	3.0	112
2012	3	1	16	6.4	97	0.8	233	3.0	107
2012	3	1	17	7.7	86	0.7	89	2.9	99
2012	3	1	18	5.8	104	0.8	193	2.8	109
2012	3	1	19	7.6	94	0.8	181	2.7	111
2012	3	1	20	9.2	91	1.0	219	3.0	107
2012	3	1	21	9.8	86	1.2	183	4.3	113
2012	3	1	22	10.3	84	1.4	175	4.5	114
2012	3	1	23	11.6	80	1.9	178	3.9	115
2012	3	2	0	9.6	85	1.8	207	4.5	115
2012	3	2	1	7.6	99	2.4	212	4.5	112
2012	3	2	2	4.6	275	2.0	206	5.0	114
2012	3	2	3	6.7	300	0.9	197	4.8	112
2012	3	2	4	8.8	300	1.4	357	4.5	113
2012	3	2	5	7.6	296	1.1	11	3.9	117
2012	3	2	6	6.8	304	1.0	164	2.0	123
2012	3	2	7	5.6	292	1.7	199	1.0	112
2012	3	2	8	6.0	299	1.7	189	1.1	86
2012	3	2	9	4.2	309	1.9	189	1.5	102
2012	3	2	10	4.0	297	1.9	184	1.5	121
2012	3	2	11	4.4	310	1.5	187	1.5	127
2012	3	2	12	4.2	320	2.1	174	2.1	119
2012	3	2	13	3.9	307	2.6	181	1.8	112
2012	3	2	14	3.4	301	2.2	145	1.6	139
2012	3	2	15	2.4	287	1.7	146	1.2	148
2012	3	2	16	3.9	95	2.2	157	1.5	129
2012	3	2	17	6.1	94	2.2	177	1.0	144
2012	3	2	18	6.9	90	2.1	171	2.1	113
2012	3	2	19	6.5	91	2.3	174	3.6	121
2012	3	2	20	5.4	92	2.3	171	4.5	117
2012	3	2	21	2.3	291	2.4	166	4.6	115
2012	3	2	22	2.5	277	1.9	161	4.1	113
2012	3	2	23	2.4	279	1.2	187	3.8	119

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	3	0	2.5	271	0.8	192	3.0	122
2012	3	3	1	3.4	280	0.8	155	2.8	127
2012	3	3	2	3.4	270	0.5	161	2.3	129
2012	3	3	3	3.4	268	0.8	162	2.4	121
2012	3	3	4	2.7	242	0.7	172	1.3	105
2012	3	3	5	4.2	304	2.9	220	1.3	93
2012	3	3	6	4.1	294	2.0	271	1.3	134
2012	3	3	7	4.3	308	1.2	325	1.6	86
2012	3	3	8	3.9	305	1.3	178	1.2	93
2012	3	3	9	4.1	276	1.9	190	1.3	109
2012	3	3	10	5.2	300	2.4	203	1.1	131
2012	3	3	11	4.9	290	1.8	151	0.6	286
2012	3	3	12	5.0	300	1.7	198	0.8	31
2012	3	3	13	6.0	308	3.2	203	1.0	306
2012	3	3	14	4.3	305	4.3	220	0.9	278
2012	3	3	15	2.2	326	2.7	201	1.6	269
2012	3	3	16	2.4	301	2.8	201	1.4	304
2012	3	3	17	2.5	304	2.2	208	1.0	317
2012	3	3	18	3.8	304	2.6	219	0.8	125
2012	3	3	19	1.9	292	2.7	214	0.7	51
2012	3	3	20	1.2	277	2.6	201	1.6	144
2012	3	3	21	3.9	298	2.9	195	1.3	135
2012	3	3	22	2.3	280	2.4	227	2.4	119
2012	3	3	23	3.0	308	3.3	211	1.6	82
2012	3	4	0	3.7	100	2.2	183	1.8	107
2012	3	4	1	3.7	46	2.0	208	3.9	112
2012	3	4	2	2.5	54	3.0	212	4.6	102
2012	3	4	3	4.0	261	2.3	218	3.1	100
2012	3	4	4	2.2	287	2.0	211	2.3	98
2012	3	4	5	2.8	123	2.3	219	3.4	110
2012	3	4	6	6.7	93	1.6	221	3.8	116
2012	3	4	7	6.7	98	0.7	239	3.6	106
2012	3	4	8	5.5	117	0.9	189	3.7	107
2012	3	4	9	5.0	312	1.5	186	3.0	94
2012	3	4	10	5.0	285	2.5	191	3.3	103
2012	3	4	11	6.6	297	2.2	219	3.3	119
2012	3	4	12	6.8	294	5.6	240	1.1	153
2012	3	4	13	6.6	287	6.2	244	1.7	220
2012	3	4	14	5.1	289	6.2	236	3.6	243
2012	3	4	15	4.5	302	5.1	232	3.4	237
2012	3	4	16	4.2	296	3.2	231	3.1	246
2012	3	4	17	2.8	286	2.7	236	2.4	242
2012	3	4	18	1.1	278	1.2	347	2.1	256
2012	3	4	19	1.5	99	2.8	228	1.6	251
2012	3	4	20	3.3	95	1.6	251	1.6	276
2012	3	4	21	4.6	104	1.3	307	1.2	293
2012	3	4	22	2.5	105	1.2	360	1.3	319
2012	3	4	23	2.9	94	1.3	231	1.9	324

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	5	0	3.1	93	1.0	340	1.4	304
2012	3	5	1	2.0	85	1.7	7	1.8	347
2012	3	5	2	0.8	84	1.4	231	2.3	353
2012	3	5	3	0.8	93	1.2	2	2.2	359
2012	3	5	4	0.5	288	0.6	236	2.3	354
2012	3	5	5	0.7	103	0.6	21	2.2	357
2012	3	5	6	1.5	96	1.2	334	2.2	355
2012	3	5	7	1.0	88	1.1	223	2.3	351
2012	3	5	8	1.2	101	1.1	354	2.9	350
2012	3	5	9	1.8	93	1.3	0	2.0	346
2012	3	5	10	1.3	192	1.3	17	1.9	324
2012	3	5	11	1.4	254	1.3	30	2.1	315
2012	3	5	12	3.0	244	1.1	132	2.2	281
2012	3	5	13	3.1	236	1.6	175	2.2	266
2012	3	5	14	3.3	249	2.3	203	2.0	252
2012	3	5	15	2.7	256	2.0	225	2.3	259
2012	3	5	16	2.9	239	1.9	234	2.1	258
2012	3	5	17	2.5	256	2.4	238	2.0	258
2012	3	5	18	1.6	248	2.7	234	1.9	269
2012	3	5	19	2.2	288	1.8	318	2.3	311
2012	3	5	20	1.7	304	1.0	282	2.8	325
2012	3	5	21	0.7	332	1.9	275	2.7	326
2012	3	5	22	0.8	104	1.7	295	2.3	305
2012	3	5	23	0.8	113	1.2	285	2.0	326
2012	3	6	0	2.1	242	1.3	280	1.7	331
2012	3	6	1	2.1	249	1.6	260	1.9	330
2012	3	6	2	2.4	241	1.1	248	1.3	352
2012	3	6	3	2.5	237	1.0	237	0.4	166
2012	3	6	4	3.6	243	0.6	242	0.4	103
2012	3	6	5	3.4	248	1.5	193	0.8	100
2012	3	6	6	3.3	268	1.3	246	0.9	82
2012	3	6	7	3.8	294	1.1	219	1.5	93
2012	3	6	8	5.2	298	0.9	327	1.4	106
2012	3	6	9	4.1	273	0.8	11	1.4	113
2012	3	6	10	5.4	284	1.0	19	1.1	94
2012	3	6	11	6.4	300	1.1	43	1.0	94
2012	3	6	12	6.1	318	0.9	65	0.8	142
2012	3	6	13	5.6	313	1.3	185	1.6	105
2012	3	6	14	3.7	286	2.1	200	1.5	121
2012	3	6	15	2.6	259	2.0	188	1.4	105
2012	3	6	16	2.5	259	1.7	204	1.8	112
2012	3	6	17	2.6	267	1.1	246	2.0	102
2012	3	6	18	3.2	283	0.9	272	2.3	115
2012	3	6	19	2.9	277	1.5	213	2.3	128
2012	3	6	20	4.7	291	2.0	207	2.5	114
2012	3	6	21	5.2	276	1.4	199	1.5	115
2012	3	6	22	8.3	295	1.3	340	1.6	105
2012	3	6	23	9.7	299	1.3	335	1.5	105

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	7	0	11.1	294	1.1	209	1.6	102
2012	3	7	1	11.8	295	1.4	214	1.4	113
2012	3	7	2	11.8	296	1.4	204	1.5	125
2012	3	7	3	10.9	300	1.6	201	1.1	118
2012	3	7	4	9.0	299	1.8	170	0.7	117
2012	3	7	5	7.6	302	2.2	182	0.9	118
2012	3	7	6	7.5	298	2.2	189	2.1	113
2012	3	7	7	4.5	258	2.2	179	2.0	108
2012	3	7	8	3.9	289	2.5	183	2.1	120
2012	3	7	9	4.0	308	2.4	175	2.2	126
2012	3	7	10	3.0	292	2.9	171	2.2	128
2012	3	7	11	2.7	295	3.0	166	2.4	117
2012	3	7	12	3.7	285	3.3	182	1.9	129
2012	3	7	13	4.0	310	3.5	193	2.5	122
2012	3	7	14	4.9	333	4.4	201	2.1	118
2012	3	7	15	3.6	335	4.2	192	1.1	183
2012	3	7	16	4.2	319	4.0	187	1.3	113
2012	3	7	17	4.3	320	3.2	179	2.0	117
2012	3	7	18	4.2	310	2.0	205	0.8	99
2012	3	7	19	4.4	333	2.1	197	0.7	1
2012	3	7	20	4.6	327	2.7	176	0.7	120
2012	3	7	21	2.4	72	2.8	174	2.7	116
2012	3	7	22	2.9	76	2.5	182	3.3	126
2012	3	7	23	5.6	94	2.7	173	3.3	126
2012	3	8	0	6.1	89	3.3	176	3.5	124
2012	3	8	1	8.0	92	3.5	163	3.7	122
2012	3	8	2	8.9	90	3.4	158	4.2	120
2012	3	8	3	9.7	86	3.4	152	4.2	117
2012	3	8	4	10.2	86	2.9	162	4.3	118
2012	3	8	5	10.0	84	2.2	197	4.7	120
2012	3	8	6	10.3	84	2.3	197	3.8	119
2012	3	8	7	10.1	83	2.2	176	4.5	119
2012	3	8	8	10.4	84	2.0	181	4.2	120
2012	3	8	9	11.2	82	1.7	195	4.2	124
2012	3	8	10	11.5	81	1.6	208	4.1	125
2012	3	8	11	11.4	83	1.8	210	4.3	119
2012	3	8	12	13.1	86	1.4	190	4.6	122
2012	3	8	13	13.3	90	1.1	198	4.5	116
2012	3	8	14	10.4	99	1.3	207	4.5	116
2012	3	8	15	11.0	99	1.6	209	4.3	112
2012	3	8	16	12.1	106	1.5	186	4.4	113
2012	3	8	17	14.3	93	1.2	226	4.5	109
2012	3	8	18	15.0	83	1.4	234	4.1	106
2012	3	8	19	14.7	82	1.0	243	4.5	110
2012	3	8	20	13.8	85	1.4	210	5.1	116
2012	3	8	21	10.8	100	1.7	202	5.4	116
2012	3	8	22	12.0	105	3.7	164	6.0	121
2012	3	8	23	11.5	106	3.8	159	6.4	122

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	9	0	9.1	108	4.1	149	6.5	121
2012	3	9	1	8.5	108	2.9	168	5.0	126
2012	3	9	2	8.2	112	5.0	182	5.3	124
2012	3	9	3	7.9	127	5.7	200	6.2	123
2012	3	9	4	4.8	66	5.3	183	5.7	118
2012	3	9	5	8.3	285	4.2	185	6.1	114
2012	3	9	6	6.6	278	2.4	184	6.3	118
2012	3	9	7	5.4	264	2.8	204	5.6	119
2012	3	9	8	5.0	260	3.1	195	4.4	121
2012	3	9	9	6.6	240	3.1	176	3.3	124
2012	3	9	10	3.8	308	3.4	177	0.4	134
2012	3	9	11	4.7	287	3.4	196	0.0	0
2012	3	9	12	4.3	287	3.2	188	2.7	116
2012	3	9	13	3.7	231	3.9	206	1.6	162
2012	3	9	14	4.2	247	3.4	202	3.7	121
2012	3	9	15	4.9	294	5.2	212	3.5	123
2012	3	9	16	2.7	49	3.4	207	3.3	135
2012	3	9	17	4.9	95	3.7	203	3.4	127
2012	3	9	18	7.8	93	3.5	207	3.8	113
2012	3	9	19	8.9	87	3.3	178	4.4	118
2012	3	9	20	10.1	89	3.2	172	4.0	118
2012	3	9	21	10.5	86	2.9	174	4.2	121
2012	3	9	22	10.8	84	3.3	167	4.7	117
2012	3	9	23	11.5	90	2.0	187	4.0	120
2012	3	10	0	10.1	104	2.0	224	3.8	115
2012	3	10	1	12.5	88	1.7	244	3.8	116
2012	3	10	2	12.9	85	1.1	256	3.7	116
2012	3	10	3	14.1	80	1.1	207	3.8	112
2012	3	10	4	14.7	81	1.2	294	3.8	109
2012	3	10	5	14.8	87	1.2	228	4.2	117
2012	3	10	6	14.8	92	1.5	327	4.4	114
2012	3	10	7	14.3	94	1.3	5	4.3	112
2012	3	10	8	14.6	92	1.2	324	4.5	113
2012	3	10	9	14.0	90	1.2	91	4.1	111
2012	3	10	10	12.7	92	1.6	21	4.1	110
2012	3	10	11	13.1	90	1.7	109	3.9	111
2012	3	10	12	13.5	90	1.2	296	3.8	115
2012	3	10	13	13.2	89	1.2	310	3.6	104
2012	3	10	14	12.1	88	1.2	239	3.2	104
2012	3	10	15	12.1	90	1.1	273	3.3	107
2012	3	10	16	11.9	90	1.2	238	3.1	110
2012	3	10	17	11.2	89	1.1	303	3.3	113
2012	3	10	18	10.9	92	1.5	81	3.1	106
2012	3	10	19	11.1	92	1.2	151	2.8	101
2012	3	10	20	11.6	90	1.2	49	2.5	98
2012	3	10	21	10.7	94	1.3	341	2.4	87
2012	3	10	22	9.7	96	1.7	10	2.0	66
2012	3	10	23	9.4	92	2.0	9	2.1	71

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	11	0	8.3	92	1.4	348	1.7	67
2012	3	11	1	10.9	89	1.5	220	1.8	87
2012	3	11	2	9.6	103	2.0	214	1.9	86
2012	3	11	3	10.3	92	1.1	189	4.3	105
2012	3	11	4	9.9	88	1.0	131	3.8	110
2012	3	11	5	10.0	94	0.7	301	3.0	95
2012	3	11	6	8.7	102	1.4	345	2.8	100
2012	3	11	7	8.7	105	1.7	1	3.6	103
2012	3	11	8	8.6	107	1.3	4	3.6	99
2012	3	11	9	9.5	103	1.1	13	3.9	91
2012	3	11	10	11.2	96	0.8	13	3.3	93
2012	3	11	11	9.2	100	1.0	159	3.4	94
2012	3	11	12	8.8	95	1.9	188	3.3	109
2012	3	11	13	7.4	104	1.9	133	3.5	107
2012	3	11	14	4.5	124	1.1	168	3.6	101
2012	3	11	15	5.6	118	4.0	227	2.7	95
2012	3	11	16	4.0	113	3.4	205	2.8	103
2012	3	11	17	6.5	114	1.9	204	1.6	252
2012	3	11	18	5.5	114	1.4	262	1.5	294
2012	3	11	19	6.3	98	1.2	9	1.6	292
2012	3	11	20	5.3	113	1.1	3	1.1	285
2012	3	11	21	5.5	103	1.0	360	1.0	291
2012	3	11	22	3.4	139	1.0	288	0.5	95
2012	3	11	23	6.8	110	0.7	142	1.1	80
2012	3	12	0	6.7	105	1.4	358	1.0	78
2012	3	12	1	5.9	101	1.5	7	1.1	53
2012	3	12	2	6.0	101	1.3	16	1.5	68
2012	3	12	3	6.9	106	1.9	16	1.4	41
2012	3	12	4	10.3	113	2.5	1	1.2	10
2012	3	12	5	11.2	112	2.3	11	2.6	17
2012	3	12	6	10.3	123	2.7	6	2.0	23
2012	3	12	7	8.7	124	2.9	17	1.6	335
2012	3	12	8	9.4	121	3.1	17	2.2	10
2012	3	12	9	11.4	115	3.8	12	1.9	4
2012	3	12	10	10.2	127	3.6	23	1.7	338
2012	3	12	11	8.2	126	3.0	25	1.0	278
2012	3	12	12	9.9	116	3.1	25	1.2	284
2012	3	12	13	10.9	113	3.3	14	1.3	298
2012	3	12	14	9.7	111	4.6	2	0.9	294
2012	3	12	15	12.1	112	4.2	338	1.4	295
2012	3	12	16	11.6	120	3.3	342	1.3	304
2012	3	12	17	11.0	116	3.0	1	0.7	78
2012	3	12	18	10.2	116	2.4	2	0.6	251
2012	3	12	19	9.0	118	2.0	353	1.5	18
2012	3	12	20	7.2	120	2.1	357	1.4	11
2012	3	12	21	5.2	111	1.8	347	0.9	313
2012	3	12	22	4.5	106	0.7	25	0.8	331
2012	3	12	23	2.6	106	0.5	191	1.6	11

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	13	0	1.0	89	0.7	215	1.4	348
2012	3	13	1	2.1	96	0.3	192	0.8	293
2012	3	13	2	2.8	106	0.4	340	0.7	294
2012	3	13	3	2.5	90	0.8	338	0.5	352
2012	3	13	4	4.5	104	0.9	304	0.3	254
2012	3	13	5	1.8	264	0.6	175	0.5	39
2012	3	13	6	2.4	289	0.8	181	0.2	15
2012	3	13	7	1.0	264	1.0	172	0.3	87
2012	3	13	8	1.0	111	1.3	149	0.7	97
2012	3	13	9	4.4	105	2.5	186	1.4	113
2012	3	13	10	5.7	109	3.0	191	1.8	126
2012	3	13	11	7.1	107	3.2	200	2.3	109
2012	3	13	12	7.6	91	3.2	214	1.4	117
2012	3	13	13	6.4	114	2.9	190	2.1	117
2012	3	13	14	7.7	96	3.4	188	1.8	136
2012	3	13	15	8.6	91	2.5	192	0.8	170
2012	3	13	16	9.1	84	3.1	194	0.8	153
2012	3	13	17	8.7	83	2.7	211	1.3	130
2012	3	13	18	7.0	100	2.3	219	1.7	123
2012	3	13	19	6.3	112	1.6	204	1.8	103
2012	3	13	20	7.1	98	1.4	154	1.2	94
2012	3	13	21	7.5	101	1.2	189	0.6	62
2012	3	13	22	8.1	100	1.4	203	1.4	11
2012	3	13	23	7.3	104	0.7	188	1.1	38
2012	3	14	0	7.6	100	0.9	210	0.8	48
2012	3	14	1	8.5	101	1.1	311	1.2	43
2012	3	14	2	8.7	102	0.8	16	1.6	14
2012	3	14	3	8.9	101	1.2	11	1.3	58
2012	3	14	4	10.1	105	1.8	15	0.8	333
2012	3	14	5	9.7	105	2.2	17	1.2	31
2012	3	14	6	9.4	102	2.6	21	1.4	22
2012	3	14	7	8.8	105	2.3	31	1.5	18
2012	3	14	8	12.4	110	2.5	15	2.1	24
2012	3	14	9	12.9	110	2.6	15	1.9	25
2012	3	14	10	12.2	108	2.4	14	0.4	256
2012	3	14	11	11.8	111	2.1	21	0.3	124
2012	3	14	12	12.5	108	1.6	92	0.7	145
2012	3	14	13	12.5	98	4.4	82	1.3	139
2012	3	14	14	12.7	101	3.0	81	2.2	116
2012	3	14	15	12.3	98	3.2	77	1.7	118
2012	3	14	16	12.0	100	1.7	64	1.8	122
2012	3	14	17	11.8	100	1.8	334	1.8	114
2012	3	14	18	12.2	98	1.6	336	2.1	109
2012	3	14	19	12.4	95	1.5	335	2.4	91
2012	3	14	20	12.9	93	1.7	359	2.3	88
2012	3	14	21	13.2	92	1.6	1	2.2	82
2012	3	14	22	13.0	93	1.7	352	2.1	72
2012	3	14	23	11.1	98	1.9	19	2.4	66

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	15	0	10.0	108	2.8	6	2.3	68
2012	3	15	1	9.8	108	2.7	5	1.2	67
2012	3	15	2	9.6	108	2.6	11	1.3	72
2012	3	15	3	10.7	100	2.5	9	1.6	53
2012	3	15	4	10.2	110	2.8	9	0.7	37
2012	3	15	5	12.9	112	3.0	12	0.5	340
2012	3	15	6	13.4	114	2.6	6	0.6	318
2012	3	15	7	12.9	110	2.1	18	0.4	11
2012	3	15	8	13.4	110	2.4	13	0.5	40
2012	3	15	9	12.4	111	2.3	12	0.5	35
2012	3	15	10	10.6	112	2.3	7	0.4	317
2012	3	15	11	11.1	96	1.9	8	0.1	301
2012	3	15	12	13.7	93	1.4	39	0.5	112
2012	3	15	13	12.3	96	1.4	98	1.4	104
2012	3	15	14	11.0	87	1.4	177	2.0	103
2012	3	15	15	11.0	90	1.6	217	2.9	100
2012	3	15	16	10.2	91	1.6	194	2.4	98
2012	3	15	17	9.9	96	1.0	225	2.4	90
2012	3	15	18	9.2	100	0.9	232	2.4	88
2012	3	15	19	8.6	100	1.4	220	1.5	96
2012	3	15	20	9.4	97	0.6	192	1.0	104
2012	3	15	21	8.4	98	0.7	197	0.9	107
2012	3	15	22	8.2	101	1.0	211	1.1	90
2012	3	15	23	8.2	107	0.6	182	0.6	109
2012	3	16	0	7.9	99	2.3	204	1.8	106
2012	3	16	1	3.0	64	2.5	179	3.0	117
2012	3	16	2	3.2	276	2.4	159	4.2	123
2012	3	16	3	3.9	285	1.9	194	4.1	118
2012	3	16	4	2.8	308	2.5	208	3.1	121
2012	3	16	5	1.6	275	2.7	208	2.5	113
2012	3	16	6	1.3	251	3.2	214	2.7	111
2012	3	16	7	1.9	139	2.7	209	2.6	107
2012	3	16	8	1.8	86	2.5	194	2.9	113
2012	3	16	9	4.6	110	2.6	189	2.9	113
2012	3	16	10	5.9	108	2.5	189	2.3	125
2012	3	16	11	6.3	99	2.2	160	2.6	120
2012	3	16	12	6.8	99	2.2	185	2.2	125
2012	3	16	13	6.7	105	2.4	179	2.0	119
2012	3	16	14	7.1	106	2.2	184	2.2	111
2012	3	16	15	6.9	103	2.3	185	2.2	109
2012	3	16	16	6.6	95	2.1	210	1.7	113
2012	3	16	17	6.6	106	1.9	230	0.5	148
2012	3	16	18	6.4	103	1.4	289	0.8	244
2012	3	16	19	6.8	101	0.7	17	1.1	277
2012	3	16	20	6.0	106	1.1	3	1.5	328
2012	3	16	21	5.2	100	1.6	353	2.2	15
2012	3	16	22	5.6	101	1.2	16	1.9	28
2012	3	16	23	7.1	105	0.5	243	2.4	15

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	17	0	7.2	104	0.8	17	1.5	9
2012	3	17	1	5.9	103	1.1	323	1.5	356
2012	3	17	2	4.9	100	0.7	259	1.2	5
2012	3	17	3	5.0	101	0.8	230	1.1	4
2012	3	17	4	5.3	103	0.8	346	0.5	91
2012	3	17	5	5.3	105	0.8	343	0.7	51
2012	3	17	6	5.7	102	1.5	356	0.2	281
2012	3	17	7	5.8	100	1.3	347	0.2	69
2012	3	17	8	6.8	104	1.0	3	0.2	87
2012	3	17	9	6.7	103	1.1	42	0.3	102
2012	3	17	10	7.7	101	1.2	133	1.3	113
2012	3	17	11	7.8	99	1.6	181	2.3	105
2012	3	17	12	6.6	106	1.5	159	2.0	105
2012	3	17	13	6.8	100	1.8	127	2.2	115
2012	3	17	14	6.2	105	1.7	155	2.3	116
2012	3	17	15	5.9	111	2.0	197	2.5	122
2012	3	17	16	5.8	111	1.7	209	2.3	126
2012	3	17	17	6.1	124	1.7	264	2.1	115
2012	3	17	18	5.9	115	0.8	125	0.6	184
2012	3	17	19	4.5	114	0.8	22	1.2	269
2012	3	17	20	4.3	124	0.6	33	1.9	285
2012	3	17	21	6.1	120	1.3	253	2.3	297
2012	3	17	22	5.6	119	1.8	296	2.3	291
2012	3	17	23	4.6	118	1.0	278	2.3	302
2012	3	18	0	5.1	131	0.7	43	2.5	308
2012	3	18	1	4.9	122	1.0	253	2.2	305
2012	3	18	2	3.6	111	0.8	11	1.5	295
2012	3	18	3	3.4	92	0.9	18	1.5	305
2012	3	18	4	3.6	98	1.4	1	1.5	305
2012	3	18	5	3.0	90	1.0	22	1.3	319
2012	3	18	6	2.4	89	0.8	309	1.4	342
2012	3	18	7	2.6	87	0.8	46	0.9	2
2012	3	18	8	3.0	88	0.8	49	0.6	5
2012	3	18	9	2.5	89	1.0	81	0.3	242
2012	3	18	10	1.8	94	1.3	97	0.7	249
2012	3	18	11	2.6	90	1.8	156	0.6	215
2012	3	18	12	2.5	98	2.8	179	1.4	231
2012	3	18	13	2.3	93	3.0	187	1.1	233
2012	3	18	14	1.7	121	3.2	209	1.0	212
2012	3	18	15	2.3	132	3.8	214	1.1	230
2012	3	18	16	3.2	106	3.3	219	1.9	254
2012	3	18	17	3.2	100	1.9	231	2.2	247
2012	3	18	18	3.1	90	1.7	239	2.0	250
2012	3	18	19	2.6	84	1.1	312	2.0	265
2012	3	18	20	2.6	85	1.5	353	2.5	290
2012	3	18	21	3.6	87	1.0	12	2.3	302
2012	3	18	22	4.2	85	0.9	24	2.3	314
2012	3	18	23	4.5	98	0.7	8	1.9	338

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	19	0	4.5	109	0.5	359	1.7	342
2012	3	19	1	5.0	114	0.3	40	2.2	342
2012	3	19	2	5.1	115	0.7	127	2.1	356
2012	3	19	3	5.3	113	0.8	312	2.2	350
2012	3	19	4	4.9	111	0.7	192	2.2	354
2012	3	19	5	4.2	113	1.0	23	2.2	3
2012	3	19	6	4.5	113	1.7	351	2.4	7
2012	3	19	7	5.1	111	0.7	167	2.3	7
2012	3	19	8	5.6	107	0.6	88	1.7	2
2012	3	19	9	6.3	103	1.0	81	1.3	357
2012	3	19	10	6.4	102	1.2	133	0.5	90
2012	3	19	11	6.2	91	1.5	154	0.7	212
2012	3	19	12	7.3	95	1.7	124	0.7	188
2012	3	19	13	7.6	99	2.2	162	0.7	180
2012	3	19	14	7.0	104	2.1	175	1.2	113
2012	3	19	15	6.0	100	1.4	123	1.8	140
2012	3	19	16	7.1	109	1.3	304	1.6	148
2012	3	19	17	7.7	111	1.1	231	1.1	149
2012	3	19	18	7.4	99	1.6	316	0.5	195
2012	3	19	19	9.6	109	1.8	8	0.5	313
2012	3	19	20	11.4	115	2.1	23	0.9	27
2012	3	19	21	11.6	118	3.6	16	2.4	17
2012	3	19	22	13.5	110	3.6	8	2.5	13
2012	3	19	23	13.3	115	3.4	4	2.6	7
2012	3	20	0	14.1	113	3.2	11	2.4	6
2012	3	20	1	15.1	111	3.4	5	2.3	7
2012	3	20	2	14.7	111	2.9	11	2.0	6
2012	3	20	3	14.0	110	3.3	20	1.5	36
2012	3	20	4	14.5	112	3.4	12	1.1	64
2012	3	20	5	13.0	110	3.0	14	1.1	58
2012	3	20	6	13.9	111	2.6	32	1.9	39
2012	3	20	7	12.9	117	2.4	34	2.3	26
2012	3	20	8	12.1	119	2.1	38	1.0	17
2012	3	20	9	11.8	118	2.5	29	0.8	257
2012	3	20	10	10.2	117	2.5	61	0.7	267
2012	3	20	11	10.8	113	3.2	77	0.4	242
2012	3	20	12	10.3	112	3.9	75	0.9	109
2012	3	20	13	10.3	110	4.0	82	0.7	129
2012	3	20	14	11.0	112	3.0	83	0.8	185
2012	3	20	15	11.8	111	2.9	88	0.7	189
2012	3	20	16	10.3	110	1.9	102	0.8	201
2012	3	20	17	9.2	110	1.7	62	0.5	215
2012	3	20	18	7.3	113	1.1	47	0.4	231
2012	3	20	19	6.9	96	0.5	32	0.5	249
2012	3	20	20	6.0	87	0.3	321	0.5	245
2012	3	20	21	2.9	128	0.5	289	0.1	250
2012	3	20	22	0.8	238	0.8	222	0.2	293
2012	3	20	23	1.0	247	0.5	320	0.6	315

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	21	0	0.8	270	0.7	25	0.3	308
2012	3	21	1	0.5	264	0.5	97	0.3	199
2012	3	21	2	1.5	92	0.6	178	0.1	168
2012	3	21	3	3.1	97	0.7	199	0.4	62
2012	3	21	4	6.0	107	0.1	106	0.9	114
2012	3	21	5	5.3	101	0.5	202	2.6	118
2012	3	21	6	2.9	99	1.0	223	3.1	104
2012	3	21	7	2.9	36	1.1	211	3.1	113
2012	3	21	8	2.1	276	1.4	186	3.7	120
2012	3	21	9	1.2	204	2.1	191	4.1	120
2012	3	21	10	0.9	240	2.3	187	4.6	115
2012	3	21	11	0.7	244	2.7	214	3.4	119
2012	3	21	12	4.0	101	3.5	214	2.6	124
2012	3	21	13	4.5	101	3.1	200	3.4	116
2012	3	21	14	2.9	153	3.6	177	3.4	112
2012	3	21	15	2.4	281	3.4	179	2.5	114
2012	3	21	16	2.9	111	3.3	191	0.9	178
2012	3	21	17	5.3	101	2.6	214	0.9	152
2012	3	21	18	5.3	115	2.4	235	0.8	156
2012	3	21	19	6.1	105	0.9	256	0.5	246
2012	3	21	20	7.4	110	1.2	354	0.5	97
2012	3	21	21	8.0	114	1.7	4	1.0	312
2012	3	21	22	7.3	110	1.3	309	1.0	310
2012	3	21	23	8.1	108	1.1	15	1.3	0
2012	3	22	0	6.7	99	2.4	13	1.5	357
2012	3	22	1	11.0	113	2.5	17	1.6	350
2012	3	22	2	8.0	100	2.6	8	2.0	7
2012	3	22	3	6.9	103	2.1	30	2.3	8
2012	3	22	4	7.7	102	2.4	11	2.3	7
2012	3	22	5	7.8	105	2.1	10	1.7	8
2012	3	22	6	7.9	99	2.0	13	0.7	5
2012	3	22	7	6.9	107	2.2	17	0.4	129
2012	3	22	8	7.0	106	0.9	47	0.6	357
2012	3	22	9	7.3	103	0.6	105	0.8	24
2012	3	22	10	7.5	100	0.9	48	0.3	260
2012	3	22	11	7.0	99	0.8	75	0.5	197
2012	3	22	12	6.3	92	1.4	149	0.7	215
2012	3	22	13	5.5	98	1.1	139	0.8	196
2012	3	22	14	5.1	103	1.1	137	0.7	158
2012	3	22	15	4.1	107	1.2	153	1.7	110
2012	3	22	16	4.6	110	1.5	127	1.2	126
2012	3	22	17	4.4	109	1.6	203	2.0	23
2012	3	22	18	4.7	108	1.0	165	1.2	20
2012	3	22	19	6.0	105	1.4	187	1.3	11
2012	3	22	20	7.0	99	1.3	301	1.7	121
2012	3	22	21	5.3	108	0.8	255	0.6	353
2012	3	22	22	7.9	103	1.0	227	0.5	79
2012	3	22	23	7.2	109	1.2	260	0.6	26

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	23	0	6.5	104	0.7	216	0.9	21
2012	3	23	1	6.8	102	0.7	305	1.3	344
2012	3	23	2	7.6	105	0.7	229	1.4	325
2012	3	23	3	7.9	103	0.5	40	2.2	3
2012	3	23	4	7.2	105	0.8	327	2.0	352
2012	3	23	5	6.1	106	1.1	4	2.0	4
2012	3	23	6	5.9	108	0.7	342	2.0	6
2012	3	23	7	5.5	106	1.2	347	1.7	1
2012	3	23	8	5.7	105	0.5	106	1.4	355
2012	3	23	9	5.3	109	0.6	36	1.0	8
2012	3	23	10	5.2	101	0.7	52	0.7	288
2012	3	23	11	3.6	101	1.1	153	0.4	196
2012	3	23	12	2.6	95	1.8	182	0.6	205
2012	3	23	13	2.1	97	1.5	182	1.0	236
2012	3	23	14	1.6	96	1.3	184	0.7	238
2012	3	23	15	1.4	96	1.5	172	0.6	207
2012	3	23	16	1.9	97	1.2	157	0.7	213
2012	3	23	17	2.7	104	1.1	109	0.7	219
2012	3	23	18	2.1	98	0.9	58	0.6	252
2012	3	23	19	2.3	89	1.0	355	0.7	286
2012	3	23	20	3.5	86	0.9	355	1.4	288
2012	3	23	21	3.8	88	0.9	294	1.5	311
2012	3	23	22	3.4	87	0.7	334	1.6	328
2012	3	23	23	3.9	87	0.9	2	1.6	325
2012	3	24	0	2.5	87	0.5	272	1.8	333
2012	3	24	1	3.0	85	1.0	287	2.0	343
2012	3	24	2	4.0	87	0.6	65	2.5	350
2012	3	24	3	4.2	86	0.7	96	2.2	356
2012	3	24	4	3.8	87	0.7	156	2.2	358
2012	3	24	5	4.1	88	0.6	60	2.0	355
2012	3	24	6	4.1	89	0.5	62	2.1	357
2012	3	24	7	4.3	85	0.7	42	2.1	8
2012	3	24	8	5.0	104	0.7	100	1.8	9
2012	3	24	9	5.2	104	1.0	71	0.4	166
2012	3	24	10	4.8	108	1.1	100	0.7	270
2012	3	24	11	5.1	104	1.2	123	1.0	223
2012	3	24	12	5.2	105	1.5	143	0.9	215
2012	3	24	13	5.9	104	1.7	146	0.9	212
2012	3	24	14	6.7	100	2.2	165	1.0	214
2012	3	24	15	5.4	104	2.4	188	1.0	138
2012	3	24	16	4.4	111	2.3	204	0.7	136
2012	3	24	17	3.9	107	2.0	211	0.8	204
2012	3	24	18	5.6	105	1.6	237	1.1	255
2012	3	24	19	7.0	107	0.6	321	1.1	276
2012	3	24	20	7.0	108	0.9	329	0.9	288
2012	3	24	21	6.2	106	0.9	257	0.9	294
2012	3	24	22	6.2	106	1.1	214	1.3	349
2012	3	24	23	6.5	106	0.8	2	1.0	335

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	25	0	5.8	118	0.6	343	0.9	281
2012	3	25	1	3.8	119	1.2	11	1.4	302
2012	3	25	2	2.6	91	1.1	334	1.3	312
2012	3	25	3	3.3	88	0.8	153	1.2	312
2012	3	25	4	4.1	109	1.2	324	1.5	352
2012	3	25	5	4.9	112	0.7	42	1.7	359
2012	3	25	6	4.7	100	0.7	19	0.9	350
2012	3	25	7	4.5	97	0.8	8	0.6	0
2012	3	25	8	5.7	109	0.8	101	0.6	27
2012	3	25	9	8.0	95	1.3	147	0.4	206
2012	3	25	10	7.3	101	1.3	134	0.8	201
2012	3	25	11	7.4	101	2.2	152	0.7	178
2012	3	25	12	7.6	96	2.3	163	1.4	144
2012	3	25	13	7.7	94	2.3	173	1.1	180
2012	3	25	14	6.5	99	2.5	175	1.2	198
2012	3	25	15	6.7	108	2.5	183	1.2	160
2012	3	25	16	7.0	107	2.4	185	1.1	171
2012	3	25	17	6.8	105	1.9	208	1.5	214
2012	3	25	18	7.2	107	1.9	221	1.2	256
2012	3	25	19	7.1	101	1.2	264	1.5	281
2012	3	25	20	6.8	98	1.1	343	1.5	290
2012	3	25	21	7.4	94	0.9	28	1.3	287
2012	3	25	22	6.4	100	0.6	55	1.1	318
2012	3	25	23	6.4	102	1.9	355	2.0	350
2012	3	26	0	7.3	104	1.4	355	2.1	358
2012	3	26	1	7.0	100	1.9	356	2.1	348
2012	3	26	2	8.4	96	2.8	1	2.1	358
2012	3	26	3	8.8	99	2.4	352	2.0	0
2012	3	26	4	10.2	95	1.2	264	2.1	5
2012	3	26	5	9.2	103	1.0	232	2.0	355
2012	3	26	6	9.3	107	1.2	1	1.9	357
2012	3	26	7	8.1	97	2.0	3	2.0	2
2012	3	26	8	9.5	91	0.8	35	2.1	14
2012	3	26	9	8.9	96	0.9	33	0.6	312
2012	3	26	10	8.4	104	0.7	103	0.4	239
2012	3	26	11	8.9	106	0.8	103	0.6	230
2012	3	26	12	9.0	103	1.3	143	0.8	201
2012	3	26	13	9.2	104	1.7	173	0.9	202
2012	3	26	14	8.8	101	1.9	187	1.0	214
2012	3	26	15	8.7	105	1.7	193	0.7	196
2012	3	26	16	7.1	106	1.4	181	0.7	194
2012	3	26	17	7.6	102	0.7	202	0.6	218
2012	3	26	18	8.0	103	0.8	231	0.4	230
2012	3	26	19	8.3	98	0.5	352	0.5	277
2012	3	26	20	8.6	99	0.7	25	1.3	308
2012	3	26	21	8.5	97	1.2	348	1.2	310
2012	3	26	22	9.9	103	1.0	205	1.6	353
2012	3	26	23	8.9	103	0.7	166	1.8	359

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	27	0	8.4	101	0.4	176	2.0	2
2012	3	27	1	7.9	99	1.0	7	1.6	2
2012	3	27	2	8.6	96	0.7	358	1.7	354
2012	3	27	3	8.1	97	0.7	208	1.7	347
2012	3	27	4	7.7	102	0.9	7	1.8	341
2012	3	27	5	8.2	106	1.2	188	2.0	8
2012	3	27	6	7.2	106	0.9	165	2.1	11
2012	3	27	7	8.2	97	2.3	10	1.7	16
2012	3	27	8	9.8	103	2.3	38	1.4	4
2012	3	27	9	9.1	110	1.6	46	0.8	327
2012	3	27	10	7.5	115	1.4	41	0.7	315
2012	3	27	11	10.1	111	1.6	140	1.1	307
2012	3	27	12	7.2	114	1.0	114	1.4	267
2012	3	27	13	7.9	116	0.9	79	0.7	196
2012	3	27	14	8.3	112	2.1	192	0.6	88
2012	3	27	15	8.9	110	1.2	145	0.6	202
2012	3	27	16	7.1	108	0.9	42	0.9	200
2012	3	27	17	7.0	122	0.7	9	0.6	78
2012	3	27	18	8.1	124	0.8	193	0.6	221
2012	3	27	19	8.7	121	0.8	345	0.6	259
2012	3	27	20	10.4	116	0.5	292	0.9	313
2012	3	27	21	8.2	115	1.7	359	2.3	357
2012	3	27	22	8.4	111	1.6	351	2.3	4
2012	3	27	23	11.7	109	2.6	3	2.4	5
2012	3	28	0	12.1	112	3.3	12	2.7	5
2012	3	28	1	10.1	109	3.1	9	2.7	7
2012	3	28	2	10.1	109	3.3	14	2.8	7
2012	3	28	3	12.3	111	3.1	19	2.7	8
2012	3	28	4	12.5	109	2.7	355	2.3	13
2012	3	28	5	12.5	110	1.6	13	1.4	0
2012	3	28	6	11.3	105	2.0	349	1.4	355
2012	3	28	7	11.5	106	1.1	233	1.1	15
2012	3	28	8	10.9	107	1.1	189	0.7	45
2012	3	28	9	11.8	106	1.1	129	0.7	210
2012	3	28	10	10.7	102	0.7	64	1.7	93
2012	3	28	11	8.7	108	0.8	114	1.8	83
2012	3	28	12	7.0	100	0.8	102	1.3	85
2012	3	28	13	8.3	94	2.0	201	2.2	108
2012	3	28	14	9.7	95	1.3	270	3.9	99
2012	3	28	15	8.8	100	1.5	10	2.3	92
2012	3	28	16	9.8	93	1.3	33	2.3	84
2012	3	28	17	9.5	91	1.3	19	2.1	99
2012	3	28	18	8.8	100	1.1	50	2.3	89
2012	3	28	19	8.1	106	1.3	76	2.2	81
2012	3	28	20	10.0	112	1.5	11	2.5	100
2012	3	28	21	10.7	109	2.9	18	2.3	42
2012	3	28	22	12.0	110	2.9	23	2.5	21
2012	3	28	23	9.6	104	2.2	356	2.2	18

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	29	0	8.1	106	3.0	5	2.0	340
2012	3	29	1	9.9	109	2.8	4	2.0	10
2012	3	29	2	10.8	107	2.4	11	1.6	9
2012	3	29	3	11.2	99	2.7	1	0.7	332
2012	3	29	4	13.5	112	2.3	6	1.2	46
2012	3	29	5	14.1	109	2.0	234	1.4	38
2012	3	29	6	13.1	104	2.0	261	1.7	86
2012	3	29	7	13.0	103	1.8	330	1.7	113
2012	3	29	8	12.7	100	1.9	348	1.9	88
2012	3	29	9	12.2	97	1.6	348	1.8	80
2012	3	29	10	10.5	98	2.0	73	2.4	96
2012	3	29	11	4.6	100	2.7	187	2.7	102
2012	3	29	12	7.4	96	1.8	185	3.3	108
2012	3	29	13	9.0	104	1.1	204	4.0	117
2012	3	29	14	9.4	109	1.6	128	2.9	119
2012	3	29	15	11.6	111	2.0	208	1.9	131
2012	3	29	16	9.4	106	1.8	123	2.9	117
2012	3	29	17	10.6	111	1.1	226	3.0	111
2012	3	29	18	10.6	110	1.2	155	1.1	104
2012	3	29	19	8.3	109	1.4	167	2.2	114
2012	3	29	20	7.7	104	1.6	194	3.9	113
2012	3	29	21	7.6	105	1.3	204	3.4	123
2012	3	29	22	7.2	105	1.3	234	3.1	108
2012	3	29	23	6.9	112	1.2	17	3.0	91
2012	3	30	0	7.5	103	2.2	244	3.9	96
2012	3	30	1	6.3	114	1.0	270	3.3	116
2012	3	30	2	5.7	103	0.8	334	2.8	118
2012	3	30	3	4.1	96	1.1	359	2.6	96
2012	3	30	4	6.6	94	1.1	351	2.4	84
2012	3	30	5	6.7	97	2.1	216	2.7	89
2012	3	30	6	7.7	89	1.7	223	1.5	154
2012	3	30	7	6.6	110	0.9	233	1.9	108
2012	3	30	8	6.0	98	1.0	182	2.5	104
2012	3	30	9	6.6	92	1.4	185	2.8	120
2012	3	30	10	6.6	95	2.0	169	2.9	120
2012	3	30	11	7.1	84	2.6	170	2.7	119
2012	3	30	12	7.4	95	3.1	197	1.0	172
2012	3	30	13	7.3	91	3.3	213	1.6	132
2012	3	30	14	6.3	98	3.8	201	2.2	234
2012	3	30	15	6.0	98	2.7	175	1.8	234
2012	3	30	16	4.5	108	2.7	190	3.0	242
2012	3	30	17	2.5	150	2.8	191	2.5	236
2012	3	30	18	0.6	78	3.4	217	1.9	248
2012	3	30	19	1.6	288	2.6	220	2.0	256
2012	3	30	20	2.6	291	3.5	209	1.9	261
2012	3	30	21	1.1	281	3.2	206	1.2	226
2012	3	30	22	1.0	250	3.1	212	0.6	314
2012	3	30	23	2.2	119	2.8	226	0.6	337

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	3	31	0	3.0	92	1.3	228	0.6	292
2012	3	31	1	4.3	100	1.0	27	0.7	280
2012	3	31	2	5.7	107	0.7	28	0.8	10
2012	3	31	3	6.3	106	0.7	303	0.5	63
2012	3	31	4	7.1	104	1.3	5	0.5	177
2012	3	31	5	6.6	100	1.2	4	0.7	43
2012	3	31	6	6.1	99	1.3	347	0.7	97
2012	3	31	7	5.7	104	0.8	10	0.8	72
2012	3	31	8	5.4	106	1.1	26	0.5	47
2012	3	31	9	5.5	102	1.5	141	0.7	112
2012	3	31	10	6.4	101	1.5	154	1.5	125
2012	3	31	11	6.3	103	2.2	119	1.9	111
2012	3	31	12	5.7	105	2.1	147	1.2	119
2012	3	31	13	5.6	103	2.7	186	1.3	178
2012	3	31	14	5.0	107	2.2	173	1.0	152
2012	3	31	15	5.3	103	1.8	176	1.5	210
2012	3	31	16	5.5	107	1.8	170	1.3	198
2012	3	31	17	4.4	100	1.6	226	1.5	215
2012	3	31	18	5.1	106	1.3	268	1.9	238
2012	3	31	19	4.6	105	1.0	322	1.5	262
2012	3	31	20	5.1	106	0.6	17	1.6	291
2012	3	31	21	4.8	108	0.9	337	1.5	318
2012	3	31	22	4.8	100	0.5	129	1.4	326
2012	3	31	23	6.5	101	0.6	320	1.9	342
2012	4	1	0	6.2	105	0.7	212	2.2	350
2012	4	1	1	6.5	107	1.4	356	2.2	343
2012	4	1	2	6.3	103	0.7	325	2.1	355
2012	4	1	3	7.1	99	1.0	215	2.4	2
2012	4	1	4	6.4	101	1.0	331	2.2	7
2012	4	1	5	6.0	105	1.5	356	2.1	4
2012	4	1	6	6.3	104	1.1	353	1.9	356
2012	4	1	7	6.6	105	0.6	25	2.2	12
2012	4	1	8	6.3	103	0.8	42	1.5	17
2012	4	1	9	6.5	104	0.7	77	0.7	332
2012	4	1	10	7.3	101	1.3	149	0.9	192
2012	4	1	11	7.6	106	1.8	142	0.9	177
2012	4	1	12	8.2	96	2.0	145	1.5	130
2012	4	1	13	8.6	96	1.8	155	1.9	118
2012	4	1	14	9.2	94	2.8	202	2.2	128
2012	4	1	15	8.9	109	3.1	219	2.3	146
2012	4	1	16	7.7	109	2.9	205	1.6	230
2012	4	1	17	7.8	101	2.5	207	1.8	247
2012	4	1	18	8.5	102	2.2	213	1.3	233
2012	4	1	19	8.6	99	1.6	201	0.7	258
2012	4	1	20	9.3	96	1.3	204	0.9	282
2012	4	1	21	10.9	90	1.1	339	0.6	304
2012	4	1	22	10.0	92	1.5	353	0.8	23
2012	4	1	23	8.3	105	2.0	7	1.1	49

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	2	0	11.3	111	1.9	27	1.4	73
2012	4	2	1	10.7	109	1.2	4	1.9	71
2012	4	2	2	11.8	107	1.7	323	1.2	59
2012	4	2	3	17.4	110	1.7	260	1.6	49
2012	4	2	4	16.5	109	2.0	57	2.1	85
2012	4	2	5	19.5	112	2.9	97	3.1	113
2012	4	2	6	20.0	111	2.2	118	2.8	107
2012	4	2	7	20.4	111	3.2	100	2.2	106
2012	4	2	8	20.4	111	4.7	81	2.3	98
2012	4	2	9	19.2	110	4.1	71	1.9	111
2012	4	2	10	18.1	110	3.1	66	1.8	110
2012	4	2	11	15.1	107	2.2	46	1.5	116
2012	4	2	12	13.8	104	2.1	11	0.7	132
2012	4	2	13	13.5	93	2.0	8	1.9	106
2012	4	2	14	12.2	96	1.9	354	2.3	91
2012	4	2	15	11.3	95	2.0	10	2.3	83
2012	4	2	16	11.7	93	1.2	48	2.1	82
2012	4	2	17	11.0	99	1.6	34	3.1	96
2012	4	2	18	9.3	105	1.5	150	3.7	103
2012	4	2	19	7.4	126	1.5	202	4.1	92
2012	4	2	20	6.5	131	4.9	211	3.9	96
2012	4	2	21	6.7	125	1.5	187	4.1	112
2012	4	2	22	8.5	109	0.8	171	1.6	144
2012	4	2	23	9.1	101	1.1	309	3.1	122
2012	4	3	0	9.4	98	1.2	10	3.4	107
2012	4	3	1	10.6	95	1.1	83	3.4	99
2012	4	3	2	10.1	94	1.4	10	3.6	94
2012	4	3	3	9.3	99	1.2	5	3.7	106
2012	4	3	4	9.5	96	1.2	18	3.6	100
2012	4	3	5	10.9	95	1.6	96	3.4	104
2012	4	3	6	10.0	102	1.0	23	3.6	99
2012	4	3	7	9.5	91	1.1	25	3.0	80
2012	4	3	8	9.7	89	2.1	79	2.9	84
2012	4	3	9	9.7	92	3.0	90	2.7	92
2012	4	3	10	9.5	89	2.8	109	2.7	85
2012	4	3	11	8.6	95	3.0	109	3.0	115
2012	4	3	12	8.0	99	3.0	105	3.1	123
2012	4	3	13	7.8	98	2.6	114	1.7	150
2012	4	3	14	6.8	97	2.2	147	0.9	196
2012	4	3	15	6.4	105	1.7	171	0.9	190
2012	4	3	16	5.8	103	2.0	191	1.1	221
2012	4	3	17	6.5	101	2.1	205	1.1	310
2012	4	3	18	6.7	94	1.6	219	1.1	273
2012	4	3	19	6.9	107	1.2	249	0.7	238
2012	4	3	20	6.6	111	0.6	52	1.0	135
2012	4	3	21	5.8	109	1.0	339	0.5	221
2012	4	3	22	5.0	108	0.8	327	1.1	294
2012	4	3	23	5.2	104	0.9	349	0.3	302

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	4	0	4.5	109	0.6	10	0.5	260
2012	4	4	1	3.9	110	0.8	350	0.5	272
2012	4	4	2	3.7	110	1.0	10	0.7	29
2012	4	4	3	3.8	105	0.7	278	0.6	53
2012	4	4	4	3.5	101	0.8	356	0.9	359
2012	4	4	5	4.0	106	0.8	198	0.8	6
2012	4	4	6	3.3	95	0.7	169	0.6	21
2012	4	4	7	3.5	89	0.6	61	0.4	298
2012	4	4	8	3.1	93	0.8	74	0.4	291
2012	4	4	9	1.3	107	1.2	107	0.4	138
2012	4	4	10	2.2	245	1.5	145	0.6	189
2012	4	4	11	2.8	261	1.7	156	0.8	195
2012	4	4	12	2.2	233	3.2	191	1.2	229
2012	4	4	13	3.1	289	4.1	224	1.6	262
2012	4	4	14	4.3	283	4.8	235	1.9	271
2012	4	4	15	2.7	275	4.3	233	2.1	264
2012	4	4	16	3.3	273	2.5	258	2.1	254
2012	4	4	17	2.7	281	2.2	232	2.2	242
2012	4	4	18	2.1	270	1.7	249	2.4	253
2012	4	4	19	2.2	269	0.8	339	2.1	258
2012	4	4	20	2.8	302	0.8	324	1.9	265
2012	4	4	21	1.2	301	1.0	311	2.0	309
2012	4	4	22	0.9	61	1.0	335	2.1	311
2012	4	4	23	0.9	88	1.1	354	2.2	311
2012	4	5	0	1.0	262	0.8	230	2.6	318
2012	4	5	1	0.6	331	1.2	267	2.5	336
2012	4	5	2	0.4	319	0.9	9	2.7	340
2012	4	5	3	0.7	45	0.4	323	2.4	331
2012	4	5	4	1.9	102	0.5	308	2.7	336
2012	4	5	5	1.7	99	0.9	317	2.5	349
2012	4	5	6	2.1	91	1.2	345	2.5	340
2012	4	5	7	2.0	89	0.6	118	2.3	337
2012	4	5	8	1.7	92	0.7	75	2.3	334
2012	4	5	9	1.1	111	1.3	38	2.3	312
2012	4	5	10	0.7	133	2.1	48	1.9	309
2012	4	5	11	1.0	114	1.5	132	1.7	266
2012	4	5	12	0.5	138	2.6	178	1.6	245
2012	4	5	13	1.2	130	3.0	204	1.9	235
2012	4	5	14	2.3	165	2.5	220	2.0	242
2012	4	5	15	2.2	130	1.9	325	1.8	238
2012	4	5	16	3.1	168	1.9	300	1.8	261
2012	4	5	17	3.4	173	2.2	226	1.9	251
2012	4	5	18	2.5	135	1.5	290	2.0	248
2012	4	5	19	3.0	118	1.0	315	2.0	259
2012	4	5	20	3.6	87	1.0	43	2.2	287
2012	4	5	21	3.6	91	0.7	258	2.3	312
2012	4	5	22	3.5	95	0.6	37	2.0	333
2012	4	5	23	3.8	88	0.9	1	2.5	349

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	6	0	4.3	86	1.3	278	2.4	351
2012	4	6	1	4.3	84	0.7	293	2.4	350
2012	4	6	2	4.1	86	1.0	18	2.4	351
2012	4	6	3	3.9	89	1.0	252	2.6	347
2012	4	6	4	4.0	89	0.7	250	2.5	349
2012	4	6	5	3.3	84	0.6	140	2.5	339
2012	4	6	6	3.5	83	0.7	3	2.3	337
2012	4	6	7	3.9	90	0.5	94	1.8	343
2012	4	6	8	3.5	92	1.1	34	0.8	17
2012	4	6	9	3.5	89	1.1	64	0.8	280
2012	4	6	10	3.6	105	1.5	162	1.0	239
2012	4	6	11	3.6	103	2.1	158	1.1	200
2012	4	6	12	3.2	105	2.6	173	1.1	207
2012	4	6	13	2.3	99	3.3	198	1.2	226
2012	4	6	14	2.4	98	3.4	212	1.2	232
2012	4	6	15	2.8	102	4.0	223	2.1	235
2012	4	6	16	2.4	86	3.6	220	2.3	245
2012	4	6	17	1.0	83	3.5	220	2.6	242
2012	4	6	18	0.4	267	2.4	257	2.9	246
2012	4	6	19	1.0	38	1.6	255	2.4	253
2012	4	6	20	1.2	122	0.8	31	2.0	280
2012	4	6	21	1.3	97	0.7	355	2.3	310
2012	4	6	22	1.3	94	0.7	330	2.4	318
2012	4	6	23	1.3	89	1.1	352	2.5	313
2012	4	7	0	1.3	91	1.3	348	3.1	311
2012	4	7	1	0.8	89	0.9	349	2.3	309
2012	4	7	2	1.0	93	0.7	23	2.1	307
2012	4	7	3	0.6	83	1.0	359	1.8	313
2012	4	7	4	2.6	219	0.4	346	1.8	323
2012	4	7	5	1.5	236	0.9	12	0.9	347
2012	4	7	6	0.9	78	0.4	138	0.9	337
2012	4	7	7	2.5	87	0.6	90	0.7	61
2012	4	7	8	1.9	87	1.0	76	0.5	279
2012	4	7	9	2.0	89	1.1	82	0.6	256
2012	4	7	10	0.6	107	1.6	106	1.2	237
2012	4	7	11	0.7	100	2.0	185	1.3	221
2012	4	7	12	0.9	188	3.0	193	1.2	223
2012	4	7	13	1.2	198	3.4	207	1.4	228
2012	4	7	14	2.3	202	4.0	217	1.7	237
2012	4	7	15	2.3	203	4.1	214	2.4	245
2012	4	7	16	2.3	219	3.5	217	2.5	244
2012	4	7	17	2.4	219	2.7	233	2.4	260
2012	4	7	18	1.3	138	1.6	245	2.2	266
2012	4	7	19	1.7	97	1.0	330	2.1	268
2012	4	7	20	2.5	88	1.3	329	2.0	289
2012	4	7	21	4.6	98	1.2	336	1.6	310
2012	4	7	22	6.4	110	0.6	354	1.7	341
2012	4	7	23	6.8	99	0.3	57	1.7	353

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	8	0	5.8	105	0.5	122	2.2	360
2012	4	8	1	7.6	98	0.7	188	2.3	360
2012	4	8	2	8.3	103	0.9	354	2.2	3
2012	4	8	3	7.7	101	1.1	325	2.1	0
2012	4	8	4	7.8	95	1.1	300	2.2	5
2012	4	8	5	8.0	91	0.9	205	2.0	8
2012	4	8	6	9.1	97	0.7	4	2.1	7
2012	4	8	7	9.6	111	0.8	24	1.4	349
2012	4	8	8	9.5	109	0.9	80	0.7	338
2012	4	8	9	9.1	113	1.1	89	0.8	246
2012	4	8	10	8.6	115	1.2	131	0.8	194
2012	4	8	11	9.0	110	1.3	171	0.6	193
2012	4	8	12	9.2	107	1.7	178	0.7	182
2012	4	8	13	7.9	107	1.3	151	0.8	210
2012	4	8	14	8.1	113	1.3	100	1.1	189
2012	4	8	15	8.7	116	1.2	91	1.4	112
2012	4	8	16	7.2	121	1.0	125	0.9	159
2012	4	8	17	8.5	118	0.8	178	1.0	203
2012	4	8	18	7.4	121	0.8	76	1.0	221
2012	4	8	19	11.3	115	1.1	332	1.0	260
2012	4	8	20	9.9	113	1.1	153	1.6	333
2012	4	8	21	11.8	113	1.4	9	2.6	9
2012	4	8	22	10.3	117	2.0	6	2.1	359
2012	4	8	23	10.6	114	1.9	20	2.3	0
2012	4	9	0	8.6	108	2.1	7	2.1	357
2012	4	9	1	6.5	105	1.7	11	1.9	354
2012	4	9	2	7.5	116	1.5	5	2.1	357
2012	4	9	3	6.1	123	2.5	13	1.5	347
2012	4	9	4	7.4	106	2.6	20	1.9	358
2012	4	9	5	8.5	112	2.1	9	1.7	342
2012	4	9	6	7.0	119	1.9	19	2.4	4
2012	4	9	7	6.7	128	1.1	52	1.8	351
2012	4	9	8	6.6	114	1.6	22	1.2	359
2012	4	9	9	9.3	113	1.1	91	0.8	221
2012	4	9	10	7.4	117	1.0	110	0.7	201
2012	4	9	11	7.9	119	0.9	138	0.8	198
2012	4	9	12	7.2	113	1.3	126	0.7	203
2012	4	9	13	6.6	110	1.6	106	1.8	118
2012	4	9	14	7.3	117	1.4	107	1.8	117
2012	4	9	15	7.2	127	1.0	61	1.2	155
2012	4	9	16	6.5	126	1.6	215	1.1	202
2012	4	9	17	5.9	112	1.6	228	1.6	242
2012	4	9	18	4.6	116	1.1	290	1.9	262
2012	4	9	19	3.9	104	1.1	11	1.8	276
2012	4	9	20	3.0	97	0.4	67	1.7	310
2012	4	9	21	3.3	93	0.7	270	1.8	326
2012	4	9	22	3.2	96	0.6	2	2.4	3
2012	4	9	23	3.4	96	1.2	347	2.5	4

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	10	0	5.2	105	0.8	241	2.1	358
2012	4	10	1	5.8	105	0.9	43	2.3	7
2012	4	10	2	5.7	112	0.9	145	1.0	39
2012	4	10	3	4.3	110	0.6	323	1.2	348
2012	4	10	4	6.1	111	2.4	3	1.1	325
2012	4	10	5	7.9	119	2.6	20	1.6	356
2012	4	10	6	7.2	128	1.7	26	1.7	348
2012	4	10	7	7.2	125	0.7	42	1.3	4
2012	4	10	8	7.9	119	0.9	58	0.5	179
2012	4	10	9	8.2	120	1.1	39	0.6	188
2012	4	10	10	9.8	115	0.7	126	0.5	168
2012	4	10	11	9.4	110	1.3	77	0.9	146
2012	4	10	12	8.6	108	1.6	56	1.0	160
2012	4	10	13	8.6	86	1.5	90	1.0	145
2012	4	10	14	8.5	81	1.3	29	1.1	203
2012	4	10	15	7.0	85	1.0	18	1.4	220
2012	4	10	16	5.1	106	1.0	95	1.2	231
2012	4	10	17	5.5	108	1.4	207	1.2	237
2012	4	10	18	6.4	102	1.8	280	1.3	258
2012	4	10	19	7.3	97	1.2	14	0.8	260
2012	4	10	20	7.3	95	1.8	7	0.6	273
2012	4	10	21	6.6	105	1.7	353	0.5	286
2012	4	10	22	5.5	111	1.6	20	0.3	62
2012	4	10	23	6.1	111	1.4	11	0.5	28
2012	4	11	0	6.2	100	2.2	8	1.4	353
2012	4	11	1	5.2	105	1.1	32	1.7	358
2012	4	11	2	5.9	101	1.9	9	1.0	324
2012	4	11	3	6.4	98	1.2	21	0.9	17
2012	4	11	4	7.2	100	1.5	13	0.8	6
2012	4	11	5	6.3	107	1.0	23	0.2	30
2012	4	11	6	7.4	106	0.7	322	0.7	348
2012	4	11	7	7.3	103	0.7	10	0.6	75
2012	4	11	8	7.1	103	0.5	70	0.4	21
2012	4	11	9	6.2	104	0.8	160	0.3	227
2012	4	11	10	6.1	102	0.8	151	0.4	186
2012	4	11	11	5.7	99	1.0	85	0.7	233
2012	4	11	12	6.9	106	1.5	79	0.8	198
2012	4	11	13	8.3	110	1.7	103	0.9	193
2012	4	11	14	8.3	104	1.9	214	1.0	202
2012	4	11	15	6.8	101	2.1	206	1.1	204
2012	4	11	16	4.2	102	1.3	208	2.0	258
2012	4	11	17	5.5	94	1.1	210	1.4	257
2012	4	11	18	4.1	97	0.6	310	1.7	267
2012	4	11	19	4.7	104	1.1	50	1.8	296
2012	4	11	20	8.4	94	2.4	4	1.2	270
2012	4	11	21	2.7	96	2.4	355	1.1	337
2012	4	11	22	0.5	240	1.6	311	2.1	313
2012	4	11	23	0.6	232	1.7	323	1.6	324

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	12	0	0.2	174	1.4	304	1.6	338
2012	4	12	1	0.3	120	1.2	329	2.0	345
2012	4	12	2	n/a	n/a	1.2	296	2.0	338
2012	4	12	3	n/a	n/a	1.0	259	1.9	335
2012	4	12	4	n/a	n/a	0.6	264	2.2	352
2012	4	12	5	0.9	97	0.9	62	2.2	6
2012	4	12	6	2.2	98	2.7	11	1.2	352
2012	4	12	7	4.2	110	2.8	2	1.3	7
2012	4	12	8	2.9	105	2.5	0	0.7	345
2012	4	12	9	4.3	101	2.1	15	0.2	109
2012	4	12	10	6.1	89	1.7	13	0.3	138
2012	4	12	11	5.6	94	1.1	32	0.4	132
2012	4	12	12	6.2	98	1.0	36	0.6	153
2012	4	12	13	6.5	95	1.3	10	0.4	186
2012	4	12	14	6.1	103	1.3	22	0.1	323
2012	4	12	15	5.8	102	0.9	79	0.1	98
2012	4	12	16	5.1	112	0.9	227	0.2	160
2012	4	12	17	4.5	113	0.4	258	0.4	170
2012	4	12	18	2.9	110	0.4	307	0.1	178
2012	4	12	19	2.8	106	0.8	5	0.3	230
2012	4	12	20	2.1	104	0.9	358	0.1	213
2012	4	12	21	0.5	268	0.7	8	0.4	106
2012	4	12	22	0.5	253	0.4	13	0.3	88
2012	4	12	23	0.4	258	0.7	10	0.1	211
2012	4	13	0	1.0	255	0.7	352	0.1	290
2012	4	13	1	1.6	263	0.6	7	0.4	304
2012	4	13	2	1.5	282	0.7	11	0.7	358
2012	4	13	3	1.5	271	0.5	327	0.8	328
2012	4	13	4	1.8	263	0.4	320	0.6	18
2012	4	13	5	1.7	261	0.6	257	0.9	14
2012	4	13	6	1.6	264	0.4	83	1.1	348
2012	4	13	7	1.4	244	0.5	199	1.3	306
2012	4	13	8	1.8	258	0.5	224	1.0	303
2012	4	13	9	2.4	277	0.6	53	0.9	228
2012	4	13	10	3.1	288	0.7	74	1.0	249
2012	4	13	11	3.1	279	1.2	154	1.4	266
2012	4	13	12	3.4	276	2.3	200	0.9	225
2012	4	13	13	3.7	264	3.4	205	1.9	268
2012	4	13	14	3.8	272	3.8	208	2.0	275
2012	4	13	15	3.5	281	4.4	207	2.4	266
2012	4	13	16	2.9	274	3.6	204	2.3	262
2012	4	13	17	3.0	287	3.1	219	2.1	255
2012	4	13	18	2.6	281	3.0	234	2.3	266
2012	4	13	19	1.9	270	1.4	236	2.3	266
2012	4	13	20	2.0	278	1.2	262	2.8	271
2012	4	13	21	1.8	284	1.3	288	2.8	277
2012	4	13	22	1.6	298	0.7	17	2.7	279
2012	4	13	23	1.3	290	0.9	360	2.4	287

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	14	0	1.1	281	0.7	355	2.6	285
2012	4	14	1	1.5	285	1.2	307	2.2	306
2012	4	14	2	1.3	275	0.8	26	2.2	307
2012	4	14	3	0.4	280	0.8	344	1.4	297
2012	4	14	4	n/a	n/a	1.0	15	1.0	287
2012	4	14	5	n/a	n/a	0.6	234	0.2	108
2012	4	14	6	n/a	n/a	0.4	282	0.4	275
2012	4	14	7	0.0	269	0.5	86	0.6	275
2012	4	14	8	1.7	100	0.7	164	1.0	114
2012	4	14	9	5.0	103	0.8	204	1.2	114
2012	4	14	10	5.6	101	1.0	161	1.7	107
2012	4	14	11	5.5	100	1.5	195	2.1	105
2012	4	14	12	6.0	101	1.6	180	2.3	95
2012	4	14	13	6.2	101	1.3	193	3.1	104
2012	4	14	14	5.1	104	1.4	173	3.4	106
2012	4	14	15	4.7	100	1.5	157	3.7	109
2012	4	14	16	5.2	101	1.6	151	3.2	115
2012	4	14	17	5.2	107	1.2	140	2.3	120
2012	4	14	18	5.5	105	1.0	217	2.2	119
2012	4	14	19	5.5	107	0.9	201	2.4	115
2012	4	14	20	5.6	106	0.6	201	2.4	109
2012	4	14	21	5.5	106	0.9	228	2.4	107
2012	4	14	22	5.3	108	0.8	211	2.5	111
2012	4	14	23	5.5	111	1.0	191	1.5	115
2012	4	15	0	4.2	117	0.6	125	0.6	172
2012	4	15	1	3.7	134	1.2	15	1.0	92
2012	4	15	2	2.7	132	1.3	339	0.9	99
2012	4	15	3	2.1	118	2.2	3	1.0	109
2012	4	15	4	2.5	107	1.1	67	0.1	276
2012	4	15	5	2.7	104	1.0	11	0.6	72
2012	4	15	6	4.2	107	1.6	30	0.1	249
2012	4	15	7	6.5	101	1.3	65	0.3	354
2012	4	15	8	6.8	100	1.2	75	0.4	177
2012	4	15	9	7.0	97	1.5	110	0.4	218
2012	4	15	10	7.6	98	1.4	117	0.9	153
2012	4	15	11	7.8	98	2.1	174	1.8	122
2012	4	15	12	7.2	100	2.3	185	2.6	109
2012	4	15	13	6.6	101	2.0	190	1.9	120
2012	4	15	14	5.9	100	2.3	173	0.9	176
2012	4	15	15	5.7	98	2.4	183	1.0	192
2012	4	15	16	5.4	99	1.8	191	1.0	168
2012	4	15	17	5.1	97	2.2	197	1.1	165
2012	4	15	18	5.0	100	0.8	242	0.9	207
2012	4	15	19	6.4	102	0.7	345	1.1	272
2012	4	15	20	6.6	108	1.0	333	1.1	302
2012	4	15	21	6.9	115	1.1	9	1.0	303
2012	4	15	22	7.3	114	1.0	352	1.4	6
2012	4	15	23	7.8	109	1.0	354	1.4	23

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	16	0	7.0	110	1.7	3	2.0	15
2012	4	16	1	7.0	108	2.2	3	1.0	33
2012	4	16	2	6.9	108	2.0	18	1.4	21
2012	4	16	3	6.7	102	2.3	13	1.7	354
2012	4	16	4	8.2	100	2.2	31	1.8	0
2012	4	16	5	9.6	111	2.0	35	2.0	7
2012	4	16	6	9.7	104	1.6	31	2.1	14
2012	4	16	7	8.9	113	1.7	22	2.1	11
2012	4	16	8	9.8	117	2.0	34	1.5	13
2012	4	16	9	10.0	115	1.9	47	1.1	16
2012	4	16	10	10.4	112	2.3	67	0.5	250
2012	4	16	11	9.8	112	2.6	82	0.8	219
2012	4	16	12	8.5	113	2.5	88	1.2	148
2012	4	16	13	7.9	112	2.6	74	1.6	127
2012	4	16	14	7.1	111	2.0	72	1.5	110
2012	4	16	15	9.5	110	1.2	104	0.9	176
2012	4	16	16	10.1	109	0.9	84	0.8	185
2012	4	16	17	8.2	110	1.2	6	0.7	149
2012	4	16	18	9.3	113	2.7	134	0.4	258
2012	4	16	19	8.8	113	1.8	93	1.9	144
2012	4	16	20	8.8	100	1.2	104	3.6	116
2012	4	16	21	9.2	94	1.2	176	3.6	111
2012	4	16	22	8.2	103	1.3	215	2.7	87
2012	4	16	23	8.3	103	0.6	182	2.7	93
2012	4	17	0	7.1	103	1.0	58	3.8	103
2012	4	17	1	5.7	103	3.3	199	4.4	111
2012	4	17	2	4.3	79	3.1	204	3.3	100
2012	4	17	3	2.5	169	1.9	172	2.4	122
2012	4	17	4	3.4	151	2.3	197	3.0	103
2012	4	17	5	7.2	132	2.5	195	1.5	104
2012	4	17	6	7.3	131	3.2	210	1.0	71
2012	4	17	7	6.4	100	2.0	192	1.2	85
2012	4	17	8	5.4	96	1.7	166	1.4	98
2012	4	17	9	6.2	100	2.0	138	1.7	119
2012	4	17	10	7.0	102	1.9	127	2.2	118
2012	4	17	11	6.3	102	2.3	97	2.2	119
2012	4	17	12	5.6	111	2.1	91	2.4	111
2012	4	17	13	5.3	108	2.2	91	2.1	109
2012	4	17	14	5.7	113	1.5	126	1.7	124
2012	4	17	15	7.5	112	1.6	105	1.7	136
2012	4	17	16	7.1	110	1.2	123	1.5	110
2012	4	17	17	8.9	111	0.8	75	1.9	129
2012	4	17	18	7.1	117	1.1	284	1.0	160
2012	4	17	19	5.6	122	1.3	289	0.5	167
2012	4	17	20	4.9	126	0.7	13	0.1	192
2012	4	17	21	5.9	116	1.1	15	0.3	3
2012	4	17	22	7.5	110	1.6	24	1.8	7
2012	4	17	23	8.7	111	2.2	18	2.2	2

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	18	0	10.0	111	2.6	12	2.3	10
2012	4	18	1	11.2	113	2.6	13	2.4	11
2012	4	18	2	11.5	111	2.7	10	2.3	12
2012	4	18	3	9.7	112	2.3	10	2.9	14
2012	4	18	4	8.0	118	1.3	16	2.1	13
2012	4	18	5	10.8	113	0.9	59	2.0	13
2012	4	18	6	9.7	108	0.7	179	1.2	15
2012	4	18	7	10.2	103	1.1	88	1.1	40
2012	4	18	8	9.5	100	1.5	89	0.4	226
2012	4	18	9	8.1	104	1.1	97	0.4	250
2012	4	18	10	8.5	98	1.4	127	0.6	198
2012	4	18	11	9.5	90	2.8	90	1.2	130
2012	4	18	12	10.0	90	2.6	88	1.6	126
2012	4	18	13	8.7	91	3.0	70	1.5	123
2012	4	18	14	7.0	99	1.9	96	1.4	121
2012	4	18	15	6.1	105	1.3	120	2.3	111
2012	4	18	16	6.4	114	2.2	128	2.4	119
2012	4	18	17	7.1	98	3.6	100	3.0	116
2012	4	18	18	8.4	93	1.6	199	2.2	86
2012	4	18	19	7.0	96	1.6	28	1.0	30
2012	4	18	20	5.6	99	1.3	162	1.6	64
2012	4	18	21	6.8	94	1.9	189	1.0	66
2012	4	18	22	6.8	102	2.0	163	2.4	87
2012	4	18	23	6.8	94	1.5	178	0.7	119
2012	4	19	0	8.0	88	1.7	180	0.4	239
2012	4	19	1	6.9	99	1.4	168	1.0	50
2012	4	19	2	7.5	96	1.0	158	1.6	114
2012	4	19	3	8.8	86	0.5	183	1.3	83
2012	4	19	4	8.6	91	1.0	235	1.5	92
2012	4	19	5	8.4	90	1.1	289	1.5	65
2012	4	19	6	8.2	94	0.6	19	1.8	74
2012	4	19	7	8.1	93	0.9	67	2.2	80
2012	4	19	8	7.6	99	0.6	83	2.3	90
2012	4	19	9	8.0	94	1.1	37	2.4	102
2012	4	19	10	7.6	92	2.0	73	2.4	95
2012	4	19	11	8.7	98	2.6	100	2.0	98
2012	4	19	12	9.5	93	2.0	85	1.9	90
2012	4	19	13	8.0	104	2.1	65	1.7	83
2012	4	19	14	9.3	103	1.7	111	1.5	103
2012	4	19	15	11.0	106	1.2	87	1.3	114
2012	4	19	16	12.6	107	1.2	79	1.2	95
2012	4	19	17	14.1	110	1.1	123	0.4	214
2012	4	19	18	13.5	108	1.3	21	0.9	165
2012	4	19	19	14.7	108	2.2	0	1.0	96
2012	4	19	20	14.1	97	2.0	6	1.5	80
2012	4	19	21	11.6	100	2.1	3	1.3	109
2012	4	19	22	9.6	101	2.5	0	0.5	139
2012	4	19	23	8.8	95	1.8	14	0.4	97

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	20	0	5.6	100	1.3	248	1.2	29
2012	4	20	1	8.4	121	1.9	204	0.9	34
2012	4	20	2	4.5	99	1.8	190	1.6	111
2012	4	20	3	8.2	96	1.3	300	2.9	109
2012	4	20	4	10.3	100	1.1	347	3.5	105
2012	4	20	5	11.4	94	1.2	49	3.9	115
2012	4	20	6	12.7	89	2.0	107	3.8	117
2012	4	20	7	12.6	88	1.1	165	4.8	119
2012	4	20	8	12.9	87	1.8	148	4.6	126
2012	4	20	9	12.5	94	1.9	171	4.4	121
2012	4	20	10	9.9	106	1.7	169	4.8	123
2012	4	20	11	7.4	111	2.6	145	4.6	126
2012	4	20	12	7.7	91	3.4	159	5.1	116
2012	4	20	13	9.0	80	4.5	194	5.1	118
2012	4	20	14	8.2	82	4.0	190	4.4	118
2012	4	20	15	6.8	83	4.6	192	3.0	133
2012	4	20	16	1.6	333	3.6	205	3.4	134
2012	4	20	17	2.6	23	3.5	224	2.1	158
2012	4	20	18	2.7	260	2.7	195	1.9	152
2012	4	20	19	2.5	100	2.5	205	0.7	209
2012	4	20	20	5.3	93	3.1	213	0.8	68
2012	4	20	21	4.6	109	2.8	219	1.2	98
2012	4	20	22	4.9	109	2.2	206	1.1	137
2012	4	20	23	4.9	109	1.5	213	2.0	110
2012	4	21	0	4.9	113	1.3	252	1.7	106
2012	4	21	1	5.0	110	0.9	195	1.6	94
2012	4	21	2	5.4	108	0.9	176	1.7	84
2012	4	21	3	5.6	105	1.1	191	1.1	64
2012	4	21	4	5.2	102	1.0	190	1.0	96
2012	4	21	5	4.9	95	0.9	185	1.2	43
2012	4	21	6	5.1	109	0.4	133	1.2	31
2012	4	21	7	7.0	102	0.9	159	1.0	41
2012	4	21	8	7.1	99	1.4	126	1.0	106
2012	4	21	9	6.4	99	1.7	123	1.2	140
2012	4	21	10	6.3	102	2.2	109	1.5	130
2012	4	21	11	6.6	105	2.0	169	1.1	142
2012	4	21	12	7.5	96	1.8	171	0.9	187
2012	4	21	13	6.6	100	1.9	152	1.4	156
2012	4	21	14	4.8	106	1.9	204	1.6	202
2012	4	21	15	4.8	116	2.2	210	1.2	202
2012	4	21	16	4.9	106	3.0	227	1.2	181
2012	4	21	17	4.5	113	1.9	216	1.5	221
2012	4	21	18	4.5	112	1.5	217	2.1	254
2012	4	21	19	3.9	132	1.2	243	1.8	269
2012	4	21	20	3.6	132	1.1	13	1.9	274
2012	4	21	21	4.2	111	0.5	58	2.0	290
2012	4	21	22	3.5	114	1.0	357	2.0	307
2012	4	21	23	4.2	106	1.0	340	1.9	336

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	22	0	4.2	116	0.5	189	2.3	4
2012	4	22	1	3.7	102	0.6	222	2.5	359
2012	4	22	2	4.8	107	0.6	106	2.1	5
2012	4	22	3	5.7	98	0.8	1	2.1	6
2012	4	22	4	5.7	99	0.5	343	2.2	3
2012	4	22	5	6.2	104	0.4	173	2.5	7
2012	4	22	6	6.6	97	0.6	8	2.2	7
2012	4	22	7	7.0	103	1.0	40	1.8	7
2012	4	22	8	6.3	106	1.1	70	1.0	350
2012	4	22	9	6.9	111	1.3	92	0.9	248
2012	4	22	10	6.5	105	1.6	110	1.0	212
2012	4	22	11	6.2	106	1.8	178	1.0	201
2012	4	22	12	5.6	101	1.9	187	1.1	206
2012	4	22	13	5.7	101	2.3	202	1.1	195
2012	4	22	14	5.8	95	2.5	199	1.4	156
2012	4	22	15	3.9	105	2.8	199	1.5	152
2012	4	22	16	3.8	120	2.5	211	1.4	195
2012	4	22	17	4.1	118	1.7	220	1.7	228
2012	4	22	18	4.4	118	1.1	209	2.1	246
2012	4	22	19	3.9	119	1.0	351	1.3	243
2012	4	22	20	4.2	125	0.9	48	0.3	141
2012	4	22	21	4.4	121	1.6	252	1.8	116
2012	4	22	22	4.1	101	1.8	217	2.9	110
2012	4	22	23	1.1	119	1.8	223	1.5	238
2012	4	23	0	1.2	252	0.8	324	1.7	287
2012	4	23	1	1.2	268	1.4	334	2.2	295
2012	4	23	2	1.4	135	1.4	331	2.1	344
2012	4	23	3	2.1	87	1.4	327	0.7	357
2012	4	23	4	2.9	90	0.4	201	0.6	15
2012	4	23	5	2.8	90	0.5	52	0.5	68
2012	4	23	6	2.5	88	0.5	44	0.7	354
2012	4	23	7	1.8	87	0.6	93	0.4	54
2012	4	23	8	1.1	94	1.2	109	0.5	279
2012	4	23	9	1.9	252	2.0	154	0.5	223
2012	4	23	10	1.8	238	3.6	191	0.9	230
2012	4	23	11	1.8	259	3.7	202	0.8	199
2012	4	23	12	1.5	237	3.4	175	0.8	205
2012	4	23	13	2.0	265	3.7	206	1.1	212
2012	4	23	14	4.3	296	4.2	197	1.7	237
2012	4	23	15	4.2	301	4.2	214	2.1	233
2012	4	23	16	2.4	263	5.0	222	2.5	238
2012	4	23	17	1.9	220	4.4	211	2.7	245
2012	4	23	18	1.3	56	4.0	215	2.9	241
2012	4	23	19	1.7	321	3.6	206	3.2	242
2012	4	23	20	1.4	278	4.1	221	2.5	255
2012	4	23	21	1.0	161	3.7	215	2.0	257
2012	4	23	22	3.1	122	3.1	220	1.9	267
2012	4	23	23	4.0	113	2.1	240	1.6	279

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	24	0	3.3	113	1.0	310	0.7	279
2012	4	24	1	1.2	168	0.6	162	0.3	57
2012	4	24	2	1.5	90	0.5	257	0.4	96
2012	4	24	3	2.2	94	0.6	5	0.3	286
2012	4	24	4	4.6	104	1.3	349	0.3	20
2012	4	24	5	6.7	99	1.3	32	1.0	360
2012	4	24	6	8.9	104	1.2	27	1.2	2
2012	4	24	7	9.9	99	1.1	54	1.1	28
2012	4	24	8	9.8	107	1.2	70	0.5	200
2012	4	24	9	9.6	105	1.3	149	0.7	200
2012	4	24	10	9.2	100	1.6	115	0.9	174
2012	4	24	11	9.7	103	1.5	86	1.7	117
2012	4	24	12	10.5	111	1.5	132	1.8	112
2012	4	24	13	10.2	112	1.8	91	2.4	117
2012	4	24	14	8.4	105	1.5	67	0.9	167
2012	4	24	15	6.7	112	1.5	135	1.0	134
2012	4	24	16	5.4	122	1.3	100	1.0	199
2012	4	24	17	6.6	116	0.7	110	0.9	168
2012	4	24	18	5.0	112	0.6	199	1.0	242
2012	4	24	19	6.8	113	0.8	326	1.0	261
2012	4	24	20	5.3	118	0.8	347	1.4	297
2012	4	24	21	4.8	112	0.8	207	1.2	12
2012	4	24	22	5.8	120	1.7	200	1.2	7
2012	4	24	23	7.8	111	2.5	219	1.2	318
2012	4	25	0	7.3	110	1.5	193	0.8	151
2012	4	25	1	9.1	106	1.2	39	0.6	109
2012	4	25	2	7.2	107	2.0	9	1.1	99
2012	4	25	3	5.3	119	3.2	13	0.5	238
2012	4	25	4	6.7	126	2.8	18	1.0	322
2012	4	25	5	8.6	125	2.1	4	1.5	336
2012	4	25	6	8.6	112	1.8	15	0.6	351
2012	4	25	7	10.8	106	1.5	7	0.7	65
2012	4	25	8	9.1	106	1.5	18	0.6	339
2012	4	25	9	9.6	111	1.5	58	0.5	211
2012	4	25	10	10.3	114	1.2	78	0.7	242
2012	4	25	11	10.3	111	1.6	51	1.2	234
2012	4	25	12	11.7	110	1.8	50	1.0	214
2012	4	25	13	13.7	109	1.5	8	0.7	195
2012	4	25	14	12.8	107	2.1	32	0.5	154
2012	4	25	15	13.9	109	1.7	30	0.4	168
2012	4	25	16	14.4	112	1.4	156	0.9	140
2012	4	25	17	11.4	108	1.6	237	2.0	117
2012	4	25	18	10.3	111	1.3	36	1.8	86
2012	4	25	19	8.9	115	2.1	14	0.9	249
2012	4	25	20	8.6	111	2.7	21	0.9	280
2012	4	25	21	6.9	89	3.5	16	1.0	273
2012	4	25	22	5.8	115	3.7	15	0.9	316
2012	4	25	23	7.6	89	4.0	14	1.2	324

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	26	0	9.5	113	3.5	18	1.5	357
2012	4	26	1	10.5	121	3.3	12	1.0	300
2012	4	26	2	4.3	109	2.9	13	1.1	335
2012	4	26	3	2.9	279	1.6	238	1.5	338
2012	4	26	4	2.5	279	2.3	215	1.3	260
2012	4	26	5	3.7	285	4.6	211	1.8	271
2012	4	26	6	2.2	281	4.4	212	2.4	268
2012	4	26	7	2.0	291	1.7	175	1.4	224
2012	4	26	8	1.6	283	1.2	134	0.8	98
2012	4	26	9	1.5	291	1.1	149	1.1	90
2012	4	26	10	1.7	276	1.2	109	1.1	116
2012	4	26	11	2.6	290	1.4	155	1.1	136
2012	4	26	12	2.2	259	2.3	176	0.8	165
2012	4	26	13	1.0	218	3.3	183	0.6	209
2012	4	26	14	1.5	266	4.1	197	1.1	239
2012	4	26	15	1.9	255	4.6	199	1.7	249
2012	4	26	16	1.8	269	4.3	209	1.3	248
2012	4	26	17	2.7	291	4.9	211	1.6	77
2012	4	26	18	2.1	277	4.8	211	1.2	51
2012	4	26	19	2.7	289	5.1	213	1.3	25
2012	4	26	20	2.8	289	4.6	206	1.6	14
2012	4	26	21	2.9	291	4.4	205	1.5	45
2012	4	26	22	1.8	277	3.5	206	0.8	32
2012	4	26	23	2.0	271	3.9	216	0.4	299
2012	4	27	0	1.4	254	3.4	208	0.6	85
2012	4	27	1	1.2	209	3.6	206	0.8	31
2012	4	27	2	1.9	110	2.5	198	1.7	63
2012	4	27	3	5.5	104	1.7	185	2.2	88
2012	4	27	4	7.7	93	2.1	202	2.5	101
2012	4	27	5	9.0	92	2.0	198	2.1	101
2012	4	27	6	10.0	85	1.3	189	3.2	102
2012	4	27	7	10.1	88	1.2	194	3.5	90
2012	4	27	8	9.7	80	1.3	152	3.2	109
2012	4	27	9	7.8	79	1.2	186	3.5	125
2012	4	27	10	5.4	104	1.5	161	4.2	128
2012	4	27	11	5.1	104	1.6	172	3.0	136
2012	4	27	12	3.9	77	1.8	177	3.2	127
2012	4	27	13	5.3	87	1.9	185	3.5	120
2012	4	27	14	3.9	83	1.8	192	4.1	118
2012	4	27	15	3.8	76	2.3	175	3.5	121
2012	4	27	16	1.6	285	1.9	182	3.4	120
2012	4	27	17	1.7	256	2.0	182	1.9	144
2012	4	27	18	2.3	280	2.5	177	0.7	242
2012	4	27	19	1.9	93	1.6	148	0.8	258
2012	4	27	20	1.6	72	1.1	170	0.3	158
2012	4	27	21	3.5	78	1.0	169	1.8	112
2012	4	27	22	1.6	88	1.0	175	2.8	117
2012	4	27	23	1.3	82	1.1	205	2.7	120

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	28	0	1.9	95	1.1	223	3.2	118
2012	4	28	1	4.6	95	0.7	201	3.0	113
2012	4	28	2	2.4	90	0.5	300	2.5	107
2012	4	28	3	5.1	87	0.4	243	1.9	90
2012	4	28	4	6.9	108	0.5	259	1.9	103
2012	4	28	5	6.2	107	0.7	341	1.3	79
2012	4	28	6	8.1	103	1.0	25	1.1	69
2012	4	28	7	7.8	100	0.8	37	1.2	74
2012	4	28	8	7.8	103	0.9	50	1.3	106
2012	4	28	9	8.7	101	1.1	92	1.3	106
2012	4	28	10	7.9	103	1.0	91	1.1	110
2012	4	28	11	7.8	104	1.2	102	1.4	112
2012	4	28	12	7.8	101	1.6	120	2.4	99
2012	4	28	13	7.5	100	1.6	128	2.9	97
2012	4	28	14	5.9	104	1.4	138	2.8	99
2012	4	28	15	5.6	101	1.3	173	3.3	101
2012	4	28	16	5.1	108	1.5	170	4.2	111
2012	4	28	17	4.8	94	1.5	176	3.9	118
2012	4	28	18	2.6	68	0.9	162	2.6	126
2012	4	28	19	2.3	286	1.3	184	1.2	138
2012	4	28	20	2.2	278	2.1	190	1.3	113
2012	4	28	21	2.2	285	2.6	196	1.4	128
2012	4	28	22	2.6	277	2.3	187	1.4	132
2012	4	28	23	2.5	279	2.1	192	1.9	110
2012	4	29	0	2.1	266	1.6	162	1.1	113
2012	4	29	1	2.8	293	1.4	157	1.6	122
2012	4	29	2	2.7	287	1.5	169	2.0	117
2012	4	29	3	2.5	289	1.8	162	1.7	106
2012	4	29	4	2.1	277	2.0	155	2.1	111
2012	4	29	5	0.8	259	1.6	157	2.2	129
2012	4	29	6	1.0	65	1.5	180	2.6	123
2012	4	29	7	2.1	133	1.8	165	3.2	117
2012	4	29	8	5.5	99	1.7	179	3.1	118
2012	4	29	9	7.7	85	1.8	193	3.2	114
2012	4	29	10	7.9	84	1.8	155	3.2	110
2012	4	29	11	7.6	89	2.2	155	3.2	111
2012	4	29	12	7.5	92	2.3	157	2.6	114
2012	4	29	13	7.1	95	2.2	127	2.8	110
2012	4	29	14	7.8	92	2.5	127	2.8	117
2012	4	29	15	8.1	86	1.9	128	1.9	122
2012	4	29	16	7.8	92	1.6	146	2.1	114
2012	4	29	17	7.9	91	1.8	139	2.2	117
2012	4	29	18	8.4	95	1.3	144	1.9	117
2012	4	29	19	8.0	96	0.6	202	1.5	113
2012	4	29	20	8.3	97	0.3	322	1.2	90
2012	4	29	21	9.2	104	0.5	6	1.2	58
2012	4	29	22	8.7	106	0.7	129	1.1	58
2012	4	29	23	8.4	105	0.6	129	1.0	35

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	4	30	0	8.2	105	0.8	6	1.6	11
2012	4	30	1	6.9	104	1.6	13	1.3	5
2012	4	30	2	6.4	104	2.3	20	1.3	355
2012	4	30	3	6.6	106	2.3	11	1.3	11
2012	4	30	4	6.3	100	2.3	12	1.3	11
2012	4	30	5	6.1	98	2.2	14	1.3	5
2012	4	30	6	6.1	103	2.2	17	1.3	359
2012	4	30	7	6.1	101	1.7	29	1.2	9
2012	4	30	8	5.1	105	1.6	28	0.8	325
2012	4	30	9	2.9	117	1.6	51	1.0	289
2012	4	30	10	2.9	99	1.7	91	1.3	278
2012	4	30	11	4.3	102	1.3	114	0.9	232
2012	4	30	12	5.5	98	1.3	110	0.9	203
2012	4	30	13	5.1	100	1.5	150	1.3	222
2012	4	30	14	3.9	105	2.1	197	0.8	208
2012	4	30	15	1.6	105	1.7	193	0.6	216
2012	4	30	16	0.2	48	2.4	205	1.0	224
2012	4	30	17	0.8	286	2.2	212	1.3	247
2012	4	30	18	1.3	276	1.2	235	1.4	272
2012	4	30	19	1.6	277	0.9	248	1.2	287
2012	4	30	20	1.7	275	1.3	181	1.5	120
2012	4	30	21	1.9	271	1.1	178	1.9	112
2012	4	30	22	2.4	276	1.3	194	0.9	86
2012	4	30	23	2.2	269	0.7	18	0.4	144
2012	5	1	0	2.1	275	0.9	254	0.8	289
2012	5	1	1	2.5	280	0.6	223	1.3	270
2012	5	1	2	2.6	282	1.8	213	0.5	213
2012	5	1	3	2.5	283	1.2	217	0.4	82
2012	5	1	4	2.3	281	0.7	211	1.4	72
2012	5	1	5	2.3	279	0.7	195	2.7	114
2012	5	1	6	2.1	281	1.0	180	2.5	110
2012	5	1	7	2.0	285	2.2	174	2.5	110
2012	5	1	8	2.3	280	2.6	173	2.3	110
2012	5	1	9	2.3	273	2.7	179	2.6	112
2012	5	1	10	1.8	272	3.0	183	2.4	120
2012	5	1	11	4.1	94	2.9	185	2.2	115
2012	5	1	12	3.8	104	3.4	174	1.9	118
2012	5	1	13	3.5	104	3.3	182	1.4	132
2012	5	1	14	2.1	287	3.3	178	1.1	172
2012	5	1	15	3.7	290	4.3	171	1.5	231
2012	5	1	16	3.2	292	4.2	183	1.6	241
2012	5	1	17	2.5	281	4.3	183	2.1	243
2012	5	1	18	2.2	269	3.6	191	2.7	251
2012	5	1	19	2.5	289	4.3	198	2.2	241
2012	5	1	20	2.1	278	4.2	209	1.6	254
2012	5	1	21	1.5	272	3.8	200	0.9	235
2012	5	1	22	1.3	134	3.9	209	0.8	282
2012	5	1	23	1.4	272	4.2	217	0.9	13

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	2	0	1.9	142	4.3	211	1.8	86
2012	5	2	1	5.4	108	3.8	210	2.4	106
2012	5	2	2	5.3	105	2.5	179	2.2	103
2012	5	2	3	5.6	108	1.8	177	2.0	93
2012	5	2	4	4.8	107	1.1	206	2.1	84
2012	5	2	5	5.4	94	1.1	202	2.2	86
2012	5	2	6	4.6	97	1.2	182	1.9	94
2012	5	2	7	4.7	100	1.2	170	2.1	87
2012	5	2	8	5.7	94	1.3	142	2.6	97
2012	5	2	9	6.5	91	1.8	125	2.3	107
2012	5	2	10	6.6	96	2.8	109	2.4	115
2012	5	2	11	7.2	90	1.6	191	1.8	120
2012	5	2	12	7.4	93	2.8	192	1.3	163
2012	5	2	13	6.7	90	2.9	204	1.0	187
2012	5	2	14	6.4	91	3.6	204	1.0	159
2012	5	2	15	5.3	97	3.5	221	1.3	205
2012	5	2	16	5.7	105	2.9	217	1.5	218
2012	5	2	17	5.5	107	2.8	216	1.4	216
2012	5	2	18	5.0	113	2.2	215	1.0	174
2012	5	2	19	5.3	111	1.6	226	1.2	246
2012	5	2	20	5.0	105	0.7	241	1.2	308
2012	5	2	21	5.0	119	1.2	244	1.0	301
2012	5	2	22	4.5	118	1.1	210	0.7	298
2012	5	2	23	4.5	118	0.9	65	1.1	34
2012	5	3	0	4.3	110	0.5	345	0.9	46
2012	5	3	1	3.8	109	0.5	228	0.6	67
2012	5	3	2	3.5	110	1.4	352	0.4	351
2012	5	3	3	3.6	108	1.8	2	1.4	358
2012	5	3	4	3.2	111	2.0	10	1.8	4
2012	5	3	5	4.0	111	1.8	6	1.8	4
2012	5	3	6	4.5	97	1.1	340	1.7	3
2012	5	3	7	3.7	101	0.9	143	1.0	340
2012	5	3	8	3.6	104	1.2	123	0.6	305
2012	5	3	9	3.9	108	1.4	120	0.8	233
2012	5	3	10	3.8	106	1.5	174	0.8	247
2012	5	3	11	4.0	106	3.1	195	1.3	214
2012	5	3	12	4.3	100	3.1	191	1.2	218
2012	5	3	13	3.9	100	3.3	196	1.4	215
2012	5	3	14	3.5	101	2.9	225	1.4	222
2012	5	3	15	2.8	107	3.6	233	2.2	247
2012	5	3	16	1.7	108	4.0	226	2.7	244
2012	5	3	17	1.9	253	3.4	225	2.8	245
2012	5	3	18	2.5	277	3.4	224	2.5	249
2012	5	3	19	2.2	289	2.7	217	2.8	246
2012	5	3	20	1.1	259	3.1	227	2.3	256
2012	5	3	21	0.9	165	1.6	231	2.1	261
2012	5	3	22	1.2	94	1.0	273	2.0	270
2012	5	3	23	0.8	94	1.1	255	2.0	296

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	4	0	0.9	270	0.9	283	2.2	301
2012	5	4	1	0.9	276	1.2	339	1.3	296
2012	5	4	2	1.5	271	1.0	271	1.2	261
2012	5	4	3	2.1	307	1.5	214	0.6	144
2012	5	4	4	1.7	289	1.3	159	0.6	15
2012	5	4	5	2.2	283	1.8	193	0.3	100
2012	5	4	6	0.8	263	1.0	195	0.5	235
2012	5	4	7	0.5	102	2.5	199	0.6	247
2012	5	4	8	0.9	96	2.8	199	0.6	285
2012	5	4	9	2.4	97	3.8	196	1.3	108
2012	5	4	10	2.6	11	2.6	197	1.7	129
2012	5	4	11	0.8	128	3.6	210	1.1	158
2012	5	4	12	1.6	287	4.5	182	0.9	188
2012	5	4	13	1.5	298	4.5	186	2.7	240
2012	5	4	14	2.4	94	4.6	192	2.4	245
2012	5	4	15	2.8	105	4.0	201	1.7	225
2012	5	4	16	2.5	86	2.7	198	2.3	232
2012	5	4	17	1.6	293	3.3	189	2.3	242
2012	5	4	18	2.1	112	3.6	184	1.6	240
2012	5	4	19	2.3	100	3.5	188	1.3	245
2012	5	4	20	1.0	280	2.8	213	1.0	222
2012	5	4	21	3.0	102	3.0	217	1.4	258
2012	5	4	22	3.6	99	3.1	195	0.8	149
2012	5	4	23	5.5	103	2.5	202	0.8	59
2012	5	5	0	6.5	99	2.1	208	1.8	113
2012	5	5	1	7.4	97	1.8	170	2.3	125
2012	5	5	2	8.6	89	1.3	210	2.3	115
2012	5	5	3	7.3	86	1.1	240	3.2	113
2012	5	5	4	6.0	96	0.6	187	3.5	110
2012	5	5	5	3.5	97	0.7	171	3.5	105
2012	5	5	6	0.6	297	0.7	193	3.6	102
2012	5	5	7	1.9	64	1.0	197	3.8	107
2012	5	5	8	2.0	93	1.3	164	3.2	108
2012	5	5	9	2.1	76	1.9	170	3.2	106
2012	5	5	10	2.7	85	1.9	167	2.6	121
2012	5	5	11	1.2	107	2.0	188	2.7	123
2012	5	5	12	1.7	117	2.1	186	1.6	145
2012	5	5	13	2.4	100	2.2	180	1.5	225
2012	5	5	14	4.2	98	2.7	174	1.7	234
2012	5	5	15	3.7	103	3.0	168	1.4	244
2012	5	5	16	3.4	104	2.5	192	1.4	217
2012	5	5	17	4.4	103	3.1	170	1.5	229
2012	5	5	18	5.5	95	2.1	172	1.6	252
2012	5	5	19	6.9	88	2.3	193	1.2	257
2012	5	5	20	7.2	87	2.5	204	1.1	300
2012	5	5	21	9.3	92	3.3	212	0.6	336
2012	5	5	22	10.9	92	2.9	199	1.3	120
2012	5	5	23	11.2	89	2.2	193	2.1	116

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	6	0	10.8	90	2.4	199	2.4	99
2012	5	6	1	10.2	88	1.8	222	2.6	106
2012	5	6	2	10.8	87	0.9	217	3.1	104
2012	5	6	3	11.5	85	0.7	221	3.4	94
2012	5	6	4	11.3	95	1.1	188	3.4	89
2012	5	6	5	11.3	98	1.0	214	3.7	89
2012	5	6	6	11.8	95	1.3	208	4.0	94
2012	5	6	7	11.7	91	1.3	224	3.6	94
2012	5	6	8	11.1	99	1.1	239	3.7	94
2012	5	6	9	11.3	102	1.5	162	4.1	113
2012	5	6	10	12.2	91	1.3	177	4.7	118
2012	5	6	11	12.3	87	1.5	170	4.4	116
2012	5	6	12	11.8	92	1.2	220	4.3	120
2012	5	6	13	11.2	95	1.4	181	3.8	120
2012	5	6	14	10.8	93	1.0	204	3.8	119
2012	5	6	15	10.5	96	1.3	216	3.4	121
2012	5	6	16	10.9	93	1.5	226	3.8	121
2012	5	6	17	9.8	98	1.1	209	3.5	118
2012	5	6	18	9.1	110	1.3	207	3.2	115
2012	5	6	19	9.9	93	1.9	208	3.8	116
2012	5	6	20	11.0	82	2.2	210	3.7	118
2012	5	6	21	11.3	81	1.5	198	4.4	116
2012	5	6	22	11.8	80	1.1	199	4.3	118
2012	5	6	23	12.1	79	1.2	207	4.1	120
2012	5	7	0	10.4	85	1.1	213	3.8	120
2012	5	7	1	10.2	91	1.2	231	3.6	114
2012	5	7	2	10.1	100	1.2	217	3.4	114
2012	5	7	3	10.3	92	1.2	211	3.4	118
2012	5	7	4	10.3	104	1.0	204	3.6	117
2012	5	7	5	10.6	98	0.8	234	3.3	114
2012	5	7	6	10.6	102	0.9	260	3.3	111
2012	5	7	7	11.3	106	1.3	215	3.5	112
2012	5	7	8	11.1	96	1.3	211	3.8	105
2012	5	7	9	10.5	99	1.0	203	3.9	110
2012	5	7	10	10.7	99	0.9	228	4.2	116
2012	5	7	11	11.4	91	0.8	147	3.7	104
2012	5	7	12	11.7	91	1.0	135	3.4	104
2012	5	7	13	11.5	92	1.2	149	3.3	107
2012	5	7	14	11.9	92	1.6	184	3.7	117
2012	5	7	15	12.0	98	1.3	198	2.8	108
2012	5	7	16	13.0	93	1.3	239	2.6	89
2012	5	7	17	13.8	88	1.8	226	2.7	86
2012	5	7	18	14.0	84	1.1	272	3.1	78
2012	5	7	19	12.9	87	1.2	216	3.8	87
2012	5	7	20	12.6	86	2.1	205	4.1	105
2012	5	7	21	10.9	92	1.6	193	3.2	114
2012	5	7	22	8.4	102	3.3	203	4.5	114
2012	5	7	23	8.9	110	4.6	204	4.0	119

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	8	0	5.6	121	4.0	191	2.9	124
2012	5	8	1	6.2	146	3.8	195	1.8	154
2012	5	8	2	4.9	205	3.4	208	3.2	106
2012	5	8	3	3.1	268	4.7	211	3.0	105
2012	5	8	4	2.1	305	3.6	210	2.5	118
2012	5	8	5	2.2	274	3.7	204	2.2	125
2012	5	8	6	5.5	256	2.5	198	3.8	117
2012	5	8	7	3.2	300	2.3	181	2.7	129
2012	5	8	8	5.3	286	3.0	163	1.3	142
2012	5	8	9	3.3	286	3.1	170	0.7	173
2012	5	8	10	2.2	117	4.2	205	0.9	165
2012	5	8	11	2.4	110	3.8	185	1.6	205
2012	5	8	12	4.4	87	4.5	177	2.4	244
2012	5	8	13	4.1	120	4.1	182	1.9	222
2012	5	8	14	5.2	102	3.8	170	1.3	201
2012	5	8	15	6.8	97	3.6	192	1.2	206
2012	5	8	16	7.3	90	2.7	207	1.3	209
2012	5	8	17	6.6	98	4.0	198	2.2	250
2012	5	8	18	8.2	102	4.3	203	2.0	261
2012	5	8	19	9.8	92	3.5	210	1.4	265
2012	5	8	20	8.5	95	3.6	214	1.7	282
2012	5	8	21	10.4	91	1.6	200	1.3	272
2012	5	8	22	10.4	87	1.7	190	2.6	111
2012	5	8	23	8.8	90	1.0	241	3.2	106
2012	5	9	0	5.4	102	2.8	201	2.7	105
2012	5	9	1	3.2	89	3.4	208	2.1	127
2012	5	9	2	4.1	110	2.4	181	1.7	75
2012	5	9	3	6.2	99	1.9	199	3.6	115
2012	5	9	4	6.8	87	1.2	195	3.9	110
2012	5	9	5	7.3	94	1.4	161	4.2	113
2012	5	9	6	6.3	95	1.6	162	2.9	100
2012	5	9	7	7.6	80	1.4	147	3.2	111
2012	5	9	8	3.1	68	2.3	135	3.2	115
2012	5	9	9	1.7	266	2.5	158	3.3	122
2012	5	9	10	3.7	293	2.4	160	3.4	112
2012	5	9	11	3.2	291	3.6	193	2.0	132
2012	5	9	12	4.5	292	3.9	211	2.1	120
2012	5	9	13	4.0	285	4.6	217	1.3	225
2012	5	9	14	3.6	283	4.9	225	1.7	271
2012	5	9	15	3.7	276	5.5	229	2.4	255
2012	5	9	16	5.1	299	5.8	231	2.3	266
2012	5	9	17	7.8	287	5.0	236	2.0	267
2012	5	9	18	4.9	300	5.4	248	2.7	243
2012	5	9	19	4.1	300	2.3	220	2.4	246
2012	5	9	20	3.5	297	4.3	234	1.8	261
2012	5	9	21	2.7	262	3.3	232	1.5	259
2012	5	9	22	3.0	266	3.1	229	1.3	266
2012	5	9	23	3.0	267	3.5	212	1.1	41

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	10	0	3.2	274	3.8	212	1.8	93
2012	5	10	1	6.0	309	1.7	209	1.3	87
2012	5	10	2	6.2	298	2.6	190	1.0	96
2012	5	10	3	6.4	296	2.1	188	1.6	114
2012	5	10	4	4.9	306	2.4	177	1.5	107
2012	5	10	5	3.7	293	1.9	189	1.4	85
2012	5	10	6	6.0	291	2.7	165	0.8	114
2012	5	10	7	5.9	303	2.3	170	1.8	102
2012	5	10	8	5.6	299	1.7	165	1.9	112
2012	5	10	9	5.0	298	3.6	173	0.9	153
2012	5	10	10	4.2	294	4.2	184	1.0	205
2012	5	10	11	3.5	277	3.9	175	1.2	222
2012	5	10	12	2.6	270	3.3	191	1.7	227
2012	5	10	13	3.1	285	3.2	200	2.2	254
2012	5	10	14	3.8	284	3.7	187	2.3	253
2012	5	10	15	3.5	276	4.0	188	2.0	259
2012	5	10	16	2.8	297	3.5	192	2.5	251
2012	5	10	17	3.2	283	3.6	193	2.4	252
2012	5	10	18	2.6	285	3.6	198	1.9	257
2012	5	10	19	3.6	296	3.4	204	1.7	258
2012	5	10	20	2.0	337	2.8	208	1.2	232
2012	5	10	21	2.8	88	3.3	210	0.7	123
2012	5	10	22	2.4	80	2.5	192	2.0	120
2012	5	10	23	2.9	100	1.4	186	2.2	120
2012	5	11	0	3.9	99	1.9	194	2.8	112
2012	5	11	1	5.2	103	1.7	214	2.6	114
2012	5	11	2	5.7	104	2.1	209	2.7	114
2012	5	11	3	5.5	95	1.7	218	2.9	106
2012	5	11	4	5.2	89	1.5	204	3.2	111
2012	5	11	5	4.7	90	1.3	211	3.7	112
2012	5	11	6	3.8	93	1.8	212	3.5	111
2012	5	11	7	4.3	94	1.9	194	3.7	105
2012	5	11	8	6.2	84	1.8	168	3.5	118
2012	5	11	9	5.7	83	1.8	167	3.3	117
2012	5	11	10	5.6	89	2.5	170	3.8	113
2012	5	11	11	6.1	85	2.8	172	3.8	116
2012	5	11	12	6.8	86	2.9	183	3.0	122
2012	5	11	13	6.3	86	3.2	184	3.2	122
2012	5	11	14	6.5	81	3.2	193	2.4	129
2012	5	11	15	7.4	129	2.5	182	2.5	130
2012	5	11	16	6.7	134	2.4	183	2.7	126
2012	5	11	17	7.4	103	2.4	195	1.4	144
2012	5	11	18	6.4	124	2.2	184	0.9	148
2012	5	11	19	5.8	124	2.3	183	0.8	241
2012	5	11	20	7.4	108	2.3	199	0.6	288
2012	5	11	21	11.0	89	2.2	209	1.0	317
2012	5	11	22	9.3	97	1.5	199	0.7	85
2012	5	11	23	7.7	106	1.6	194	0.4	111

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	12	0	8.8	99	1.5	201	0.9	111
2012	5	12	1	10.3	91	0.9	184	0.7	92
2012	5	12	2	10.9	82	1.2	185	1.8	96
2012	5	12	3	11.3	91	1.4	175	2.6	107
2012	5	12	4	10.1	103	1.3	169	2.7	88
2012	5	12	5	9.9	91	1.4	201	2.9	86
2012	5	12	6	11.9	86	1.2	203	2.8	102
2012	5	12	7	13.0	92	1.0	161	2.1	119
2012	5	12	8	12.5	99	1.6	181	1.4	141
2012	5	12	9	13.7	86	2.0	182	1.3	148
2012	5	12	10	13.7	77	1.4	185	1.1	147
2012	5	12	11	13.1	87	2.3	180	1.1	134
2012	5	12	12	14.6	84	2.5	188	1.6	143
2012	5	12	13	14.4	83	2.7	189	1.1	163
2012	5	12	14	13.3	86	2.7	192	1.4	174
2012	5	12	15	12.9	81	3.8	210	1.5	255
2012	5	12	16	12.3	85	3.9	214	1.5	269
2012	5	12	17	11.6	88	4.1	212	2.0	276
2012	5	12	18	9.6	98	3.7	212	2.1	276
2012	5	12	19	9.0	97	3.6	210	2.5	277
2012	5	12	20	9.0	96	1.9	213	2.1	274
2012	5	12	21	8.2	97	0.8	82	1.6	269
2012	5	12	22	8.5	97	0.8	63	1.5	280
2012	5	12	23	9.1	96	0.6	155	0.8	276
2012	5	13	0	9.2	93	1.4	247	0.6	259
2012	5	13	1	8.5	90	2.0	203	0.7	1
2012	5	13	2	5.3	91	1.6	203	0.5	267
2012	5	13	3	4.0	107	1.9	195	1.0	339
2012	5	13	4	2.1	121	2.0	195	0.8	126
2012	5	13	5	1.1	288	1.5	183	1.3	115
2012	5	13	6	3.5	101	1.5	180	2.6	124
2012	5	13	7	3.7	88	2.1	177	2.8	120
2012	5	13	8	2.9	317	2.5	168	3.6	119
2012	5	13	9	4.3	314	2.8	173	3.6	120
2012	5	13	10	5.4	324	3.5	207	3.2	123
2012	5	13	11	4.9	310	3.3	190	2.2	196
2012	5	13	12	5.1	297	3.2	199	1.2	276
2012	5	13	13	6.5	290	3.3	245	1.5	256
2012	5	13	14	4.9	295	3.4	199	2.2	254
2012	5	13	15	3.9	285	3.6	197	2.4	239
2012	5	13	16	3.4	289	4.0	223	2.4	239
2012	5	13	17	2.3	265	3.9	217	2.8	241
2012	5	13	18	2.3	182	3.4	221	3.1	247
2012	5	13	19	1.3	239	1.9	265	2.5	256
2012	5	13	20	0.7	107	1.5	298	2.1	265
2012	5	13	21	1.4	112	1.0	303	2.2	291
2012	5	13	22	1.7	95	1.0	18	2.4	289
2012	5	13	23	2.1	91	0.8	346	2.5	315

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	14	0	2.3	91	0.8	286	2.3	323
2012	5	14	1	2.0	88	0.8	318	2.0	336
2012	5	14	2	2.2	90	1.4	348	2.2	347
2012	5	14	3	4.3	96	1.6	341	2.1	344
2012	5	14	4	6.4	110	1.0	337	2.1	357
2012	5	14	5	6.2	108	0.5	29	2.3	7
2012	5	14	6	6.2	109	0.8	21	2.1	3
2012	5	14	7	6.5	110	1.0	53	1.1	354
2012	5	14	8	5.7	108	1.4	69	0.7	288
2012	5	14	9	4.6	112	1.2	77	1.2	283
2012	5	14	10	4.5	114	1.5	136	1.8	283
2012	5	14	11	4.0	108	2.0	124	1.0	242
2012	5	14	12	4.2	105	2.3	189	1.1	212
2012	5	14	13	3.6	101	3.2	191	1.0	192
2012	5	14	14	2.4	82	3.3	189	1.1	170
2012	5	14	15	2.5	85	3.6	213	1.2	211
2012	5	14	16	2.8	94	4.0	207	2.3	244
2012	5	14	17	1.5	87	3.1	216	2.2	247
2012	5	14	18	2.0	260	4.1	223	2.4	252
2012	5	14	19	1.9	251	4.2	216	2.6	262
2012	5	14	20	0.9	106	4.2	221	2.5	271
2012	5	14	21	0.8	236	3.0	231	2.4	264
2012	5	14	22	1.0	149	2.6	231	2.6	257
2012	5	14	23	1.2	100	2.9	220	2.2	279
2012	5	15	0	1.1	330	1.8	228	2.1	312
2012	5	15	1	2.3	282	2.6	218	1.6	280
2012	5	15	2	1.7	320	4.1	216	1.4	278
2012	5	15	3	1.1	259	4.1	224	1.4	288
2012	5	15	4	0.9	294	2.8	218	0.9	274
2012	5	15	5	1.9	278	3.0	203	0.4	111
2012	5	15	6	2.4	270	2.5	198	0.8	79
2012	5	15	7	3.7	292	1.1	182	0.8	120
2012	5	15	8	3.7	306	2.5	185	0.6	188
2012	5	15	9	3.3	294	3.6	175	0.9	128
2012	5	15	10	4.9	263	4.6	227	1.2	207
2012	5	15	11	5.2	248	5.2	235	2.0	223
2012	5	15	12	4.6	264	5.7	243	2.8	237
2012	5	15	13	4.2	292	4.3	236	2.5	246
2012	5	15	14	4.0	292	5.1	237	2.1	225
2012	5	15	15	5.2	253	4.6	238	2.3	219
2012	5	15	16	4.8	253	5.0	239	2.1	215
2012	5	15	17	1.9	259	4.5	239	2.8	234
2012	5	15	18	4.3	283	4.7	249	1.9	225
2012	5	15	19	2.7	286	6.0	248	2.9	243
2012	5	15	20	4.5	300	3.1	226	2.7	253
2012	5	15	21	3.6	295	1.9	232	2.5	256
2012	5	15	22	2.1	262	1.8	263	1.9	294
2012	5	15	23	2.4	274	1.6	319	1.6	308

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	16	0	2.7	285	2.1	222	1.8	297
2012	5	16	1	2.5	279	2.3	237	1.8	288
2012	5	16	2	2.6	275	1.3	299	1.7	303
2012	5	16	3	2.5	279	1.1	284	2.0	309
2012	5	16	4	2.7	287	1.3	268	1.5	301
2012	5	16	5	2.6	278	1.0	297	1.5	318
2012	5	16	6	2.5	272	1.4	151	1.3	316
2012	5	16	7	3.0	276	3.1	191	1.2	275
2012	5	16	8	3.4	297	4.2	190	1.6	266
2012	5	16	9	4.1	292	4.0	187	1.9	254
2012	5	16	10	4.4	288	4.2	219	2.1	257
2012	5	16	11	3.6	283	4.4	230	2.0	248
2012	5	16	12	3.4	284	3.6	234	1.9	264
2012	5	16	13	4.1	293	2.1	275	2.0	277
2012	5	16	14	3.8	290	3.1	207	1.8	356
2012	5	16	15	3.4	272	3.8	203	1.9	21
2012	5	16	16	2.7	249	3.8	221	1.9	247
2012	5	16	17	4.0	278	3.7	222	1.3	218
2012	5	16	18	3.8	286	3.3	225	0.7	228
2012	5	16	19	3.5	284	2.8	219	1.2	236
2012	5	16	20	2.9	284	1.0	291	1.6	245
2012	5	16	21	2.6	274	1.6	266	2.3	263
2012	5	16	22	2.2	262	1.2	262	2.2	271
2012	5	16	23	2.6	264	1.1	276	2.1	266
2012	5	17	0	2.6	272	2.0	245	2.2	271
2012	5	17	1	1.8	259	1.4	289	2.1	273
2012	5	17	2	1.8	270	1.0	314	2.1	276
2012	5	17	3	1.3	279	0.7	1	2.0	274
2012	5	17	4	1.3	271	0.6	306	1.5	258
2012	5	17	5	1.1	263	0.8	255	1.3	252
2012	5	17	6	0.9	280	0.7	324	1.6	257
2012	5	17	7	1.9	254	0.9	253	1.8	288
2012	5	17	8	2.2	270	0.9	90	1.1	260
2012	5	17	9	2.6	296	1.5	148	1.4	237
2012	5	17	10	3.0	259	2.2	189	1.4	250
2012	5	17	11	3.1	262	2.2	225	1.7	254
2012	5	17	12	4.2	272	1.7	49	2.0	246
2012	5	17	13	5.1	280	2.3	237	2.5	267
2012	5	17	14	4.8	278	3.0	241	2.4	272
2012	5	17	15	5.6	286	1.6	192	2.3	282
2012	5	17	16	5.9	289	3.3	232	2.1	274
2012	5	17	17	5.5	287	2.8	245	2.2	282
2012	5	17	18	5.4	291	0.8	105	2.6	291
2012	5	17	19	4.7	286	0.8	134	2.6	270
2012	5	17	20	3.7	286	0.8	318	2.4	277
2012	5	17	21	1.9	275	1.4	243	1.9	270
2012	5	17	22	0.8	271	2.1	235	2.0	285
2012	5	17	23	0.8	276	1.3	267	2.5	283

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	18	0	1.5	276	1.7	228	2.4	276
2012	5	18	1	1.6	277	1.5	250	2.3	271
2012	5	18	2	1.4	266	0.8	313	2.6	281
2012	5	18	3	0.9	286	0.8	336	1.8	287
2012	5	18	4	1.4	262	1.4	351	0.6	246
2012	5	18	5	1.9	268	0.6	27	0.8	249
2012	5	18	6	1.5	266	0.7	51	0.3	188
2012	5	18	7	1.6	268	1.0	86	0.4	139
2012	5	18	8	1.3	278	1.1	147	0.5	174
2012	5	18	9	0.6	233	1.6	179	0.7	136
2012	5	18	10	0.9	195	2.0	173	0.8	138
2012	5	18	11	0.7	166	2.8	173	0.8	153
2012	5	18	12	3.0	134	3.2	179	1.1	180
2012	5	18	13	3.7	106	2.9	198	0.9	246
2012	5	18	14	2.7	109	3.7	196	1.0	228
2012	5	18	15	2.1	97	4.5	198	0.8	137
2012	5	18	16	1.5	282	4.4	200	0.8	201
2012	5	18	17	1.9	278	4.7	206	0.5	177
2012	5	18	18	1.0	250	4.6	201	0.6	25
2012	5	18	19	1.3	307	4.0	203	1.6	260
2012	5	18	20	0.6	246	3.8	205	1.3	266
2012	5	18	21	1.0	84	3.2	204	1.6	279
2012	5	18	22	4.7	107	3.1	203	1.4	285
2012	5	18	23	2.3	272	2.4	208	0.8	270
2012	5	19	0	1.0	212	2.3	210	0.8	254
2012	5	19	1	3.3	122	2.4	205	0.8	269
2012	5	19	2	2.4	149	0.7	358	1.0	264
2012	5	19	3	1.5	118	1.1	222	1.0	278
2012	5	19	4	1.0	217	0.9	222	0.9	276
2012	5	19	5	2.4	104	1.1	199	0.6	255
2012	5	19	6	4.3	103	0.8	156	0.6	262
2012	5	19	7	5.0	104	1.3	183	0.2	256
2012	5	19	8	5.7	99	1.5	161	0.8	263
2012	5	19	9	6.9	92	1.9	159	0.7	224
2012	5	19	10	6.1	97	2.1	126	0.8	188
2012	5	19	11	6.5	96	1.9	120	1.6	111
2012	5	19	12	6.5	92	2.6	174	1.2	151
2012	5	19	13	5.2	98	3.1	212	1.2	189
2012	5	19	14	5.0	99	3.1	229	1.3	184
2012	5	19	15	4.1	104	3.0	219	1.3	174
2012	5	19	16	4.0	110	2.8	223	1.6	242
2012	5	19	17	3.9	111	2.8	223	2.0	255
2012	5	19	18	3.9	108	3.0	218	2.0	250
2012	5	19	19	4.2	106	2.1	221	1.8	258
2012	5	19	20	4.1	116	1.2	349	1.7	268
2012	5	19	21	6.2	112	0.9	7	1.9	280
2012	5	19	22	6.7	112	0.8	2	2.0	297
2012	5	19	23	6.3	120	0.9	349	1.9	312

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	20	0	5.8	123	1.4	351	1.8	346
2012	5	20	1	4.9	103	1.1	349	2.2	1
2012	5	20	2	6.6	104	1.9	8	2.2	4
2012	5	20	3	7.5	97	2.2	19	2.3	3
2012	5	20	4	8.2	93	2.2	9	1.8	9
2012	5	20	5	7.0	105	2.6	18	2.1	7
2012	5	20	6	8.4	107	2.0	13	2.0	359
2012	5	20	7	9.2	108	0.8	92	1.8	7
2012	5	20	8	10.1	110	0.8	127	0.6	249
2012	5	20	9	9.8	111	1.1	174	0.7	195
2012	5	20	10	8.6	108	1.5	193	0.7	179
2012	5	20	11	8.2	108	1.6	190	0.8	144
2012	5	20	12	7.9	98	1.5	177	1.0	126
2012	5	20	13	8.1	90	1.7	194	1.6	111
2012	5	20	14	7.9	92	2.0	196	0.9	174
2012	5	20	15	7.6	104	1.4	199	0.7	189
2012	5	20	16	7.4	101	1.1	214	0.9	224
2012	5	20	17	8.2	101	0.9	181	1.1	254
2012	5	20	18	7.8	101	0.7	21	0.9	270
2012	5	20	19	7.7	95	1.2	14	0.4	255
2012	5	20	20	7.7	100	2.4	2	0.8	351
2012	5	20	21	7.1	104	1.9	6	1.1	6
2012	5	20	22	7.7	102	0.8	22	1.3	4
2012	5	20	23	7.5	105	0.9	15	1.1	335
2012	5	21	0	7.0	105	0.7	49	1.0	323
2012	5	21	1	6.5	103	1.2	356	0.7	324
2012	5	21	2	8.3	99	1.4	6	0.8	344
2012	5	21	3	8.8	98	2.0	19	1.0	4
2012	5	21	4	8.3	99	1.5	18	1.0	359
2012	5	21	5	8.1	100	1.7	12	1.2	1
2012	5	21	6	10.9	106	1.6	18	0.3	60
2012	5	21	7	10.8	109	2.3	12	0.5	4
2012	5	21	8	9.4	101	2.1	13	0.2	44
2012	5	21	9	10.3	104	1.5	17	0.1	138
2012	5	21	10	10.8	104	1.0	45	0.5	191
2012	5	21	11	11.3	110	1.1	41	0.6	199
2012	5	21	12	10.6	109	0.9	122	0.5	197
2012	5	21	13	9.5	105	1.4	112	0.3	190
2012	5	21	14	10.5	109	0.6	120	0.2	217
2012	5	21	15	8.1	108	0.5	60	0.4	221
2012	5	21	16	10.2	110	0.8	308	0.2	155
2012	5	21	17	8.3	100	1.7	10	0.3	99
2012	5	21	18	7.6	99	1.7	15	0.5	85
2012	5	21	19	5.7	109	1.8	7	0.2	324
2012	5	21	20	5.9	103	2.1	199	0.2	58
2012	5	21	21	6.6	107	1.1	247	0.2	242
2012	5	21	22	4.0	109	1.0	5	0.8	333
2012	5	21	23	4.0	105	1.2	217	0.3	113

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	22	0	4.3	98	0.9	32	0.6	290
2012	5	22	1	2.4	299	1.2	276	0.5	333
2012	5	22	2	2.7	289	2.2	186	0.4	358
2012	5	22	3	3.0	294	1.3	284	0.5	216
2012	5	22	4	2.6	295	1.4	315	1.5	284
2012	5	22	5	1.9	270	1.1	46	2.1	311
2012	5	22	6	1.9	260	1.1	38	1.2	275
2012	5	22	7	2.9	277	0.8	39	1.5	300
2012	5	22	8	4.4	288	0.9	47	1.2	279
2012	5	22	9	3.7	290	1.5	249	0.7	219
2012	5	22	10	3.8	284	2.8	207	0.7	204
2012	5	22	11	3.6	276	3.2	203	0.7	201
2012	5	22	12	2.4	271	3.5	199	1.4	250
2012	5	22	13	2.3	235	5.0	199	1.8	258
2012	5	22	14	1.9	271	4.9	201	2.4	249
2012	5	22	15	2.1	255	4.4	206	2.4	250
2012	5	22	16	2.3	277	4.2	207	1.5	220
2012	5	22	17	2.9	277	4.3	204	0.8	153
2012	5	22	18	2.0	295	4.0	202	0.7	175
2012	5	22	19	1.6	288	3.7	205	1.2	251
2012	5	22	20	0.6	331	1.7	256	1.5	247
2012	5	22	21	0.7	100	0.9	336	1.3	280
2012	5	22	22	0.8	103	1.0	357	1.6	318
2012	5	22	23	0.2	57	0.7	44	1.7	334
2012	5	23	0	0.3	115	0.7	30	2.1	320
2012	5	23	1	1.6	239	0.6	330	1.7	319
2012	5	23	2	2.1	221	0.4	233	0.6	100
2012	5	23	3	0.6	72	0.5	121	1.0	359
2012	5	23	4	0.9	117	0.3	38	0.6	121
2012	5	23	5	1.8	104	0.4	205	0.8	342
2012	5	23	6	2.7	107	0.4	97	0.2	16
2012	5	23	7	3.2	111	0.9	83	0.2	210
2012	5	23	8	3.7	105	1.1	110	0.5	181
2012	5	23	9	4.5	104	1.7	118	0.6	177
2012	5	23	10	5.3	100	2.2	105	0.7	185
2012	5	23	11	5.0	105	2.1	117	1.2	134
2012	5	23	12	4.9	105	2.8	176	1.3	112
2012	5	23	13	4.4	106	2.7	201	1.2	195
2012	5	23	14	4.1	106	3.6	217	1.5	240
2012	5	23	15	4.5	106	3.6	215	2.2	232
2012	5	23	16	3.6	109	2.1	231	2.1	247
2012	5	23	17	1.6	102	1.1	296	2.6	247
2012	5	23	18	1.3	158	1.4	264	2.1	244
2012	5	23	19	1.5	123	1.0	283	1.9	257
2012	5	23	20	1.9	109	0.7	354	1.4	274
2012	5	23	21	2.1	84	0.6	268	1.6	301
2012	5	23	22	1.7	86	1.2	321	2.2	318
2012	5	23	23	1.9	94	1.3	305	2.3	333

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	24	0	1.5	95	1.3	322	2.2	337
2012	5	24	1	1.4	94	1.9	337	2.3	333
2012	5	24	2	1.7	95	2.3	342	2.4	328
2012	5	24	3	1.5	98	3.0	353	2.4	339
2012	5	24	4	1.5	97	2.4	348	2.2	318
2012	5	24	5	1.9	88	1.9	344	2.0	326
2012	5	24	6	0.9	90	2.5	7	2.4	355
2012	5	24	7	1.2	95	1.6	27	1.5	306
2012	5	24	8	2.0	96	0.9	50	1.5	288
2012	5	24	9	2.0	99	2.0	45	1.7	286
2012	5	24	10	3.1	111	1.5	128	1.3	266
2012	5	24	11	2.3	116	2.3	183	1.3	282
2012	5	24	12	2.3	138	2.9	232	1.3	249
2012	5	24	13	2.8	148	3.4	219	1.4	208
2012	5	24	14	2.8	152	4.0	207	1.9	220
2012	5	24	15	2.1	130	3.0	239	1.9	252
2012	5	24	16	1.8	128	3.4	208	2.1	247
2012	5	24	17	1.6	112	2.9	212	2.2	246
2012	5	24	18	2.1	86	1.8	239	2.0	259
2012	5	24	19	3.2	89	1.2	263	2.0	263
2012	5	24	20	2.8	88	1.4	338	1.9	272
2012	5	24	21	1.1	97	0.9	5	1.6	294
2012	5	24	22	1.8	94	0.7	38	2.0	342
2012	5	24	23	1.6	94	0.7	330	2.2	336
2012	5	25	0	1.8	95	0.9	203	2.6	358
2012	5	25	1	0.9	106	1.1	1	2.7	7
2012	5	25	2	2.2	88	1.2	346	2.7	2
2012	5	25	3	4.1	100	1.2	235	2.7	354
2012	5	25	4	7.1	100	0.5	123	2.1	3
2012	5	25	5	5.9	108	0.5	104	0.9	4
2012	5	25	6	2.7	104	0.8	90	0.5	288
2012	5	25	7	4.3	105	0.9	57	0.6	206
2012	5	25	8	4.8	107	1.1	110	0.5	193
2012	5	25	9	4.2	106	1.6	168	0.7	178
2012	5	25	10	4.3	106	1.5	174	0.8	158
2012	5	25	11	5.5	108	2.5	171	0.8	148
2012	5	25	12	5.7	113	2.7	173	1.0	165
2012	5	25	13	4.6	119	3.1	169	1.2	138
2012	5	25	14	3.5	102	3.0	203	0.9	188
2012	5	25	15	3.5	109	2.2	218	1.7	225
2012	5	25	16	4.3	108	2.5	196	2.3	247
2012	5	25	17	3.4	100	2.8	184	2.6	244
2012	5	25	18	2.8	87	2.7	190	2.6	245
2012	5	25	19	2.7	96	2.6	219	2.6	248
2012	5	25	20	4.9	101	1.3	229	2.2	258
2012	5	25	21	6.1	107	1.3	253	2.0	284
2012	5	25	22	6.6	106	1.4	276	2.1	295
2012	5	25	23	6.8	103	1.2	302	1.6	309

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	26	0	6.4	99	0.7	111	1.4	343
2012	5	26	1	5.5	104	0.6	205	1.3	4
2012	5	26	2	7.9	96	1.1	180	1.1	320
2012	5	26	3	8.6	93	0.5	87	1.4	9
2012	5	26	4	9.3	96	0.7	91	1.6	13
2012	5	26	5	9.6	99	0.4	186	1.4	3
2012	5	26	6	8.9	98	0.7	182	0.7	22
2012	5	26	7	7.5	102	0.9	170	0.5	95
2012	5	26	8	4.7	121	1.1	213	0.7	167
2012	5	26	9	7.1	107	0.6	82	1.0	146
2012	5	26	10	7.2	99	1.1	93	0.7	129
2012	5	26	11	6.6	92	1.2	187	0.9	147
2012	5	26	12	5.0	116	3.0	208	1.1	192
2012	5	26	13	10.9	86	6.4	221	1.0	208
2012	5	26	14	12.2	81	5.3	212	3.7	253
2012	5	26	15	12.0	89	4.4	211	3.7	266
2012	5	26	16	9.2	108	1.9	163	2.9	272
2012	5	26	17	10.0	90	0.6	214	2.1	286
2012	5	26	18	7.3	103	0.8	236	1.3	277
2012	5	26	19	8.2	95	0.6	174	0.8	258
2012	5	26	20	7.4	81	0.7	191	1.0	262
2012	5	26	21	7.4	96	0.8	231	0.6	310
2012	5	26	22	5.3	103	1.0	272	0.7	319
2012	5	26	23	6.0	105	0.9	49	0.4	11
2012	5	27	0	6.6	104	0.7	352	0.5	351
2012	5	27	1	6.4	101	1.1	184	0.5	337
2012	5	27	2	6.2	106	1.4	193	0.4	258
2012	5	27	3	7.7	91	1.2	190	0.4	273
2012	5	27	4	7.6	100	0.8	198	0.6	50
2012	5	27	5	6.9	92	1.2	206	0.5	251
2012	5	27	6	7.2	89	0.9	163	0.7	92
2012	5	27	7	6.5	92	1.1	143	0.4	230
2012	5	27	8	7.5	94	1.8	168	0.5	137
2012	5	27	9	7.3	94	2.2	174	1.3	132
2012	5	27	10	6.9	97	3.0	187	0.7	211
2012	5	27	11	6.1	113	3.5	192	1.0	150
2012	5	27	12	6.1	102	4.2	193	1.0	126
2012	5	27	13	7.0	95	4.0	195	1.3	237
2012	5	27	14	7.1	99	3.4	200	1.3	259
2012	5	27	15	8.6	93	4.3	205	0.7	219
2012	5	27	16	7.0	94	3.6	209	0.8	152
2012	5	27	17	4.5	100	4.4	208	1.8	238
2012	5	27	18	1.6	255	4.8	209	2.1	259
2012	5	27	19	1.8	262	3.8	209	2.8	272
2012	5	27	20	0.6	269	2.9	217	2.8	269
2012	5	27	21	0.9	100	1.9	235	2.2	298
2012	5	27	22	1.0	266	0.9	223	2.3	282
2012	5	27	23	1.1	244	1.2	330	2.4	286

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	28	0	1.2	112	1.2	351	1.9	305
2012	5	28	1	0.9	274	1.2	351	1.1	298
2012	5	28	2	1.9	127	0.4	230	0.9	343
2012	5	28	3	4.5	108	1.5	359	1.0	8
2012	5	28	4	4.8	103	1.7	11	1.5	2
2012	5	28	5	6.4	107	1.3	20	1.5	7
2012	5	28	6	8.5	107	1.0	13	1.2	19
2012	5	28	7	7.0	110	1.0	61	0.6	17
2012	5	28	8	5.9	100	0.9	169	0.3	81
2012	5	28	9	5.7	104	0.9	127	0.6	192
2012	5	28	10	5.6	104	1.5	145	0.9	189
2012	5	28	11	4.5	107	2.6	195	0.9	166
2012	5	28	12	6.6	103	2.6	186	1.4	136
2012	5	28	13	4.7	106	3.3	192	1.6	136
2012	5	28	14	3.5	111	4.8	198	1.6	132
2012	5	28	15	2.7	133	4.4	197	1.9	133
2012	5	28	16	2.8	278	4.5	193	1.8	264
2012	5	28	17	1.8	282	4.6	195	2.0	278
2012	5	28	18	0.7	265	4.0	204	2.1	282
2012	5	28	19	1.1	282	3.1	201	2.2	256
2012	5	28	20	1.3	273	2.8	207	2.0	263
2012	5	28	21	1.3	316	1.7	232	2.1	275
2012	5	28	22	0.8	303	1.5	234	2.2	298
2012	5	28	23	0.7	279	1.2	232	2.3	309
2012	5	29	0	1.4	302	1.7	242	1.8	312
2012	5	29	1	0.8	275	1.2	213	1.0	274
2012	5	29	2	0.7	295	1.3	239	1.4	266
2012	5	29	3	0.8	288	1.0	329	1.2	270
2012	5	29	4	1.1	243	0.7	321	0.3	214
2012	5	29	5	1.9	92	0.6	195	0.3	227
2012	5	29	6	6.3	106	1.1	122	0.3	230
2012	5	29	7	6.2	104	1.4	159	0.6	133
2012	5	29	8	7.5	94	1.8	129	1.6	116
2012	5	29	9	8.4	90	2.5	155	1.7	117
2012	5	29	10	7.6	96	2.6	162	2.4	120
2012	5	29	11	7.0	98	3.5	191	1.7	212
2012	5	29	12	6.9	99	3.5	203	1.2	245
2012	5	29	13	6.9	87	2.7	214	1.5	140
2012	5	29	14	7.1	81	3.8	201	1.4	176
2012	5	29	15	7.2	80	2.9	193	1.3	147
2012	5	29	16	7.2	82	2.7	202	1.4	143
2012	5	29	17	6.8	94	2.8	210	1.3	167
2012	5	29	18	7.6	95	2.2	210	0.9	149
2012	5	29	19	6.1	103	2.2	203	0.4	149
2012	5	29	20	8.2	98	3.4	197	1.4	123
2012	5	29	21	9.4	97	3.2	206	1.1	140
2012	5	29	22	10.9	92	2.1	182	3.5	115
2012	5	29	23	12.4	86	1.7	177	4.3	109

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	5	30	0	12.1	88	1.5	221	3.2	112
2012	5	30	1	11.6	90	1.3	218	2.7	114
2012	5	30	2	11.8	87	1.2	191	2.7	111
2012	5	30	3	11.8	89	0.8	217	3.0	120
2012	5	30	4	11.0	94	0.9	245	3.2	119
2012	5	30	5	11.7	92	1.0	199	3.2	103
2012	5	30	6	11.5	92	1.0	188	3.3	111
2012	5	30	7	11.5	92	0.9	212	3.5	109
2012	5	30	8	11.7	90	1.2	213	3.5	100
2012	5	30	9	11.4	91	1.5	210	3.1	101
2012	5	30	10	11.3	91	2.1	133	3.2	107
2012	5	30	11	11.0	93	1.5	172	3.3	110
2012	5	30	12	9.1	101	1.2	176	3.5	116
2012	5	30	13	8.1	93	2.3	140	3.6	124
2012	5	30	14	8.4	98	1.6	147	3.4	126
2012	5	30	15	9.9	88	2.1	177	3.4	121
2012	5	30	16	8.3	92	2.2	174	2.6	130
2012	5	30	17	6.2	101	3.4	185	1.5	116
2012	5	30	18	4.7	133	2.4	197	1.3	144
2012	5	30	19	7.9	102	2.4	187	2.9	121
2012	5	30	20	10.0	85	2.0	202	2.7	113
2012	5	30	21	10.2	87	1.5	211	3.0	109
2012	5	30	22	9.8	84	1.0	223	3.2	89
2012	5	30	23	9.0	83	0.8	222	3.1	93
2012	5	31	0	10.1	87	0.6	244	2.7	87
2012	5	31	1	9.5	96	0.6	211	2.3	98
2012	5	31	2	9.6	100	0.7	163	1.9	88
2012	5	31	3	8.9	107	0.4	239	2.9	99
2012	5	31	4	8.9	105	0.9	335	2.7	100
2012	5	31	5	8.2	104	0.7	224	2.8	97
2012	5	31	6	7.3	99	1.3	205	2.6	95
2012	5	31	7	6.0	88	1.1	165	2.6	99
2012	5	31	8	6.4	91	1.2	153	2.5	109
2012	5	31	9	8.2	86	1.7	126	2.7	117
2012	5	31	10	8.4	85	2.8	167	2.4	129
2012	5	31	11	5.6	127	3.8	188	2.2	127
2012	5	31	12	4.0	146	3.4	190	2.8	123
2012	5	31	13	4.3	116	4.9	192	1.8	142
2012	5	31	14	3.7	103	5.7	195	0.8	201
2012	5	31	15	3.1	200	5.0	193	1.2	276
2012	5	31	16	2.0	292	5.3	207	1.9	222
2012	5	31	17	2.2	303	4.3	213	2.6	253
2012	5	31	18	2.1	290	4.1	210	3.1	253
2012	5	31	19	1.5	265	3.0	200	2.6	256
2012	5	31	20	2.6	21	4.3	211	2.5	261
2012	5	31	21	3.8	84	4.0	214	1.8	264
2012	5	31	22	5.3	81	3.5	215	1.9	275
2012	5	31	23	6.7	86	2.5	205	1.3	271

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	1	0	6.5	96	1.0	45	0.7	270
2012	6	1	1	6.0	99	1.2	267	0.8	280
2012	6	1	2	6.0	105	1.2	325	0.6	341
2012	6	1	3	6.4	115	1.8	8	0.9	43
2012	6	1	4	7.3	120	2.4	11	0.8	9
2012	6	1	5	9.3	118	2.6	22	1.6	8
2012	6	1	6	9.4	111	2.2	22	1.7	10
2012	6	1	7	12.5	111	2.6	35	1.5	13
2012	6	1	8	12.6	113	2.2	40	1.2	24
2012	6	1	9	10.9	109	1.4	123	0.9	106
2012	6	1	10	12.6	107	2.3	86	1.4	111
2012	6	1	11	14.4	105	1.7	61	1.5	142
2012	6	1	12	12.8	107	1.1	146	1.4	142
2012	6	1	13	10.9	98	1.0	77	1.5	138
2012	6	1	14	8.8	96	0.9	72	1.3	110
2012	6	1	15	8.6	95	1.4	182	1.7	100
2012	6	1	16	9.0	92	2.7	189	2.5	94
2012	6	1	17	7.1	108	3.3	184	3.9	101
2012	6	1	18	6.1	103	3.3	186	3.0	129
2012	6	1	19	1.4	317	3.3	191	2.5	124
2012	6	1	20	1.3	313	2.6	183	2.0	134
2012	6	1	21	2.1	45	2.4	178	1.6	133
2012	6	1	22	1.3	249	3.1	196	1.4	104
2012	6	1	23	1.8	287	2.9	203	3.2	105
2012	6	2	0	1.2	278	2.1	185	2.9	117
2012	6	2	1	0.5	245	1.5	224	1.7	73
2012	6	2	2	n/a	n/a	1.4	144	1.4	60
2012	6	2	3	n/a	n/a	0.7	203	1.6	84
2012	6	2	4	n/a	n/a	0.9	199	1.6	83
2012	6	2	5	5.3	90	0.8	200	1.1	70
2012	6	2	6	5.8	87	1.0	147	0.9	51
2012	6	2	7	6.1	93	1.7	147	0.5	68
2012	6	2	8	5.8	94	1.8	149	1.0	76
2012	6	2	9	5.1	93	2.5	168	1.3	94
2012	6	2	10	5.0	97	3.3	178	1.5	98
2012	6	2	11	4.5	99	4.5	183	1.0	68
2012	6	2	12	3.9	83	5.1	187	2.1	349
2012	6	2	13	2.3	286	4.3	207	1.6	291
2012	6	2	14	2.7	101	5.0	193	1.3	266
2012	6	2	15	3.6	103	5.2	196	2.9	252
2012	6	2	16	3.3	104	5.2	204	2.9	247
2012	6	2	17	2.6	101	4.8	202	2.5	252
2012	6	2	18	2.3	301	4.6	212	2.6	246
2012	6	2	19	2.2	273	4.6	204	2.6	248
2012	6	2	20	1.7	290	4.2	202	2.7	247
2012	6	2	21	1.2	264	2.7	209	2.4	263
2012	6	2	22	1.6	271	2.4	242	2.4	271
2012	6	2	23	1.7	264	2.6	233	2.1	272

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	3	0	1.3	255	2.0	241	2.1	282
2012	6	3	1	0.8	259	1.2	10	2.0	304
2012	6	3	2	0.9	61	1.0	360	2.1	303
2012	6	3	3	0.7	106	0.9	10	2.0	307
2012	6	3	4	0.8	102	1.6	356	1.1	297
2012	6	3	5	0.6	79	0.6	201	0.7	339
2012	6	3	6	0.9	88	1.0	142	0.2	8
2012	6	3	7	0.6	75	1.2	79	0.6	276
2012	6	3	8	0.6	82	1.4	142	0.9	226
2012	6	3	9	1.6	98	1.5	162	0.8	254
2012	6	3	10	4.0	97	2.0	178	1.2	198
2012	6	3	11	4.8	100	2.8	175	1.2	220
2012	6	3	12	4.7	101	3.3	175	1.3	216
2012	6	3	13	4.8	99	3.5	182	1.2	183
2012	6	3	14	3.4	103	3.2	219	1.0	184
2012	6	3	15	3.6	108	3.9	201	0.9	289
2012	6	3	16	3.7	105	3.4	208	1.7	279
2012	6	3	17	2.4	98	4.2	201	2.8	251
2012	6	3	18	1.9	267	3.8	209	2.6	252
2012	6	3	19	0.9	245	3.8	205	2.3	259
2012	6	3	20	1.2	237	1.7	244	2.6	250
2012	6	3	21	0.6	218	1.5	243	1.8	264
2012	6	3	22	1.1	95	1.1	336	2.0	286
2012	6	3	23	1.6	90	0.9	356	2.4	297
2012	6	4	0	1.4	89	1.3	353	1.8	309
2012	6	4	1	1.4	86	0.9	331	1.7	318
2012	6	4	2	1.8	93	0.7	25	1.9	333
2012	6	4	3	2.6	88	0.5	12	2.3	341
2012	6	4	4	3.4	87	1.0	225	2.1	343
2012	6	4	5	3.3	90	0.6	176	2.2	344
2012	6	4	6	3.9	103	1.0	102	1.8	340
2012	6	4	7	2.8	94	1.1	55	1.3	334
2012	6	4	8	2.1	114	1.5	45	1.0	295
2012	6	4	9	1.8	115	1.4	59	1.0	303
2012	6	4	10	1.7	118	1.1	86	1.2	280
2012	6	4	11	2.8	107	1.9	26	1.3	227
2012	6	4	12	3.4	115	2.3	314	1.2	279
2012	6	4	13	3.1	144	2.6	348	1.4	279
2012	6	4	14	2.5	179	2.8	324	1.7	94
2012	6	4	15	1.7	129	2.3	341	1.7	339
2012	6	4	16	2.3	165	2.4	176	1.1	303
2012	6	4	17	2.5	174	1.4	171	1.7	13
2012	6	4	18	1.9	155	0.7	308	1.3	85
2012	6	4	19	2.8	104	2.3	37	1.5	51
2012	6	4	20	7.8	107	2.8	21	4.6	92
2012	6	4	21	7.6	115	1.9	8	1.5	118
2012	6	4	22	7.6	121	1.7	1	0.9	297
2012	6	4	23	6.5	117	2.5	6	1.0	293

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	5	0	6.5	126	2.5	12	2.1	18
2012	6	5	1	5.7	142	2.6	7	1.6	13
2012	6	5	2	7.9	128	2.8	6	1.5	16
2012	6	5	3	6.3	142	2.4	7	1.2	279
2012	6	5	4	6.6	125	1.6	346	1.8	344
2012	6	5	5	5.0	103	1.3	290	2.1	353
2012	6	5	6	4.3	105	0.7	14	0.9	349
2012	6	5	7	4.1	101	0.6	34	0.6	114
2012	6	5	8	4.9	98	0.7	43	0.6	113
2012	6	5	9	4.9	113	0.5	176	0.3	202
2012	6	5	10	3.7	95	0.4	147	0.4	254
2012	6	5	11	2.7	99	0.6	157	0.3	191
2012	6	5	12	1.1	302	1.6	189	0.6	229
2012	6	5	13	1.2	6	2.0	194	0.6	228
2012	6	5	14	1.6	296	1.3	193	1.0	237
2012	6	5	15	2.8	290	3.0	194	1.3	241
2012	6	5	16	2.9	282	3.9	192	1.7	260
2012	6	5	17	2.6	294	4.2	193	2.0	238
2012	6	5	18	2.4	291	3.5	198	1.9	250
2012	6	5	19	2.2	285	2.9	203	1.7	258
2012	6	5	20	2.6	282	3.2	206	1.5	251
2012	6	5	21	2.3	284	1.9	223	1.1	241
2012	6	5	22	3.0	289	1.9	245	0.7	276
2012	6	5	23	2.6	274	1.3	245	0.8	252
2012	6	6	0	2.0	273	1.6	266	0.9	266
2012	6	6	1	2.2	256	1.2	337	0.8	270
2012	6	6	2	1.4	229	1.1	297	0.7	284
2012	6	6	3	1.3	234	0.8	357	0.8	262
2012	6	6	4	1.5	234	0.9	344	0.5	285
2012	6	6	5	0.5	284	0.7	308	0.9	300
2012	6	6	6	1.0	289	0.5	138	0.7	326
2012	6	6	7	1.8	274	1.0	99	0.6	286
2012	6	6	8	1.7	262	1.2	191	0.6	268
2012	6	6	9	1.6	276	2.5	183	1.4	256
2012	6	6	10	2.2	264	3.4	192	1.3	250
2012	6	6	11	2.4	273	2.8	196	0.6	260
2012	6	6	12	2.9	270	3.2	188	0.6	242
2012	6	6	13	3.0	282	3.2	194	1.1	248
2012	6	6	14	2.5	270	3.8	191	1.0	271
2012	6	6	15	2.5	271	3.6	193	0.6	193
2012	6	6	16	2.7	270	3.5	201	0.4	171
2012	6	6	17	2.6	266	3.4	197	0.5	275
2012	6	6	18	1.8	261	4.7	197	0.6	100
2012	6	6	19	1.4	250	3.9	205	0.6	230
2012	6	6	20	0.8	271	2.3	221	0.7	251
2012	6	6	21	1.4	258	1.0	304	1.1	273
2012	6	6	22	1.1	248	0.7	0	1.6	309
2012	6	6	23	0.4	249	0.9	32	1.5	314

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	7	0	1.5	260	1.2	342	1.7	340
2012	6	7	1	2.1	282	0.8	351	1.9	331
2012	6	7	2	2.5	253	1.4	344	2.2	326
2012	6	7	3	2.2	258	1.4	334	2.3	328
2012	6	7	4	2.3	259	1.3	349	2.6	322
2012	6	7	5	2.6	260	1.4	345	2.3	330
2012	6	7	6	2.9	262	1.3	337	2.5	332
2012	6	7	7	3.5	274	1.2	348	2.3	321
2012	6	7	8	3.4	262	1.9	211	2.4	310
2012	6	7	9	2.4	262	2.0	206	0.6	215
2012	6	7	10	3.1	265	1.7	210	0.7	221
2012	6	7	11	1.6	270	1.9	190	1.4	254
2012	6	7	12	1.1	201	2.2	188	0.6	207
2012	6	7	13	6.0	95	2.3	189	1.5	116
2012	6	7	14	8.2	98	1.9	174	3.1	109
2012	6	7	15	8.7	96	1.9	165	2.9	112
2012	6	7	16	9.0	97	1.3	172	3.4	112
2012	6	7	17	7.6	92	2.6	182	2.1	124
2012	6	7	18	7.2	99	2.3	173	3.0	119
2012	6	7	19	5.1	76	1.5	171	3.3	112
2012	6	7	20	1.4	291	1.4	230	1.1	139
2012	6	7	21	0.8	273	1.3	218	0.3	79
2012	6	7	22	1.8	92	1.9	177	0.8	28
2012	6	7	23	2.1	268	1.2	348	1.3	24
2012	6	8	0	1.4	225	1.6	354	1.0	43
2012	6	8	1	1.1	219	1.1	180	0.8	118
2012	6	8	2	1.4	286	1.9	162	1.0	63
2012	6	8	3	1.5	263	0.8	287	0.5	336
2012	6	8	4	1.6	274	0.9	75	0.7	83
2012	6	8	5	0.9	253	0.6	46	0.6	305
2012	6	8	6	1.5	264	0.5	84	0.4	163
2012	6	8	7	2.8	275	0.6	51	0.4	219
2012	6	8	8	2.6	287	1.2	158	0.6	201
2012	6	8	9	2.8	299	2.7	192	0.8	224
2012	6	8	10	2.8	283	3.1	192	1.3	233
2012	6	8	11	3.4	270	3.6	209	1.8	241
2012	6	8	12	3.6	274	4.5	208	2.3	248
2012	6	8	13	3.3	278	5.0	193	2.4	259
2012	6	8	14	3.1	300	4.2	206	2.5	253
2012	6	8	15	3.0	304	2.8	230	2.5	250
2012	6	8	16	4.2	292	2.2	249	3.3	249
2012	6	8	17	3.9	293	2.7	214	2.8	247
2012	6	8	18	2.8	286	3.6	216	2.9	251
2012	6	8	19	2.6	274	3.7	208	2.5	255
2012	6	8	20	2.1	284	3.2	217	2.4	256
2012	6	8	21	1.6	254	1.5	246	2.8	259
2012	6	8	22	1.5	263	1.6	259	2.4	270
2012	6	8	23	1.5	263	1.0	315	2.4	277

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	9	0	1.6	269	0.9	335	2.4	291
2012	6	9	1	1.8	266	1.1	350	2.4	303
2012	6	9	2	1.2	247	1.4	335	2.8	322
2012	6	9	3	1.3	258	1.8	353	2.6	318
2012	6	9	4	1.5	260	1.6	351	2.4	315
2012	6	9	5	0.5	145	1.0	319	2.5	319
2012	6	9	6	1.3	248	1.0	125	2.1	315
2012	6	9	7	0.7	200	3.1	175	2.0	310
2012	6	9	8	1.8	206	3.9	193	1.8	269
2012	6	9	9	2.3	167	4.6	181	2.1	249
2012	6	9	10	3.3	102	4.3	184	1.8	259
2012	6	9	11	1.8	103	4.2	185	1.8	230
2012	6	9	12	2.1	210	4.9	185	1.8	248
2012	6	9	13	2.8	231	4.9	190	2.2	238
2012	6	9	14	3.1	233	5.3	196	3.0	243
2012	6	9	15	3.4	237	5.4	203	3.5	244
2012	6	9	16	3.1	234	6.0	198	3.5	248
2012	6	9	17	4.1	100	5.1	206	3.0	251
2012	6	9	18	3.7	101	5.7	210	3.1	254
2012	6	9	19	3.6	105	5.9	210	3.0	258
2012	6	9	20	2.4	90	4.7	207	2.9	265
2012	6	9	21	4.2	106	3.1	210	2.8	270
2012	6	9	22	6.7	107	1.3	257	2.7	282
2012	6	9	23	3.8	106	1.1	285	2.4	296
2012	6	10	0	2.2	91	1.8	231	2.0	292
2012	6	10	1	2.4	96	0.9	344	2.0	289
2012	6	10	2	2.9	92	1.4	5	1.4	293
2012	6	10	3	4.0	99	1.5	22	0.5	306
2012	6	10	4	4.2	109	1.1	7	1.5	13
2012	6	10	5	5.7	106	1.0	3	1.5	357
2012	6	10	6	7.5	103	0.8	75	1.2	351
2012	6	10	7	8.3	106	1.0	94	0.5	195
2012	6	10	8	8.4	105	1.5	153	0.7	198
2012	6	10	9	7.4	104	1.8	166	0.8	189
2012	6	10	10	6.9	102	2.1	171	1.0	181
2012	6	10	11	7.8	97	2.8	164	1.1	168
2012	6	10	12	7.0	91	3.2	175	1.4	205
2012	6	10	13	6.4	95	3.8	186	1.1	188
2012	6	10	14	5.9	106	3.9	187	1.3	233
2012	6	10	15	5.8	101	4.5	188	1.7	249
2012	6	10	16	4.0	103	4.1	180	2.1	254
2012	6	10	17	3.1	94	3.7	177	2.1	259
2012	6	10	18	1.4	271	3.2	189	2.0	270
2012	6	10	19	1.0	284	2.2	188	1.6	271
2012	6	10	20	0.9	255	1.1	226	1.6	270
2012	6	10	21	1.2	353	1.1	315	1.1	266
2012	6	10	22	1.2	22	0.7	297	0.7	282
2012	6	10	23	6.5	103	1.1	355	0.8	328

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	11	0	9.0	95	0.8	346	0.5	263
2012	6	11	1	7.9	100	0.4	204	1.2	97
2012	6	11	2	9.2	102	0.6	350	1.3	99
2012	6	11	3	7.7	106	0.6	355	2.2	101
2012	6	11	4	2.0	214	0.6	237	3.0	104
2012	6	11	5	0.5	216	0.6	200	3.3	103
2012	6	11	6	5.7	102	0.6	188	2.2	112
2012	6	11	7	5.2	98	0.8	167	2.2	115
2012	6	11	8	2.6	105	0.8	195	2.1	120
2012	6	11	9	4.7	90	1.1	189	3.1	117
2012	6	11	10	5.6	93	1.6	160	3.5	119
2012	6	11	11	6.4	90	1.6	180	3.8	118
2012	6	11	12	6.0	101	1.9	192	2.8	125
2012	6	11	13	6.7	100	3.2	197	1.5	137
2012	6	11	14	5.8	104	3.2	190	1.9	141
2012	6	11	15	4.7	103	3.2	187	0.9	180
2012	6	11	16	3.4	109	2.9	186	1.3	221
2012	6	11	17	1.6	44	2.5	183	1.4	220
2012	6	11	18	3.0	310	2.6	194	2.3	241
2012	6	11	19	2.4	297	3.0	212	2.3	250
2012	6	11	20	3.7	302	4.2	197	2.3	253
2012	6	11	21	2.7	293	3.4	215	2.0	262
2012	6	11	22	2.8	278	2.6	203	2.2	266
2012	6	11	23	1.0	236	3.2	205	2.3	262
2012	6	12	0	1.1	263	1.7	237	1.6	264
2012	6	12	1	1.8	242	1.3	268	1.3	250
2012	6	12	2	1.7	248	1.2	352	1.0	260
2012	6	12	3	1.9	250	1.5	0	0.7	303
2012	6	12	4	1.5	289	1.6	5	1.3	296
2012	6	12	5	1.2	269	2.4	11	1.3	292
2012	6	12	6	1.5	289	1.8	20	1.4	291
2012	6	12	7	1.7	287	1.5	44	1.5	275
2012	6	12	8	1.2	261	3.9	176	1.1	262
2012	6	12	9	1.4	220	3.7	188	2.2	249
2012	6	12	10	2.7	258	3.9	198	2.0	259
2012	6	12	11	2.0	224	4.6	196	1.6	251
2012	6	12	12	2.3	240	4.6	201	2.4	261
2012	6	12	13	3.2	272	5.0	189	2.9	253
2012	6	12	14	3.1	257	4.7	198	3.3	250
2012	6	12	15	4.3	284	4.4	222	3.6	245
2012	6	12	16	5.1	286	3.9	225	3.0	248
2012	6	12	17	4.7	288	3.7	226	3.3	242
2012	6	12	18	3.9	302	4.3	250	3.1	239
2012	6	12	19	3.6	296	4.3	252	3.2	240
2012	6	12	20	2.6	302	3.8	224	3.2	244
2012	6	12	21	2.9	304	2.4	286	2.6	258
2012	6	12	22	2.6	295	0.8	334	2.3	285
2012	6	12	23	2.2	289	1.7	240	2.8	279

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	13	0	2.5	279	2.2	225	2.3	266
2012	6	13	1	2.7	281	0.9	40	2.4	283
2012	6	13	2	2.3	286	1.4	37	2.5	292
2012	6	13	3	2.7	287	1.3	3	2.1	301
2012	6	13	4	2.1	287	1.3	320	2.0	302
2012	6	13	5	2.5	284	0.8	345	1.8	304
2012	6	13	6	2.8	283	1.1	2	2.0	306
2012	6	13	7	3.1	280	1.4	35	1.2	303
2012	6	13	8	3.5	273	1.5	55	1.5	276
2012	6	13	9	3.3	288	3.2	171	1.8	253
2012	6	13	10	4.2	288	4.4	194	1.6	309
2012	6	13	11	3.2	288	3.8	200	1.7	265
2012	6	13	12	3.4	284	4.7	206	2.0	300
2012	6	13	13	4.3	286	5.5	212	2.3	281
2012	6	13	14	5.2	288	5.1	228	2.2	272
2012	6	13	15	4.8	284	5.6	247	2.2	252
2012	6	13	16	5.6	289	5.4	238	2.5	250
2012	6	13	17	5.3	296	4.7	243	2.4	250
2012	6	13	18	4.9	299	2.4	259	2.4	251
2012	6	13	19	3.4	283	1.8	253	1.7	271
2012	6	13	20	2.7	278	1.3	252	2.3	277
2012	6	13	21	2.2	273	1.8	208	2.0	264
2012	6	13	22	2.0	264	1.5	203	1.9	267
2012	6	13	23	1.9	269	0.7	272	2.2	266
2012	6	14	0	1.7	269	0.5	298	2.1	267
2012	6	14	1	1.7	262	0.7	38	2.1	271
2012	6	14	2	1.6	250	0.9	290	2.2	285
2012	6	14	3	1.7	269	0.8	5	2.1	303
2012	6	14	4	1.1	276	0.9	10	1.3	291
2012	6	14	5	1.2	270	0.9	16	0.8	280
2012	6	14	6	1.4	273	0.6	41	0.7	261
2012	6	14	7	2.2	269	0.8	139	1.0	260
2012	6	14	8	2.0	267	2.0	159	1.1	248
2012	6	14	9	2.1	260	2.3	175	0.6	234
2012	6	14	10	2.6	269	4.0	171	1.0	216
2012	6	14	11	2.9	272	4.5	184	1.3	245
2012	6	14	12	2.8	272	4.8	176	1.4	252
2012	6	14	13	3.0	264	4.8	181	1.9	254
2012	6	14	14	2.9	270	4.8	183	2.0	261
2012	6	14	15	3.0	264	4.2	206	2.8	261
2012	6	14	16	3.6	259	4.1	189	2.8	249
2012	6	14	17	4.3	284	4.3	193	2.4	247
2012	6	14	18	3.2	294	4.2	195	2.5	242
2012	6	14	19	2.4	288	4.4	196	2.4	236
2012	6	14	20	1.0	287	4.4	207	2.3	248
2012	6	14	21	0.6	264	2.4	211	2.3	258
2012	6	14	22	0.5	29	3.1	208	2.0	278
2012	6	14	23	0.8	269	2.2	218	2.1	285

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	15	0	0.6	260	1.9	245	2.1	310
2012	6	15	1	1.1	258	1.0	1	2.0	314
2012	6	15	2	1.9	114	1.4	8	1.6	314
2012	6	15	3	0.8	217	1.1	9	1.0	308
2012	6	15	4	2.5	113	1.3	1	0.6	304
2012	6	15	5	4.8	99	0.3	11	0.5	24
2012	6	15	6	6.6	102	0.5	153	0.3	2
2012	6	15	7	8.4	105	0.9	165	0.5	94
2012	6	15	8	9.1	105	1.3	135	1.1	111
2012	6	15	9	10.3	109	1.9	122	2.1	112
2012	6	15	10	10.7	106	1.5	129	2.4	110
2012	6	15	11	10.4	104	2.3	115	3.2	119
2012	6	15	12	9.9	107	2.9	102	3.2	112
2012	6	15	13	8.6	106	2.9	111	2.5	131
2012	6	15	14	7.9	101	2.4	110	1.7	162
2012	6	15	15	8.1	108	2.9	121	1.4	157
2012	6	15	16	8.9	107	2.5	201	1.4	128
2012	6	15	17	12.1	106	1.4	223	2.3	119
2012	6	15	18	15.2	109	2.2	58	2.0	91
2012	6	15	19	14.0	107	1.7	87	2.6	108
2012	6	15	20	13.0	105	1.6	11	2.6	120
2012	6	15	21	13.0	108	1.6	45	2.3	98
2012	6	15	22	11.8	105	1.3	310	2.2	102
2012	6	15	23	13.9	95	1.3	177	2.0	103
2012	6	16	0	13.2	98	1.2	199	2.1	90
2012	6	16	1	11.8	103	0.9	249	2.6	86
2012	6	16	2	12.1	104	0.8	196	2.5	93
2012	6	16	3	11.4	103	1.2	202	2.1	85
2012	6	16	4	11.0	99	0.6	9	2.0	93
2012	6	16	5	10.4	94	0.7	27	1.8	93
2012	6	16	6	8.9	92	0.3	238	1.8	96
2012	6	16	7	7.8	95	0.6	161	2.0	92
2012	6	16	8	7.4	99	0.5	194	2.3	91
2012	6	16	9	6.4	105	0.7	159	2.0	118
2012	6	16	10	5.9	108	0.6	105	1.4	135
2012	6	16	11	4.9	105	0.8	209	0.8	146
2012	6	16	12	4.2	110	1.0	179	0.5	140
2012	6	16	13	3.5	105	1.2	168	1.0	124
2012	6	16	14	2.5	99	1.4	178	1.0	143
2012	6	16	15	4.8	103	1.3	173	0.8	138
2012	6	16	16	6.4	101	1.5	175	1.0	151
2012	6	16	17	5.0	110	1.4	173	1.0	137
2012	6	16	18	2.6	100	1.1	143	0.7	179
2012	6	16	19	0.7	110	1.0	209	0.7	257
2012	6	16	20	1.4	91	0.9	243	0.7	250
2012	6	16	21	1.9	92	0.8	38	0.8	277
2012	6	16	22	2.4	88	1.0	243	1.0	267
2012	6	16	23	2.8	100	1.0	317	0.9	273

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	17	0	2.0	88	0.6	291	0.9	280
2012	6	17	1	1.6	86	0.7	358	0.7	279
2012	6	17	2	1.8	88	0.9	324	0.5	278
2012	6	17	3	1.5	91	0.9	311	0.6	256
2012	6	17	4	0.7	188	0.7	323	0.5	264
2012	6	17	5	1.3	238	0.6	23	0.5	294
2012	6	17	6	0.5	251	0.6	53	0.7	271
2012	6	17	7	1.3	87	0.7	67	0.7	239
2012	6	17	8	1.1	278	1.2	142	0.9	254
2012	6	17	9	1.5	279	3.6	190	0.7	234
2012	6	17	10	1.6	85	4.3	189	0.8	178
2012	6	17	11	1.7	302	4.4	194	1.0	193
2012	6	17	12	2.8	283	5.0	190	1.1	247
2012	6	17	13	3.3	277	4.6	199	1.7	258
2012	6	17	14	3.5	276	4.9	200	2.1	262
2012	6	17	15	3.3	280	5.3	195	2.8	250
2012	6	17	16	3.3	281	5.0	195	3.2	247
2012	6	17	17	3.0	283	4.6	202	3.3	250
2012	6	17	18	3.2	273	4.4	194	3.4	246
2012	6	17	19	2.8	277	4.1	205	2.7	251
2012	6	17	20	3.0	283	1.7	230	3.0	256
2012	6	17	21	2.7	279	3.3	205	2.5	265
2012	6	17	22	2.2	287	2.3	230	2.4	278
2012	6	17	23	2.0	275	1.2	251	2.7	299
2012	6	18	0	1.8	262	1.1	290	2.9	300
2012	6	18	1	1.5	259	1.0	321	2.8	303
2012	6	18	2	2.5	275	0.6	282	2.9	311
2012	6	18	3	2.5	265	0.9	306	2.9	305
2012	6	18	4	2.8	267	1.0	338	2.7	314
2012	6	18	5	1.9	253	0.9	45	2.6	305
2012	6	18	6	2.0	270	0.7	43	1.8	305
2012	6	18	7	2.5	264	1.2	143	1.5	289
2012	6	18	8	2.7	249	1.8	91	1.8	281
2012	6	18	9	2.6	247	2.9	173	2.4	260
2012	6	18	10	2.5	242	4.0	185	1.7	253
2012	6	18	11	2.9	266	4.7	183	2.5	240
2012	6	18	12	3.3	281	5.5	185	2.4	248
2012	6	18	13	3.4	276	5.6	186	2.6	257
2012	6	18	14	2.9	275	5.6	195	2.6	263
2012	6	18	15	2.7	273	5.3	199	2.8	257
2012	6	18	16	3.0	275	5.5	203	3.4	252
2012	6	18	17	3.5	279	5.7	208	3.4	255
2012	6	18	18	2.8	286	6.3	209	3.4	256
2012	6	18	19	2.4	288	6.7	212	3.7	264
2012	6	18	20	2.5	290	6.3	210	3.8	266
2012	6	18	21	1.9	280	4.5	210	3.8	272
2012	6	18	22	1.9	286	3.8	215	3.6	272
2012	6	18	23	1.5	281	2.9	232	3.2	274

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	19	0	1.8	268	2.0	259	2.6	280
2012	6	19	1	2.1	275	1.8	247	2.5	287
2012	6	19	2	1.8	274	1.2	236	2.5	282
2012	6	19	3	1.5	278	0.6	349	2.0	272
2012	6	19	4	1.9	262	0.9	212	1.4	247
2012	6	19	5	1.4	284	0.7	231	1.1	238
2012	6	19	6	1.6	297	0.9	233	1.2	244
2012	6	19	7	1.5	290	1.4	203	1.2	242
2012	6	19	8	1.6	272	2.7	204	1.0	217
2012	6	19	9	2.1	110	3.4	205	0.9	227
2012	6	19	10	3.0	99	3.1	194	1.0	227
2012	6	19	11	3.1	100	2.9	181	1.1	246
2012	6	19	12	2.9	98	3.0	191	1.5	246
2012	6	19	13	2.9	95	4.3	185	1.2	243
2012	6	19	14	1.8	279	4.5	188	0.9	193
2012	6	19	15	1.8	259	5.0	189	0.9	233
2012	6	19	16	2.5	136	4.7	183	1.6	253
2012	6	19	17	2.4	98	4.6	188	2.1	240
2012	6	19	18	0.7	325	4.2	201	2.3	241
2012	6	19	19	0.9	75	3.0	200	2.0	241
2012	6	19	20	0.9	293	2.1	203	1.7	245
2012	6	19	21	0.8	247	1.1	237	1.3	260
2012	6	19	22	1.0	334	1.3	247	1.3	272
2012	6	19	23	2.6	106	0.9	336	1.4	280
2012	6	20	0	2.3	93	0.7	336	1.2	280
2012	6	20	1	2.1	100	0.8	359	0.8	253
2012	6	20	2	2.6	113	0.6	281	0.7	224
2012	6	20	3	0.4	61	0.4	351	0.6	272
2012	6	20	4	1.1	94	0.5	322	0.5	235
2012	6	20	5	3.5	109	0.5	336	0.3	212
2012	6	20	6	3.0	119	0.6	138	0.5	221
2012	6	20	7	0.6	248	0.5	194	0.5	212
2012	6	20	8	3.0	103	0.5	152	0.3	157
2012	6	20	9	3.9	103	0.7	88	0.3	188
2012	6	20	10	5.9	94	1.2	102	1.3	98
2012	6	20	11	6.4	97	1.8	81	1.2	91
2012	6	20	12	8.2	104	1.6	128	1.1	98
2012	6	20	13	8.8	109	1.3	83	1.4	111
2012	6	20	14	7.5	103	1.9	82	1.7	112
2012	6	20	15	6.5	107	2.2	81	1.8	104
2012	6	20	16	5.5	97	1.5	69	1.3	122
2012	6	20	17	6.2	100	1.1	49	1.3	142
2012	6	20	18	4.6	102	1.0	18	0.7	189
2012	6	20	19	4.5	109	0.7	305	0.8	220
2012	6	20	20	3.9	99	0.6	294	1.1	243
2012	6	20	21	2.0	97	0.5	115	1.0	274
2012	6	20	22	2.2	97	1.0	331	1.2	292
2012	6	20	23	4.2	97	0.7	187	1.7	344

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	21	0	3.9	100	0.7	247	2.3	0
2012	6	21	1	2.8	91	1.0	174	2.2	1
2012	6	21	2	3.2	97	0.9	70	2.4	358
2012	6	21	3	1.7	248	0.9	35	1.9	10
2012	6	21	4	0.6	98	0.8	187	1.1	342
2012	6	21	5	0.8	165	0.7	166	0.9	248
2012	6	21	6	3.8	103	2.0	186	1.2	177
2012	6	21	7	4.5	108	1.1	283	0.8	23
2012	6	21	8	5.2	112	0.9	46	0.8	340
2012	6	21	9	4.3	105	0.9	50	0.5	266
2012	6	21	10	5.5	96	1.0	177	0.8	242
2012	6	21	11	6.8	93	1.3	139	0.9	218
2012	6	21	12	6.6	111	1.2	161	1.2	163
2012	6	21	13	6.1	109	1.9	104	1.5	220
2012	6	21	14	5.8	98	1.6	79	1.4	204
2012	6	21	15	4.0	118	1.4	131	1.2	197
2012	6	21	16	3.3	102	0.9	162	0.8	200
2012	6	21	17	3.7	110	0.7	267	0.5	216
2012	6	21	18	3.9	110	1.1	241	1.2	260
2012	6	21	19	3.2	117	1.1	316	1.6	260
2012	6	21	20	3.3	95	0.7	301	1.7	256
2012	6	21	21	4.4	115	1.1	252	0.9	272
2012	6	21	22	5.9	127	1.0	353	1.7	331
2012	6	21	23	6.3	117	1.2	321	1.6	350
2012	6	22	0	5.1	116	1.1	241	2.3	6
2012	6	22	1	7.0	114	2.0	12	2.1	17
2012	6	22	2	8.2	114	3.0	8	2.2	4
2012	6	22	3	6.7	125	3.8	10	1.6	350
2012	6	22	4	5.3	110	3.8	9	2.1	351
2012	6	22	5	5.0	106	2.4	352	2.5	12
2012	6	22	6	4.9	113	2.7	3	2.1	7
2012	6	22	7	4.8	115	3.2	23	1.4	356
2012	6	22	8	4.8	113	3.1	19	0.8	328
2012	6	22	9	5.0	115	3.2	36	1.2	267
2012	6	22	10	5.2	122	3.4	35	1.8	265
2012	6	22	11	7.8	119	2.9	41	1.3	267
2012	6	22	12	8.6	110	1.9	49	1.2	177
2012	6	22	13	7.1	94	1.9	96	1.5	166
2012	6	22	14	5.1	97	1.4	104	2.2	100
2012	6	22	15	3.7	114	1.2	109	1.7	70
2012	6	22	16	3.7	110	1.3	146	1.7	62
2012	6	22	17	3.8	110	1.2	20	2.3	81
2012	6	22	18	3.6	97	1.0	257	0.9	297
2012	6	22	19	3.6	91	0.5	112	1.2	253
2012	6	22	20	3.3	95	0.6	345	1.4	267
2012	6	22	21	3.7	100	0.7	86	0.9	309
2012	6	22	22	3.6	99	0.8	235	1.2	345
2012	6	22	23	3.2	99	1.4	354	2.2	356

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	23	0	3.5	97	1.2	358	2.4	357
2012	6	23	1	3.0	105	3.3	2	2.2	359
2012	6	23	2	4.4	107	4.0	3	2.5	9
2012	6	23	3	5.1	114	3.9	357	2.0	3
2012	6	23	4	7.1	132	3.8	357	2.2	345
2012	6	23	5	7.7	126	3.2	356	2.0	320
2012	6	23	6	7.3	118	3.1	359	2.3	313
2012	6	23	7	7.3	115	3.3	17	1.8	313
2012	6	23	8	6.7	122	3.0	25	1.3	292
2012	6	23	9	6.2	130	3.1	37	1.5	2
2012	6	23	10	6.8	136	3.2	40	1.3	10
2012	6	23	11	6.7	135	2.9	45	1.3	175
2012	6	23	12	5.8	136	3.8	74	2.9	82
2012	6	23	13	6.1	132	3.4	46	3.8	63
2012	6	23	14	4.6	125	3.9	83	3.2	65
2012	6	23	15	3.9	109	2.8	81	3.2	70
2012	6	23	16	4.0	102	2.1	85	3.6	70
2012	6	23	17	4.7	105	1.5	57	2.8	72
2012	6	23	18	5.0	106	1.3	286	2.1	79
2012	6	23	19	4.4	100	0.6	5	1.0	76
2012	6	23	20	4.8	106	0.8	342	0.9	284
2012	6	23	21	4.3	93	0.8	135	1.4	310
2012	6	23	22	3.9	89	0.9	357	1.8	320
2012	6	23	23	4.0	89	0.9	184	1.8	331
2012	6	24	0	4.0	89	1.2	314	1.8	354
2012	6	24	1	3.7	93	1.0	354	2.1	350
2012	6	24	2	3.4	91	1.7	298	2.0	339
2012	6	24	3	2.8	89	1.2	332	1.6	350
2012	6	24	4	2.1	107	1.3	346	2.0	16
2012	6	24	5	5.0	125	2.6	347	2.1	0
2012	6	24	6	5.7	108	1.8	356	2.1	13
2012	6	24	7	5.9	117	1.0	20	1.6	12
2012	6	24	8	4.3	119	1.2	197	1.0	331
2012	6	24	9	5.3	100	1.3	192	0.9	294
2012	6	24	10	5.3	101	2.2	175	0.6	192
2012	6	24	11	5.5	99	2.9	201	1.0	204
2012	6	24	12	4.7	100	3.7	195	1.4	201
2012	6	24	13	2.8	77	4.5	201	2.0	148
2012	6	24	14	2.9	281	6.8	200	3.3	116
2012	6	24	15	3.5	285	6.8	193	1.6	158
2012	6	24	16	4.8	283	7.2	195	1.5	162
2012	6	24	17	3.4	290	8.1	197	2.2	230
2012	6	24	18	3.3	295	8.2	197	1.9	248
2012	6	24	19	3.1	290	7.2	201	2.4	251
2012	6	24	20	3.2	292	5.9	204	1.8	138
2012	6	24	21	2.5	289	5.9	201	1.0	50
2012	6	24	22	2.7	270	4.5	211	1.1	85
2012	6	24	23	2.6	261	4.5	213	0.9	357

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	25	0	2.5	274	4.4	215	1.3	79
2012	6	25	1	2.5	275	3.9	214	1.7	80
2012	6	25	2	2.5	266	3.7	225	0.7	29
2012	6	25	3	2.2	257	3.1	225	1.7	54
2012	6	25	4	2.5	255	3.5	215	1.2	56
2012	6	25	5	2.9	280	2.3	230	1.0	60
2012	6	25	6	2.9	267	1.2	357	1.5	77
2012	6	25	7	3.0	270	2.3	216	0.7	77
2012	6	25	8	3.2	274	2.4	218	1.2	90
2012	6	25	9	3.2	270	2.9	215	1.4	102
2012	6	25	10	3.3	268	4.1	205	1.9	103
2012	6	25	11	3.4	277	4.9	196	2.1	111
2012	6	25	12	3.1	275	5.7	188	2.5	108
2012	6	25	13	3.4	274	5.9	182	2.8	107
2012	6	25	14	3.2	273	5.6	175	2.3	115
2012	6	25	15	3.8	275	4.9	176	2.2	108
2012	6	25	16	3.3	282	4.4	174	2.3	118
2012	6	25	17	3.3	281	4.8	180	2.3	117
2012	6	25	18	2.8	277	4.8	183	1.7	121
2012	6	25	19	2.4	276	4.1	186	1.7	117
2012	6	25	20	1.6	285	3.0	195	1.6	118
2012	6	25	21	1.0	281	2.4	219	1.5	104
2012	6	25	22	1.0	287	1.6	251	0.9	71
2012	6	25	23	1.4	270	1.2	192	0.8	352
2012	6	26	0	1.0	258	1.2	191	0.8	319
2012	6	26	1	0.8	248	1.6	210	0.7	333
2012	6	26	2	0.5	232	1.0	174	0.5	332
2012	6	26	3	0.6	271	0.9	337	0.8	36
2012	6	26	4	1.2	270	0.7	118	0.7	12
2012	6	26	5	1.1	266	1.0	185	1.3	104
2012	6	26	6	0.6	252	1.5	168	1.3	101
2012	6	26	7	0.9	272	1.8	183	1.5	115
2012	6	26	8	0.9	280	1.5	174	1.9	105
2012	6	26	9	3.1	93	3.3	184	1.4	107
2012	6	26	10	3.0	100	4.0	182	1.5	118
2012	6	26	11	3.8	101	3.7	181	1.7	119
2012	6	26	12	4.5	99	3.4	180	1.6	111
2012	6	26	13	4.0	100	3.5	177	1.9	103
2012	6	26	14	3.5	106	2.9	172	1.4	104
2012	6	26	15	3.9	107	2.8	170	1.4	121
2012	6	26	16	4.5	104	3.3	179	1.8	116
2012	6	26	17	4.2	107	3.1	192	2.4	119
2012	6	26	18	4.1	103	3.5	188	1.6	134
2012	6	26	19	5.0	105	3.2	193	1.3	150
2012	6	26	20	5.1	105	1.6	160	0.9	139
2012	6	26	21	4.8	101	1.5	121	2.0	123
2012	6	26	22	5.3	103	1.2	147	2.5	117
2012	6	26	23	5.5	99	1.0	190	2.1	120

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	27	0	4.2	101	1.0	193	1.7	121
2012	6	27	1	3.6	106	1.3	178	2.1	113
2012	6	27	2	5.0	109	1.0	165	2.5	120
2012	6	27	3	6.2	108	1.2	157	2.4	123
2012	6	27	4	6.4	103	0.9	185	1.8	128
2012	6	27	5	7.4	104	0.7	184	2.1	123
2012	6	27	6	7.5	105	1.2	169	2.1	129
2012	6	27	7	7.4	100	1.3	145	2.9	123
2012	6	27	8	7.3	104	0.8	135	3.0	120
2012	6	27	9	7.0	104	0.7	151	2.8	121
2012	6	27	10	7.5	101	0.8	168	2.7	117
2012	6	27	11	8.2	96	1.3	152	2.9	114
2012	6	27	12	8.5	98	1.6	166	3.4	114
2012	6	27	13	8.3	92	1.5	168	3.8	109
2012	6	27	14	8.2	91	1.3	191	3.5	113
2012	6	27	15	7.6	93	1.7	175	3.5	114
2012	6	27	16	7.8	92	1.9	182	3.6	117
2012	6	27	17	6.7	99	1.3	200	3.3	118
2012	6	27	18	7.4	93	1.0	212	2.6	115
2012	6	27	19	6.7	102	0.7	205	2.2	117
2012	6	27	20	6.8	99	0.3	161	1.4	128
2012	6	27	21	6.1	103	1.2	214	0.2	121
2012	6	27	22	5.4	100	0.9	342	0.4	97
2012	6	27	23	6.8	103	0.9	3	0.9	104
2012	6	28	0	8.2	97	0.9	202	0.7	66
2012	6	28	1	7.6	92	0.6	207	0.5	81
2012	6	28	2	5.6	103	0.7	335	0.1	68
2012	6	28	3	6.8	102	0.9	345	0.2	71
2012	6	28	4	7.4	101	0.5	1	0.6	115
2012	6	28	5	8.1	100	0.5	10	0.2	98
2012	6	28	6	7.5	100	0.4	46	0.1	166
2012	6	28	7	7.7	105	0.7	38	0.3	130
2012	6	28	8	8.2	100	0.9	77	0.7	113
2012	6	28	9	8.0	101	0.9	104	1.1	111
2012	6	28	10	8.5	100	1.3	187	2.2	103
2012	6	28	11	8.2	104	1.7	173	3.0	101
2012	6	28	12	7.7	102	2.0	157	2.8	102
2012	6	28	13	6.6	100	1.7	187	3.2	106
2012	6	28	14	5.8	99	1.6	175	3.1	103
2012	6	28	15	7.2	93	2.1	182	3.7	100
2012	6	28	16	7.4	91	2.5	192	3.3	102
2012	6	28	17	7.2	95	1.4	156	3.9	111
2012	6	28	18	6.9	97	1.8	157	3.4	115
2012	6	28	19	8.0	89	1.6	173	2.2	122
2012	6	28	20	7.9	94	1.1	171	1.8	115
2012	6	28	21	8.8	88	1.3	174	1.1	101
2012	6	28	22	7.9	93	1.1	213	1.3	90
2012	6	28	23	7.3	94	1.0	201	1.2	91

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	6	29	0	7.6	92	1.0	221	1.1	86
2012	6	29	1	6.8	101	0.2	231	0.7	96
2012	6	29	2	7.2	104	0.1	352	0.3	163
2012	6	29	3	7.4	105	0.2	193	0.4	116
2012	6	29	4	6.7	104	0.2	188	0.4	149
2012	6	29	5	7.4	108	0.3	90	0.5	146
2012	6	29	6	6.3	104	0.7	203	0.6	146
2012	6	29	7	5.8	96	1.1	182	0.4	177
2012	6	29	8	4.9	103	1.2	191	0.8	152
2012	6	29	9	4.9	101	1.2	183	1.0	148
2012	6	29	10	4.7	104	1.7	150	2.0	129
2012	6	29	11	5.7	98	2.0	133	2.1	128
2012	6	29	12	4.6	99	2.1	158	2.8	124
2012	6	29	13	4.3	102	2.0	139	2.7	117
2012	6	29	14	2.0	106	3.0	164	2.4	125
2012	6	29	15	2.3	305	4.2	175	2.7	132
2012	6	29	16	2.2	285	3.3	197	1.8	150
2012	6	29	17	3.1	295	3.3	202	1.1	216
2012	6	29	18	3.3	299	3.1	197	1.5	255
2012	6	29	19	2.5	277	2.4	187	1.7	253
2012	6	29	20	1.8	264	4.2	188	2.0	260
2012	6	29	21	0.9	266	2.9	200	1.8	256
2012	6	29	22	1.3	299	3.8	200	1.6	258
2012	6	29	23	1.8	284	2.6	222	1.2	268
2012	6	30	0	1.8	291	1.8	244	1.7	259
2012	6	30	1	1.2	276	2.7	228	1.3	281
2012	6	30	2	1.4	302	1.3	272	1.1	289
2012	6	30	3	1.7	302	1.5	21	1.2	276
2012	6	30	4	1.2	291	1.1	12	0.9	274
2012	6	30	5	1.9	298	0.8	76	1.0	263
2012	6	30	6	2.0	294	0.6	126	0.8	261
2012	6	30	7	1.4	264	1.0	152	0.9	267
2012	6	30	8	2.5	257	1.9	180	0.7	249
2012	6	30	9	2.1	248	4.2	189	0.6	170
2012	6	30	10	2.3	267	4.5	197	0.8	192
2012	6	30	11	1.5	239	4.7	194	1.0	225
2012	6	30	12	1.7	256	4.0	202	1.4	238
2012	6	30	13	2.2	256	4.4	188	1.9	258
2012	6	30	14	2.6	270	4.2	189	1.8	241
2012	6	30	15	2.3	273	4.2	185	2.6	242
2012	6	30	16	2.6	284	4.8	187	2.8	248
2012	6	30	17	2.3	283	4.4	183	2.7	239
2012	6	30	18	2.5	283	4.3	188	2.7	242
2012	6	30	19	2.5	282	4.7	202	3.4	247
2012	6	30	20	2.1	282	5.0	208	2.7	252
2012	6	30	21	1.5	281	5.4	211	2.4	261
2012	6	30	22	1.5	271	3.6	209	2.4	258
2012	6	30	23	1.1	256	3.7	207	2.2	260

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	1	0	1.3	274	3.5	201	1.8	239
2012	7	1	1	1.1	283	2.2	203	0.7	189
2012	7	1	2	0.9	272	1.6	204	0.6	82
2012	7	1	3	1.3	290	2.1	205	1.2	112
2012	7	1	4	1.5	298	1.6	177	1.2	116
2012	7	1	5	1.6	297	1.1	160	0.8	82
2012	7	1	6	1.5	263	1.5	168	1.4	105
2012	7	1	7	0.8	256	1.6	163	1.8	117
2012	7	1	8	2.4	102	1.9	149	2.3	104
2012	7	1	9	4.9	103	1.8	144	2.1	118
2012	7	1	10	6.2	96	2.4	158	1.7	125
2012	7	1	11	5.7	95	2.4	157	1.6	136
2012	7	1	12	6.6	90	2.6	174	1.1	126
2012	7	1	13	6.2	94	3.3	197	1.2	166
2012	7	1	14	6.5	91	3.4	203	1.2	196
2012	7	1	15	6.8	94	3.9	197	1.1	188
2012	7	1	16	6.7	101	4.0	202	1.4	216
2012	7	1	17	7.1	93	3.7	205	0.9	239
2012	7	1	18	7.0	95	2.7	196	1.0	272
2012	7	1	19	7.0	98	2.1	188	1.1	272
2012	7	1	20	7.4	97	1.8	199	1.0	287
2012	7	1	21	6.6	92	0.9	199	0.8	281
2012	7	1	22	6.7	90	0.9	163	0.5	301
2012	7	1	23	5.8	96	1.5	186	0.5	283
2012	7	2	0	5.3	100	1.8	197	0.4	287
2012	7	2	1	5.4	99	1.2	224	0.4	42
2012	7	2	2	5.6	100	0.5	21	0.3	104
2012	7	2	3	6.0	101	0.7	0	0.6	88
2012	7	2	4	6.0	95	0.8	185	0.8	101
2012	7	2	5	5.9	97	0.3	110	0.5	114
2012	7	2	6	7.4	98	0.5	109	0.3	114
2012	7	2	7	7.5	99	0.8	138	1.4	111
2012	7	2	8	8.1	95	0.9	133	1.5	123
2012	7	2	9	7.2	103	1.1	134	1.9	112
2012	7	2	10	7.8	96	1.7	146	2.4	100
2012	7	2	11	7.2	95	2.6	129	2.9	109
2012	7	2	12	7.0	98	1.9	144	2.9	116
2012	7	2	13	5.5	100	1.8	165	2.5	123
2012	7	2	14	4.9	94	2.1	183	1.8	121
2012	7	2	15	4.6	99	4.0	186	1.3	193
2012	7	2	16	2.3	143	4.5	197	1.2	202
2012	7	2	17	2.4	270	3.8	211	1.4	228
2012	7	2	18	2.2	277	4.1	212	1.9	255
2012	7	2	19	2.7	269	3.9	215	2.7	250
2012	7	2	20	1.7	276	2.4	244	2.5	253
2012	7	2	21	2.0	240	1.2	211	2.3	275
2012	7	2	22	1.7	266	1.4	336	2.3	279
2012	7	2	23	1.6	266	0.7	347	2.3	287

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	3	0	1.2	254	1.1	7	2.8	307
2012	7	3	1	1.2	268	1.1	322	2.8	319
2012	7	3	2	1.2	264	1.3	337	2.8	317
2012	7	3	3	1.6	251	0.6	360	2.7	313
2012	7	3	4	2.9	240	1.5	8	2.9	317
2012	7	3	5	2.8	252	1.7	357	2.7	311
2012	7	3	6	2.3	271	1.3	34	2.5	309
2012	7	3	7	2.3	273	1.3	74	2.2	301
2012	7	3	8	2.7	270	2.3	168	2.0	281
2012	7	3	9	3.0	289	4.6	182	2.0	260
2012	7	3	10	2.7	268	5.1	187	2.3	252
2012	7	3	11	4.0	272	5.9	190	2.4	260
2012	7	3	12	3.9	273	6.2	201	2.9	253
2012	7	3	13	3.6	271	7.3	196	3.5	247
2012	7	3	14	4.5	272	6.9	192	3.7	251
2012	7	3	15	4.6	277	7.1	193	4.5	248
2012	7	3	16	5.1	288	6.3	201	4.2	249
2012	7	3	17	4.8	288	6.0	205	4.0	247
2012	7	3	18	4.4	297	5.0	216	3.9	246
2012	7	3	19	3.5	292	4.3	209	3.6	251
2012	7	3	20	2.3	292	5.2	204	3.2	254
2012	7	3	21	1.6	270	4.3	207	2.5	256
2012	7	3	22	1.7	269	2.5	221	2.2	258
2012	7	3	23	2.1	257	2.2	245	2.1	262
2012	7	4	0	2.3	255	3.1	210	2.3	270
2012	7	4	1	1.9	266	3.0	212	2.0	289
2012	7	4	2	1.8	248	1.2	272	2.0	304
2012	7	4	3	1.9	274	0.7	343	1.6	293
2012	7	4	4	2.0	267	0.7	88	1.6	288
2012	7	4	5	2.2	266	1.0	241	1.0	271
2012	7	4	6	2.3	278	1.4	200	0.7	229
2012	7	4	7	2.6	258	1.3	166	0.5	240
2012	7	4	8	3.1	259	2.0	185	0.9	224
2012	7	4	9	2.9	262	2.7	180	0.9	204
2012	7	4	10	3.3	273	2.4	181	0.9	163
2012	7	4	11	3.2	284	3.2	196	0.7	174
2012	7	4	12	2.2	279	4.5	194	0.8	129
2012	7	4	13	2.1	253	5.0	193	1.2	241
2012	7	4	14	2.8	266	5.5	189	2.2	252
2012	7	4	15	3.1	276	5.6	189	2.1	252
2012	7	4	16	2.8	268	5.4	197	2.3	251
2012	7	4	17	3.3	284	4.7	199	2.7	250
2012	7	4	18	3.0	282	4.4	200	2.9	248
2012	7	4	19	2.5	285	4.6	199	2.8	253
2012	7	4	20	1.6	280	4.1	201	2.3	253
2012	7	4	21	1.3	240	3.4	219	2.6	254
2012	7	4	22	1.0	267	2.4	240	2.2	266
2012	7	4	23	1.3	238	1.7	241	2.3	263

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	5	0	0.5	269	0.9	250	2.2	265
2012	7	5	1	0.6	276	0.8	250	2.3	278
2012	7	5	2	0.6	264	0.8	14	2.2	297
2012	7	5	3	0.6	291	0.8	346	2.5	313
2012	7	5	4	0.6	109	0.5	7	2.0	317
2012	7	5	5	1.1	125	0.3	246	1.7	310
2012	7	5	6	1.4	109	0.5	41	1.3	297
2012	7	5	7	0.9	43	0.8	63	1.1	273
2012	7	5	8	1.8	232	1.7	66	0.8	264
2012	7	5	9	2.8	105	2.2	103	0.6	248
2012	7	5	10	3.9	100	1.4	84	0.8	248
2012	7	5	11	4.4	100	1.8	157	1.1	145
2012	7	5	12	4.5	103	3.0	164	1.4	295
2012	7	5	13	4.7	97	3.1	187	1.6	21
2012	7	5	14	4.8	97	3.5	214	1.4	185
2012	7	5	15	4.5	100	3.8	211	1.3	195
2012	7	5	16	4.4	100	4.0	220	2.2	241
2012	7	5	17	2.7	107	4.6	225	2.7	253
2012	7	5	18	3.4	103	4.6	222	2.9	251
2012	7	5	19	2.5	110	3.8	216	3.5	247
2012	7	5	20	2.5	94	3.1	213	2.8	258
2012	7	5	21	2.0	79	2.4	242	2.4	267
2012	7	5	22	1.7	94	1.2	261	2.2	269
2012	7	5	23	2.5	94	1.0	347	2.1	286
2012	7	6	0	2.6	100	0.9	15	2.0	304
2012	7	6	1	4.4	108	1.3	17	1.7	308
2012	7	6	2	5.1	108	0.9	11	1.6	325
2012	7	6	3	5.2	108	0.5	328	1.9	4
2012	7	6	4	5.7	105	0.7	267	2.1	3
2012	7	6	5	6.0	103	0.9	15	2.3	8
2012	7	6	6	6.3	101	1.0	43	1.9	8
2012	7	6	7	7.7	99	1.2	68	0.8	345
2012	7	6	8	9.1	92	1.1	124	0.6	246
2012	7	6	9	9.6	90	1.4	145	0.8	204
2012	7	6	10	9.6	98	1.5	168	0.9	164
2012	7	6	11	8.7	103	1.7	187	1.2	151
2012	7	6	12	7.3	99	1.3	147	1.4	147
2012	7	6	13	7.4	94	1.5	158	1.4	148
2012	7	6	14	5.9	99	2.0	158	1.9	144
2012	7	6	15	5.5	97	2.4	175	1.8	153
2012	7	6	16	5.5	102	2.5	202	1.2	175
2012	7	6	17	5.9	105	2.6	212	1.7	222
2012	7	6	18	6.6	97	3.2	213	0.8	212
2012	7	6	19	6.2	105	2.0	211	1.5	277
2012	7	6	20	5.4	105	1.1	271	1.6	286
2012	7	6	21	4.9	108	0.9	227	1.4	294
2012	7	6	22	5.7	110	1.0	231	0.5	256
2012	7	6	23	5.7	114	0.7	244	0.9	277

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	7	0	4.4	127	0.9	202	1.2	272
2012	7	7	1	2.4	121	1.3	215	0.9	279
2012	7	7	2	5.5	106	0.9	278	0.7	265
2012	7	7	3	6.6	97	0.8	358	1.0	266
2012	7	7	4	5.8	105	0.7	357	0.9	109
2012	7	7	5	6.6	97	0.8	293	0.9	126
2012	7	7	6	6.2	98	0.6	149	0.5	313
2012	7	7	7	2.0	334	1.5	199	0.4	149
2012	7	7	8	3.3	110	1.5	170	0.3	240
2012	7	7	9	7.1	92	2.1	190	0.4	288
2012	7	7	10	9.3	91	3.9	192	0.4	201
2012	7	7	11	9.6	94	3.4	194	0.6	197
2012	7	7	12	9.2	94	3.1	202	0.9	115
2012	7	7	13	8.6	94	2.9	171	1.1	144
2012	7	7	14	8.0	92	3.8	191	0.7	188
2012	7	7	15	8.1	97	3.4	193	1.0	244
2012	7	7	16	7.5	97	1.7	183	1.3	281
2012	7	7	17	6.1	104	1.0	166	1.0	265
2012	7	7	18	5.8	98	0.6	42	0.5	263
2012	7	7	19	4.1	106	0.4	136	0.4	244
2012	7	7	20	4.3	100	0.2	127	0.5	252
2012	7	7	21	8.2	92	0.5	138	0.5	217
2012	7	7	22	8.2	91	0.6	171	0.9	263
2012	7	7	23	7.0	109	0.4	327	0.9	282
2012	7	8	0	5.3	107	1.2	334	1.2	298
2012	7	8	1	4.1	104	1.1	326	1.6	315
2012	7	8	2	4.3	108	0.8	343	1.2	317
2012	7	8	3	1.5	224	1.1	353	1.0	334
2012	7	8	4	1.0	242	1.3	351	1.1	321
2012	7	8	5	0.8	257	0.6	319	1.0	343
2012	7	8	6	2.8	133	0.7	234	0.6	327
2012	7	8	7	5.0	95	0.8	214	0.5	327
2012	7	8	8	1.3	251	0.4	144	0.2	236
2012	7	8	9	1.1	298	0.6	345	0.5	208
2012	7	8	10	1.3	280	0.7	356	0.7	216
2012	7	8	11	1.5	264	0.8	140	0.8	239
2012	7	8	12	1.7	266	0.7	155	0.9	197
2012	7	8	13	1.1	261	1.0	139	0.9	213
2012	7	8	14	1.0	351	0.7	78	0.8	217
2012	7	8	15	1.3	267	0.7	88	1.4	242
2012	7	8	16	1.5	263	0.8	71	1.7	267
2012	7	8	17	1.5	290	0.6	13	2.1	285
2012	7	8	18	1.7	102	0.6	179	2.7	283
2012	7	8	19	1.5	278	0.4	33	1.7	293
2012	7	8	20	1.1	253	0.4	2	1.8	288
2012	7	8	21	1.2	102	0.6	342	1.8	314
2012	7	8	22	1.2	223	0.8	12	1.4	337
2012	7	8	23	0.8	215	1.1	347	1.3	338

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	9	0	0.8	120	0.5	289	1.5	315
2012	7	9	1	2.7	115	0.4	20	1.3	345
2012	7	9	2	7.0	104	0.7	68	1.1	9
2012	7	9	3	7.7	101	0.7	290	1.4	346
2012	7	9	4	7.9	98	0.9	243	1.0	356
2012	7	9	5	6.5	109	0.4	3	1.0	349
2012	7	9	6	6.8	103	0.6	4	0.3	360
2012	7	9	7	6.6	107	0.4	62	0.4	306
2012	7	9	8	8.1	103	0.7	160	0.4	12
2012	7	9	9	8.5	111	1.0	170	0.5	210
2012	7	9	10	9.3	96	1.4	155	0.9	206
2012	7	9	11	9.2	95	0.9	149	0.8	198
2012	7	9	12	9.2	92	2.2	169	0.8	194
2012	7	9	13	10.0	85	2.2	167	0.8	180
2012	7	9	14	11.4	88	2.3	153	1.7	129
2012	7	9	15	8.6	100	1.8	192	2.0	144
2012	7	9	16	9.4	95	2.3	199	2.1	136
2012	7	9	17	8.8	95	2.8	204	3.1	110
2012	7	9	18	7.5	102	1.9	201	2.6	108
2012	7	9	19	8.8	102	1.5	213	1.1	131
2012	7	9	20	7.7	106	1.8	198	0.8	116
2012	7	9	21	7.7	110	2.0	190	1.1	111
2012	7	9	22	9.3	107	2.0	203	2.3	98
2012	7	9	23	6.4	114	1.2	156	3.5	117
2012	7	10	0	2.1	211	4.7	207	3.2	113
2012	7	10	1	7.7	106	3.5	187	1.5	247
2012	7	10	2	3.5	117	3.5	210	1.8	314
2012	7	10	3	2.0	276	3.9	195	2.1	116
2012	7	10	4	1.6	97	3.1	202	2.5	124
2012	7	10	5	1.0	92	3.7	203	2.5	110
2012	7	10	6	1.6	105	3.1	203	1.3	142
2012	7	10	7	1.6	341	3.1	183	0.9	288
2012	7	10	8	1.9	324	3.1	173	0.8	257
2012	7	10	9	2.4	311	3.1	177	1.1	237
2012	7	10	10	3.0	299	4.4	192	1.2	228
2012	7	10	11	2.9	289	5.3	185	1.9	247
2012	7	10	12	3.1	273	5.7	177	1.7	222
2012	7	10	13	3.2	262	5.4	177	2.5	233
2012	7	10	14	3.1	261	5.5	178	2.7	235
2012	7	10	15	3.2	297	5.0	182	2.2	219
2012	7	10	16	3.7	293	3.6	197	2.7	234
2012	7	10	17	3.7	300	4.7	187	2.4	231
2012	7	10	18	3.7	308	3.4	198	1.9	226
2012	7	10	19	3.4	299	3.3	218	3.2	240
2012	7	10	20	2.2	284	3.4	219	2.6	248
2012	7	10	21	1.9	250	2.7	229	2.6	250
2012	7	10	22	0.8	286	1.2	228	2.3	259
2012	7	10	23	0.8	272	1.7	330	2.0	282

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	11	0	0.7	290	1.8	0	2.3	311
2012	7	11	1	0.6	9	1.9	347	2.6	313
2012	7	11	2	0.6	196	2.5	352	2.4	303
2012	7	11	3	1.3	89	0.9	302	2.2	326
2012	7	11	4	1.2	93	1.1	302	1.5	344
2012	7	11	5	1.6	86	1.3	338	2.0	349
2012	7	11	6	1.8	86	0.7	19	1.5	352
2012	7	11	7	0.5	39	1.5	33	0.8	339
2012	7	11	8	2.1	88	1.3	77	0.8	272
2012	7	11	9	2.0	98	1.5	167	1.0	230
2012	7	11	10	1.5	233	2.9	169	1.3	237
2012	7	11	11	2.6	110	3.4	178	1.2	231
2012	7	11	12	4.4	100	3.5	186	1.1	220
2012	7	11	13	4.2	102	3.8	186	1.3	222
2012	7	11	14	3.0	210	4.7	188	1.1	194
2012	7	11	15	3.4	267	4.7	208	1.7	231
2012	7	11	16	4.1	266	4.4	215	2.2	237
2012	7	11	17	3.6	269	4.4	205	2.9	243
2012	7	11	18	4.1	272	4.3	205	2.9	248
2012	7	11	19	2.7	258	4.6	214	3.2	247
2012	7	11	20	1.7	252	2.6	247	2.8	250
2012	7	11	21	1.3	97	2.2	251	2.5	258
2012	7	11	22	0.7	83	1.5	257	2.4	273
2012	7	11	23	1.5	240	1.8	234	2.6	293
2012	7	12	0	1.1	236	1.7	304	2.8	321
2012	7	12	1	0.7	91	1.3	346	2.8	312
2012	7	12	2	0.9	88	1.4	331	2.5	320
2012	7	12	3	0.7	91	0.6	63	2.5	326
2012	7	12	4	1.9	96	0.6	249	2.2	335
2012	7	12	5	2.6	86	1.3	2	2.2	0
2012	7	12	6	3.6	89	0.7	46	1.1	345
2012	7	12	7	4.4	101	1.2	61	0.9	314
2012	7	12	8	3.9	102	1.1	123	0.8	267
2012	7	12	9	3.7	99	1.5	169	1.0	220
2012	7	12	10	4.1	100	2.2	154	1.1	219
2012	7	12	11	4.5	101	2.3	162	1.1	221
2012	7	12	12	5.0	102	3.7	182	1.0	200
2012	7	12	13	4.9	104	3.9	200	1.3	202
2012	7	12	14	4.5	105	4.6	208	1.2	223
2012	7	12	15	4.2	101	5.2	214	1.7	211
2012	7	12	16	4.3	99	4.8	215	2.6	249
2012	7	12	17	2.9	91	5.0	215	3.0	249
2012	7	12	18	1.8	270	4.1	226	3.2	250
2012	7	12	19	2.4	266	3.1	240	3.2	248
2012	7	12	20	1.7	227	2.7	231	2.7	257
2012	7	12	21	1.7	97	1.7	237	2.3	262
2012	7	12	22	2.1	94	0.9	336	2.4	300
2012	7	12	23	3.1	88	0.8	146	2.8	321

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	13	0	2.3	90	1.1	329	2.5	303
2012	7	13	1	1.7	90	1.3	353	2.6	309
2012	7	13	2	1.0	109	0.6	353	2.3	299
2012	7	13	3	1.3	189	1.2	338	1.8	317
2012	7	13	4	2.2	86	1.2	12	1.6	334
2012	7	13	5	1.3	85	1.2	357	1.7	352
2012	7	13	6	1.8	114	0.7	121	1.4	8
2012	7	13	7	1.7	178	0.8	113	0.4	99
2012	7	13	8	2.1	246	1.1	35	0.7	200
2012	7	13	9	1.4	249	1.3	101	1.1	225
2012	7	13	10	2.0	240	2.5	159	1.1	264
2012	7	13	11	2.1	116	2.1	109	1.3	218
2012	7	13	12	1.8	143	3.6	195	1.1	228
2012	7	13	13	3.0	113	5.2	215	1.7	246
2012	7	13	14	3.5	104	4.8	209	1.7	250
2012	7	13	15	2.9	41	4.9	220	2.1	253
2012	7	13	16	2.0	269	4.7	216	2.7	254
2012	7	13	17	2.1	266	3.4	216	2.5	258
2012	7	13	18	2.4	244	4.9	217	3.1	250
2012	7	13	19	2.5	237	4.3	217	3.2	245
2012	7	13	20	1.7	265	4.7	215	2.7	255
2012	7	13	21	1.6	228	3.6	219	2.6	260
2012	7	13	22	1.4	226	4.8	223	2.2	290
2012	7	13	23	1.5	93	2.2	249	2.2	311
2012	7	14	0	0.9	123	1.8	234	1.8	298
2012	7	14	1	1.5	262	1.1	293	1.6	305
2012	7	14	2	2.1	239	1.0	62	1.7	304
2012	7	14	3	1.6	247	1.2	330	1.1	290
2012	7	14	4	3.2	90	0.7	60	1.4	328
2012	7	14	5	5.8	103	0.8	353	1.5	315
2012	7	14	6	7.6	109	0.5	31	1.2	350
2012	7	14	7	5.3	108	0.8	181	0.9	355
2012	7	14	8	3.8	117	0.8	2	1.1	273
2012	7	14	9	1.6	270	0.5	16	1.0	232
2012	7	14	10	2.0	256	0.9	79	1.2	234
2012	7	14	11	3.0	293	1.7	29	1.3	273
2012	7	14	12	2.2	302	1.1	323	2.1	301
2012	7	14	13	2.5	259	1.2	182	2.0	283
2012	7	14	14	3.5	272	2.8	195	2.3	259
2012	7	14	15	4.3	283	3.6	200	2.3	258
2012	7	14	16	2.8	291	1.6	291	2.5	256
2012	7	14	17	2.6	269	1.8	36	2.8	263
2012	7	14	18	1.8	257	0.8	267	3.0	260
2012	7	14	19	2.6	261	1.4	235	2.7	261
2012	7	14	20	3.2	241	1.3	241	2.5	266
2012	7	14	21	1.8	273	1.1	45	2.3	278
2012	7	14	22	2.6	243	0.8	255	2.4	288
2012	7	14	23	1.9	250	0.7	98	2.8	290

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	15	0	0.8	121	0.8	327	2.5	304
2012	7	15	1	1.0	102	1.2	316	2.6	319
2012	7	15	2	2.0	91	1.8	320	2.8	325
2012	7	15	3	1.1	97	1.9	309	3.1	321
2012	7	15	4	1.6	104	2.5	334	2.8	332
2012	7	15	5	1.8	96	2.6	341	2.8	333
2012	7	15	6	0.5	87	2.3	5	2.8	345
2012	7	15	7	0.4	104	1.9	10	2.2	351
2012	7	15	8	0.7	249	1.7	19	1.8	331
2012	7	15	9	1.4	263	2.0	52	2.3	313
2012	7	15	10	1.8	244	1.9	182	1.9	307
2012	7	15	11	2.6	253	2.8	191	1.7	265
2012	7	15	12	3.5	241	3.7	184	1.8	233
2012	7	15	13	3.3	237	4.0	190	1.8	237
2012	7	15	14	4.0	261	4.0	199	2.3	247
2012	7	15	15	4.1	268	3.4	224	2.3	250
2012	7	15	16	3.7	257	4.7	229	2.5	248
2012	7	15	17	3.3	263	4.4	225	2.8	256
2012	7	15	18	4.2	271	2.8	242	3.1	254
2012	7	15	19	3.5	258	2.4	237	3.4	253
2012	7	15	20	2.4	280	1.9	232	3.0	256
2012	7	15	21	2.0	252	2.7	230	2.5	271
2012	7	15	22	2.3	252	0.9	214	2.9	276
2012	7	15	23	2.3	256	1.1	340	3.1	289
2012	7	16	0	2.8	233	1.4	249	2.9	297
2012	7	16	1	1.8	252	1.0	43	3.5	318
2012	7	16	2	2.3	253	1.3	357	3.5	320
2012	7	16	3	2.5	252	1.9	3	3.2	319
2012	7	16	4	1.8	271	1.5	355	2.5	319
2012	7	16	5	2.1	258	1.8	22	2.6	321
2012	7	16	6	2.2	277	1.4	23	2.1	311
2012	7	16	7	2.1	267	1.2	81	1.7	298
2012	7	16	8	2.5	268	1.5	133	0.9	282
2012	7	16	9	3.5	266	1.8	153	1.6	239
2012	7	16	10	3.4	255	4.5	208	1.9	258
2012	7	16	11	3.7	258	5.2	213	2.5	246
2012	7	16	12	3.9	267	5.7	213	2.4	266
2012	7	16	13	4.2	273	6.4	213	3.1	254
2012	7	16	14	5.3	275	6.9	218	3.3	251
2012	7	16	15	6.4	279	6.4	225	3.7	248
2012	7	16	16	6.0	277	5.5	224	3.8	252
2012	7	16	17	3.5	269	4.7	229	3.5	251
2012	7	16	18	2.5	252	3.2	236	3.2	250
2012	7	16	19	3.3	268	3.1	231	2.9	255
2012	7	16	20	3.1	280	1.8	239	2.6	260
2012	7	16	21	2.6	254	1.0	335	2.7	267
2012	7	16	22	2.1	254	1.3	308	2.7	274
2012	7	16	23	1.9	250	1.7	22	2.6	280

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	17	0	1.6	262	1.4	335	2.8	287
2012	7	17	1	2.0	261	1.4	340	2.9	318
2012	7	17	2	3.0	248	2.5	344	3.5	311
2012	7	17	3	3.3	255	1.8	348	3.2	311
2012	7	17	4	3.2	249	1.5	335	3.5	319
2012	7	17	5	2.1	249	1.8	344	3.5	322
2012	7	17	6	2.3	228	2.1	15	3.1	313
2012	7	17	7	2.1	236	1.4	14	2.3	309
2012	7	17	8	2.1	231	1.2	119	1.6	281
2012	7	17	9	2.1	247	2.7	185	1.7	265
2012	7	17	10	2.3	245	3.0	186	2.1	240
2012	7	17	11	3.1	263	4.1	197	1.6	258
2012	7	17	12	3.4	270	4.6	200	2.8	235
2012	7	17	13	4.0	275	5.2	213	2.6	256
2012	7	17	14	3.7	278	6.0	212	2.8	257
2012	7	17	15	3.9	284	6.7	217	3.5	255
2012	7	17	16	3.5	279	6.7	214	3.9	251
2012	7	17	17	3.0	281	6.2	213	4.3	250
2012	7	17	18	3.4	274	5.5	214	4.1	255
2012	7	17	19	2.8	252	5.1	217	3.9	254
2012	7	17	20	2.2	284	5.1	218	3.4	261
2012	7	17	21	2.2	280	5.0	225	3.3	270
2012	7	17	22	3.1	253	4.4	235	3.5	279
2012	7	17	23	2.5	257	2.9	247	3.5	281
2012	7	18	0	2.9	246	1.8	239	3.4	282
2012	7	18	1	3.1	251	0.9	319	3.6	288
2012	7	18	2	3.3	239	1.1	290	3.4	291
2012	7	18	3	2.7	225	1.3	275	2.6	300
2012	7	18	4	2.0	247	0.7	356	2.6	301
2012	7	18	5	2.2	235	0.7	97	2.3	307
2012	7	18	6	2.1	234	0.8	82	2.3	303
2012	7	18	7	2.1	245	1.3	50	2.5	284
2012	7	18	8	2.2	242	3.0	194	2.0	269
2012	7	18	9	1.8	252	4.7	203	2.1	259
2012	7	18	10	1.9	262	5.3	204	2.1	259
2012	7	18	11	2.0	267	5.9	201	2.8	244
2012	7	18	12	2.0	263	6.7	204	2.6	241
2012	7	18	13	2.7	276	6.6	206	2.9	250
2012	7	18	14	3.0	284	7.5	214	3.2	254
2012	7	18	15	3.2	284	8.7	219	3.5	255
2012	7	18	16	3.4	273	9.0	224	3.9	254
2012	7	18	17	2.4	290	8.6	228	4.1	255
2012	7	18	18	2.8	289	8.4	227	4.0	258
2012	7	18	19	2.1	281	8.5	224	4.0	260
2012	7	18	20	0.6	256	6.9	222	3.9	263
2012	7	18	21	1.7	85	5.8	223	3.4	266
2012	7	18	22	3.6	103	3.9	225	2.8	271
2012	7	18	23	4.3	90	2.1	225	2.5	279

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	19	0	5.1	90	1.9	228	1.8	289
2012	7	19	1	6.7	93	1.8	225	1.4	286
2012	7	19	2	6.6	95	1.5	236	1.0	266
2012	7	19	3	6.3	98	1.1	284	0.8	261
2012	7	19	4	9.5	100	0.6	254	0.7	254
2012	7	19	5	9.5	100	0.3	94	0.7	272
2012	7	19	6	9.7	99	0.4	160	0.3	242
2012	7	19	7	10.6	93	0.8	189	0.1	13
2012	7	19	8	10.5	96	0.9	181	0.4	202
2012	7	19	9	10.7	100	1.1	196	0.5	186
2012	7	19	10	10.5	102	1.0	200	0.6	171
2012	7	19	11	9.7	99	0.5	176	1.0	144
2012	7	19	12	8.5	104	0.4	128	0.5	211
2012	7	19	13	9.7	101	0.8	56	0.4	165
2012	7	19	14	9.1	101	0.8	145	1.0	84
2012	7	19	15	8.8	99	0.7	113	0.6	158
2012	7	19	16	9.5	98	1.2	201	0.6	224
2012	7	19	17	8.1	102	0.7	194	0.6	219
2012	7	19	18	8.7	100	0.7	84	0.6	256
2012	7	19	19	8.9	100	2.2	22	0.6	264
2012	7	19	20	9.9	96	1.4	26	0.6	352
2012	7	19	21	10.2	109	2.3	12	1.1	345
2012	7	19	22	9.7	98	0.7	9	1.4	359
2012	7	19	23	7.9	95	0.9	182	1.4	345
2012	7	20	0	7.3	92	1.0	181	1.5	344
2012	7	20	1	5.1	118	0.8	178	1.9	356
2012	7	20	2	4.8	105	1.0	190	1.7	352
2012	7	20	3	4.9	119	0.8	240	1.8	356
2012	7	20	4	4.3	112	1.2	357	2.1	9
2012	7	20	5	5.7	104	0.9	301	2.0	2
2012	7	20	6	5.6	102	0.7	164	1.7	360
2012	7	20	7	6.2	101	0.7	72	1.0	14
2012	7	20	8	7.6	98	0.9	161	0.8	359
2012	7	20	9	7.1	97	0.8	158	0.9	256
2012	7	20	10	6.2	98	1.0	157	0.9	240
2012	7	20	11	5.5	105	1.2	160	0.9	210
2012	7	20	12	6.3	104	2.0	184	1.0	204
2012	7	20	13	6.2	120	1.7	140	0.9	167
2012	7	20	14	5.6	100	1.5	123	1.2	134
2012	7	20	15	5.9	99	2.0	145	1.0	217
2012	7	20	16	4.5	103	1.3	146	0.8	216
2012	7	20	17	4.6	109	1.4	184	0.9	215
2012	7	20	18	4.1	109	1.3	217	0.9	223
2012	7	20	19	1.5	50	2.4	237	1.4	263
2012	7	20	20	1.1	275	3.4	218	2.3	276
2012	7	20	21	1.3	257	3.9	223	2.9	272
2012	7	20	22	0.4	226	1.8	247	2.3	268
2012	7	20	23	1.1	232	2.1	226	2.5	264

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	21	0	1.2	89	1.7	221	1.8	224
2012	7	21	1	1.5	285	1.1	319	1.2	279
2012	7	21	2	2.1	235	1.1	32	2.2	277
2012	7	21	3	1.6	264	1.7	235	1.7	244
2012	7	21	4	3.1	289	1.6	221	1.1	261
2012	7	21	5	2.7	287	1.4	218	0.9	251
2012	7	21	6	4.0	284	3.0	228	1.2	265
2012	7	21	7	3.9	280	1.1	227	1.7	264
2012	7	21	8	3.9	277	1.4	222	2.5	278
2012	7	21	9	4.2	272	2.7	219	3.1	285
2012	7	21	10	3.3	269	1.7	239	2.8	272
2012	7	21	11	3.6	273	2.4	215	2.8	272
2012	7	21	12	3.3	274	1.6	254	3.1	281
2012	7	21	13	3.4	254	1.7	220	2.5	273
2012	7	21	14	3.8	278	1.5	245	2.9	281
2012	7	21	15	3.7	280	2.4	226	2.4	270
2012	7	21	16	3.2	278	1.7	243	2.3	267
2012	7	21	17	3.8	277	0.7	211	1.7	263
2012	7	21	18	3.1	259	1.4	272	1.9	271
2012	7	21	19	3.4	275	0.8	337	2.1	281
2012	7	21	20	3.1	264	1.3	38	1.7	293
2012	7	21	21	3.7	249	1.1	316	2.4	300
2012	7	21	22	3.9	245	1.2	333	2.4	316
2012	7	21	23	3.7	236	1.1	307	2.8	318
2012	7	22	0	2.5	241	1.1	358	2.6	305
2012	7	22	1	2.7	241	1.0	329	2.9	315
2012	7	22	2	2.3	232	1.6	336	2.6	309
2012	7	22	3	1.7	255	1.1	248	2.5	315
2012	7	22	4	2.4	234	1.1	247	2.5	327
2012	7	22	5	2.1	234	0.9	315	1.6	297
2012	7	22	6	0.8	183	0.7	25	0.8	263
2012	7	22	7	1.9	244	1.0	17	0.8	279
2012	7	22	8	1.8	240	0.7	46	1.1	276
2012	7	22	9	1.2	257	0.8	113	0.8	256
2012	7	22	10	1.6	260	1.6	109	1.1	247
2012	7	22	11	1.8	275	2.0	157	1.0	221
2012	7	22	12	2.3	271	2.0	143	0.9	225
2012	7	22	13	2.3	258	2.0	143	1.1	190
2012	7	22	14	1.7	247	2.5	180	1.2	216
2012	7	22	15	2.4	261	2.5	165	1.2	155
2012	7	22	16	2.7	268	2.9	175	1.1	164
2012	7	22	17	2.6	257	3.1	196	1.0	168
2012	7	22	18	2.7	248	3.0	207	0.5	203
2012	7	22	19	2.7	248	1.4	236	0.6	206
2012	7	22	20	1.8	244	2.1	230	1.5	257
2012	7	22	21	1.3	250	1.6	239	1.9	267
2012	7	22	22	2.0	233	1.2	196	2.5	275
2012	7	22	23	1.3	260	0.7	273	2.9	287

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	23	0	2.1	254	1.0	248	3.1	300
2012	7	23	1	1.7	235	1.5	348	2.6	295
2012	7	23	2	1.5	271	1.1	292	2.2	298
2012	7	23	3	2.6	236	0.4	289	2.5	298
2012	7	23	4	2.1	236	0.4	135	2.3	281
2012	7	23	5	2.0	239	0.7	252	2.1	277
2012	7	23	6	1.6	242	0.4	211	1.6	282
2012	7	23	7	2.3	242	0.8	87	2.3	285
2012	7	23	8	2.4	256	0.8	60	2.0	282
2012	7	23	9	2.8	259	1.0	150	1.7	259
2012	7	23	10	2.8	270	1.2	82	1.9	249
2012	7	23	11	3.0	267	2.4	177	1.5	252
2012	7	23	12	3.1	262	3.8	195	1.1	272
2012	7	23	13	3.1	276	4.0	201	1.4	231
2012	7	23	14	4.1	255	4.7	203	1.6	247
2012	7	23	15	4.3	253	5.4	212	1.8	259
2012	7	23	16	4.0	250	5.8	219	2.7	251
2012	7	23	17	4.0	250	6.4	220	3.4	249
2012	7	23	18	3.6	249	5.7	223	3.3	250
2012	7	23	19	3.2	246	4.7	226	3.4	255
2012	7	23	20	2.9	255	3.9	222	3.1	260
2012	7	23	21	3.1	259	3.1	231	2.8	265
2012	7	23	22	2.9	255	2.4	235	2.7	283
2012	7	23	23	3.2	255	2.4	235	3.2	292
2012	7	24	0	3.6	253	1.7	243	3.5	293
2012	7	24	1	3.4	249	1.4	319	2.7	301
2012	7	24	2	3.5	245	1.1	316	2.9	301
2012	7	24	3	3.6	232	1.1	305	2.8	310
2012	7	24	4	3.2	223	1.0	341	2.3	312
2012	7	24	5	3.5	226	0.8	223	2.3	320
2012	7	24	6	3.1	230	0.7	204	2.6	325
2012	7	24	7	2.4	232	1.0	173	2.1	314
2012	7	24	8	2.7	237	1.3	143	1.7	287
2012	7	24	9	3.1	263	2.2	183	1.6	270
2012	7	24	10	3.0	261	3.1	189	1.4	250
2012	7	24	11	3.2	269	3.5	194	1.6	247
2012	7	24	12	3.2	258	3.6	195	1.8	247
2012	7	24	13	3.7	239	4.6	211	1.9	263
2012	7	24	14	3.1	238	5.1	209	2.1	258
2012	7	24	15	3.6	249	5.4	209	2.2	259
2012	7	24	16	4.1	246	4.9	216	2.9	267
2012	7	24	17	3.9	256	4.9	222	3.3	270
2012	7	24	18	3.7	266	4.5	225	3.2	270
2012	7	24	19	2.9	262	3.1	233	3.4	271
2012	7	24	20	2.6	245	2.3	245	3.4	271
2012	7	24	21	2.0	268	1.1	249	3.4	283
2012	7	24	22	1.4	263	1.0	312	3.3	296
2012	7	24	23	1.2	269	1.2	345	3.3	296

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	25	0	1.6	266	0.7	359	3.3	295
2012	7	25	1	1.1	250	0.9	357	2.9	296
2012	7	25	2	0.6	54	1.0	26	1.9	328
2012	7	25	3	0.8	104	1.6	356	1.6	326
2012	7	25	4	1.3	101	1.5	5	1.8	333
2012	7	25	5	1.1	92	1.4	0	1.2	342
2012	7	25	6	3.2	91	1.1	14	1.3	8
2012	7	25	7	4.8	105	1.0	15	0.6	330
2012	7	25	8	3.5	106	1.1	76	0.5	257
2012	7	25	9	2.1	79	1.1	116	1.2	217
2012	7	25	10	1.1	266	1.3	160	1.0	215
2012	7	25	11	1.8	273	1.6	143	1.2	204
2012	7	25	12	1.9	253	2.1	168	1.0	206
2012	7	25	13	2.0	249	2.4	185	1.1	209
2012	7	25	14	1.7	243	3.3	188	1.2	212
2012	7	25	15	2.6	241	3.2	202	1.5	225
2012	7	25	16	2.3	229	3.1	210	2.0	231
2012	7	25	17	2.0	242	3.2	213	1.7	258
2012	7	25	18	1.8	242	2.9	230	2.1	262
2012	7	25	19	1.9	272	2.0	248	2.7	272
2012	7	25	20	1.2	87	0.9	217	2.5	274
2012	7	25	21	1.2	97	1.4	344	2.8	275
2012	7	25	22	1.1	94	1.3	355	2.9	293
2012	7	25	23	1.7	99	1.2	345	3.0	304
2012	7	26	0	2.5	92	1.3	351	2.5	304
2012	7	26	1	3.4	90	1.0	347	2.2	319
2012	7	26	2	3.6	86	0.5	29	1.9	342
2012	7	26	3	5.4	109	0.6	204	1.7	342
2012	7	26	4	5.0	103	0.7	141	1.8	8
2012	7	26	5	3.7	105	0.6	111	1.7	7
2012	7	26	6	6.2	104	0.4	147	1.7	7
2012	7	26	7	6.0	97	0.8	102	0.9	51
2012	7	26	8	6.0	101	0.9	84	0.6	216
2012	7	26	9	6.4	101	1.0	155	0.7	198
2012	7	26	10	7.0	100	1.7	166	0.9	207
2012	7	26	11	6.3	98	2.1	172	1.0	199
2012	7	26	12	6.2	95	2.2	176	0.8	208
2012	7	26	13	6.0	95	2.6	177	0.9	177
2012	7	26	14	5.3	102	2.8	187	1.0	199
2012	7	26	15	3.7	104	3.5	203	1.4	220
2012	7	26	16	3.1	100	3.6	210	1.9	246
2012	7	26	17	2.6	96	4.0	216	2.1	264
2012	7	26	18	2.1	85	3.9	220	2.2	262
2012	7	26	19	1.5	84	3.6	219	2.4	266
2012	7	26	20	1.6	93	3.0	214	1.9	247
2012	7	26	21	3.4	88	1.6	219	2.7	133
2012	7	26	22	3.1	89	1.3	240	1.4	114
2012	7	26	23	3.1	89	1.3	335	1.3	107

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	27	0	2.5	90	1.0	275	0.4	8
2012	7	27	1	1.9	88	0.7	339	0.5	286
2012	7	27	2	2.9	90	0.9	9	0.8	312
2012	7	27	3	3.1	91	0.7	313	1.0	296
2012	7	27	4	2.0	85	0.8	14	0.7	275
2012	7	27	5	1.7	90	1.0	312	0.6	221
2012	7	27	6	1.6	91	1.0	344	0.4	194
2012	7	27	7	1.9	88	0.8	104	0.5	156
2012	7	27	8	2.5	99	1.6	190	0.6	261
2012	7	27	9	1.5	98	4.4	192	0.4	216
2012	7	27	10	5.0	95	4.9	195	0.6	214
2012	7	27	11	6.0	99	4.8	197	1.2	105
2012	7	27	12	8.4	95	4.7	205	0.9	159
2012	7	27	13	8.9	94	4.4	205	0.8	235
2012	7	27	14	7.9	94	4.1	199	1.3	268
2012	7	27	15	6.1	100	4.7	201	1.4	287
2012	7	27	16	4.8	94	4.5	222	2.0	255
2012	7	27	17	2.0	252	4.3	218	3.3	251
2012	7	27	18	1.7	271	4.2	216	3.6	252
2012	7	27	19	1.6	272	4.0	223	3.8	252
2012	7	27	20	0.8	299	3.6	210	3.5	257
2012	7	27	21	0.5	295	2.4	226	2.9	261
2012	7	27	22	0.5	314	2.5	215	2.5	267
2012	7	27	23	2.0	307	2.1	227	2.2	277
2012	7	28	0	2.1	298	1.5	209	2.4	281
2012	7	28	1	1.7	296	1.1	220	2.2	276
2012	7	28	2	1.5	262	1.1	233	2.0	279
2012	7	28	3	1.8	254	1.0	296	1.5	294
2012	7	28	4	1.9	246	0.9	270	1.4	286
2012	7	28	5	2.1	243	0.8	344	1.4	279
2012	7	28	6	1.4	254	0.9	1	1.2	288
2012	7	28	7	1.4	217	1.2	83	1.5	274
2012	7	28	8	1.4	268	1.8	121	1.2	247
2012	7	28	9	1.6	261	2.7	191	1.3	231
2012	7	28	10	1.8	241	4.4	197	1.5	241
2012	7	28	11	2.4	249	4.9	190	1.4	242
2012	7	28	12	2.4	258	4.8	199	1.5	251
2012	7	28	13	2.8	271	4.6	196	1.5	244
2012	7	28	14	2.7	265	5.1	202	1.6	246
2012	7	28	15	3.2	271	5.2	202	1.8	246
2012	7	28	16	3.6	281	5.1	210	2.0	244
2012	7	28	17	2.7	284	5.5	214	3.0	246
2012	7	28	18	2.7	285	4.9	218	3.2	248
2012	7	28	19	2.3	281	4.8	218	2.7	260
2012	7	28	20	1.9	244	2.8	229	2.6	259
2012	7	28	21	1.8	229	2.6	233	2.2	268
2012	7	28	22	0.5	45	2.1	242	2.3	286
2012	7	28	23	0.5	99	0.9	217	2.3	288

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	29	0	0.4	316	0.9	235	2.1	307
2012	7	29	1	0.6	62	0.6	6	1.8	309
2012	7	29	2	0.9	93	0.9	338	1.3	274
2012	7	29	3	2.0	96	0.6	338	1.4	280
2012	7	29	4	3.3	105	0.7	302	1.0	283
2012	7	29	5	4.5	99	0.6	316	0.4	240
2012	7	29	6	4.5	116	0.6	212	0.4	253
2012	7	29	7	3.8	91	0.5	298	0.3	97
2012	7	29	8	4.2	91	1.1	207	0.5	92
2012	7	29	9	5.8	99	1.2	171	0.4	186
2012	7	29	10	5.8	96	1.5	166	0.8	176
2012	7	29	11	6.1	92	1.9	169	0.7	157
2012	7	29	12	6.3	92	2.1	163	0.8	219
2012	7	29	13	6.3	93	2.8	165	0.8	190
2012	7	29	14	7.0	93	2.6	126	2.1	129
2012	7	29	15	6.8	91	2.2	142	2.4	115
2012	7	29	16	6.4	88	2.3	148	1.4	138
2012	7	29	17	5.7	89	1.5	165	0.9	170
2012	7	29	18	4.7	96	0.5	204	0.5	214
2012	7	29	19	4.2	93	1.1	224	0.7	242
2012	7	29	20	0.5	285	0.7	321	0.8	277
2012	7	29	21	0.6	256	1.1	281	0.6	301
2012	7	29	22	0.6	254	1.5	260	0.7	274
2012	7	29	23	1.4	83	2.6	225	1.3	270
2012	7	30	0	1.2	306	1.8	217	2.1	269
2012	7	30	1	1.0	326	2.7	199	1.2	345
2012	7	30	2	0.7	247	0.8	180	0.8	330
2012	7	30	3	0.5	254	0.9	223	0.4	341
2012	7	30	4	0.6	322	0.7	11	0.2	164
2012	7	30	5	1.3	112	0.4	323	0.7	19
2012	7	30	6	4.0	108	0.3	150	0.2	24
2012	7	30	7	3.7	106	0.6	51	0.4	268
2012	7	30	8	4.5	100	0.7	158	0.5	237
2012	7	30	9	4.3	100	1.2	181	0.6	241
2012	7	30	10	4.5	94	1.9	191	0.8	222
2012	7	30	11	3.4	94	3.3	204	0.7	235
2012	7	30	12	1.2	260	3.9	199	0.9	264
2012	7	30	13	1.9	262	4.2	198	1.6	251
2012	7	30	14	2.7	275	4.8	193	2.0	243
2012	7	30	15	2.8	270	4.2	199	1.3	224
2012	7	30	16	2.4	282	4.3	206	2.0	245
2012	7	30	17	2.2	276	4.3	199	2.7	249
2012	7	30	18	2.3	285	4.2	202	2.5	255
2012	7	30	19	1.2	257	4.0	199	1.9	262
2012	7	30	20	0.6	248	4.0	197	1.8	262
2012	7	30	21	0.8	285	2.5	208	2.0	259
2012	7	30	22	0.6	268	1.1	228	1.5	248
2012	7	30	23	0.4	240	1.5	215	1.5	242

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	7	31	0	0.6	274	1.7	205	0.5	188
2012	7	31	1	0.5	141	1.3	221	0.4	207
2012	7	31	2	1.9	114	1.2	216	0.3	218
2012	7	31	3	3.3	108	1.0	199	0.5	120
2012	7	31	4	5.8	105	1.6	191	0.7	97
2012	7	31	5	6.4	96	1.9	191	0.9	113
2012	7	31	6	7.1	83	1.5	184	0.7	148
2012	7	31	7	7.3	91	1.6	173	1.1	142
2012	7	31	8	8.7	86	1.7	165	2.2	120
2012	7	31	9	9.0	88	1.7	158	3.8	114
2012	7	31	10	9.3	92	1.9	171	3.8	115
2012	7	31	11	9.2	89	1.8	198	3.5	113
2012	7	31	12	9.9	85	1.9	195	3.1	108
2012	7	31	13	10.2	86	2.6	206	3.3	109
2012	7	31	14	11.9	84	3.1	215	2.0	116
2012	7	31	15	10.4	88	3.0	216	1.5	110
2012	7	31	16	9.8	92	3.3	207	0.9	144
2012	7	31	17	9.8	89	2.3	204	1.5	133
2012	7	31	18	10.2	86	2.4	208	0.5	190
2012	7	31	19	8.3	88	3.0	226	0.6	250
2012	7	31	20	8.1	87	3.4	225	0.7	260
2012	7	31	21	7.6	97	2.8	220	1.1	266
2012	7	31	22	6.1	98	3.0	216	1.0	287
2012	7	31	23	4.5	102	2.8	212	1.1	268
2012	8	1	0	5.8	102	2.4	211	1.0	271
2012	8	1	1	7.1	100	1.3	180	0.9	274
2012	8	1	2	6.7	98	1.0	266	0.6	285
2012	8	1	3	6.3	102	0.9	3	0.6	71
2012	8	1	4	5.7	105	0.7	287	0.4	302
2012	8	1	5	4.4	110	0.8	316	0.5	41
2012	8	1	6	3.1	97	0.8	320	0.3	23
2012	8	1	7	1.8	95	0.4	52	0.3	24
2012	8	1	8	2.9	94	0.8	154	0.3	169
2012	8	1	9	4.7	103	1.7	130	0.5	177
2012	8	1	10	4.3	96	1.6	143	0.9	140
2012	8	1	11	5.3	98	1.7	137	0.7	189
2012	8	1	12	3.1	104	2.6	174	1.3	147
2012	8	1	13	1.7	147	4.1	191	1.3	155
2012	8	1	14	2.6	252	4.8	197	1.2	173
2012	8	1	15	2.2	257	4.2	212	1.0	193
2012	8	1	16	2.6	254	4.6	219	1.1	224
2012	8	1	17	2.8	269	4.0	217	1.4	242
2012	8	1	18	1.8	248	3.9	216	1.7	254
2012	8	1	19	2.3	264	3.2	224	1.9	268
2012	8	1	20	2.5	277	2.6	230	2.1	255
2012	8	1	21	1.5	252	2.7	229	2.1	262
2012	8	1	22	0.9	279	2.7	248	2.2	275
2012	8	1	23	1.1	262	2.6	232	2.0	289

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	2	0	1.2	258	3.0	239	1.5	311
2012	8	2	1	1.5	253	1.0	336	1.9	304
2012	8	2	2	1.6	244	1.3	311	2.0	298
2012	8	2	3	0.7	250	0.7	82	1.3	281
2012	8	2	4	0.4	330	0.8	356	0.5	282
2012	8	2	5	1.3	248	0.7	36	0.6	337
2012	8	2	6	0.8	243	0.9	116	0.8	25
2012	8	2	7	1.5	247	0.8	157	0.5	116
2012	8	2	8	2.4	267	0.8	129	0.4	183
2012	8	2	9	1.9	176	0.8	125	0.5	178
2012	8	2	10	3.7	100	1.4	172	0.6	189
2012	8	2	11	4.0	101	2.0	175	0.6	203
2012	8	2	12	2.6	97	3.2	172	0.7	210
2012	8	2	13	1.5	272	2.4	152	0.9	201
2012	8	2	14	2.6	267	1.8	206	0.8	210
2012	8	2	15	2.5	268	4.4	213	0.5	113
2012	8	2	16	2.9	263	5.0	206	1.0	254
2012	8	2	17	3.1	248	4.3	212	0.7	262
2012	8	2	18	2.6	250	3.9	211	1.0	253
2012	8	2	19	2.3	263	1.7	207	0.9	251
2012	8	2	20	2.5	261	1.8	164	0.7	250
2012	8	2	21	2.6	266	3.1	194	0.4	257
2012	8	2	22	2.9	256	2.4	215	0.5	285
2012	8	2	23	3.1	258	1.9	189	0.9	293
2012	8	3	0	3.0	257	2.8	214	0.7	264
2012	8	3	1	2.5	253	2.5	214	0.5	244
2012	8	3	2	2.7	251	1.1	281	0.6	6
2012	8	3	3	2.4	258	1.2	239	0.6	277
2012	8	3	4	2.6	258	1.9	219	0.5	259
2012	8	3	5	2.9	238	1.2	161	0.5	312
2012	8	3	6	2.7	230	1.1	187	0.3	244
2012	8	3	7	0.6	259	1.7	163	0.3	241
2012	8	3	8	0.8	208	2.6	151	0.3	248
2012	8	3	9	1.0	238	2.4	143	0.4	201
2012	8	3	10	1.2	175	2.6	146	1.0	133
2012	8	3	11	1.8	106	2.4	150	1.7	135
2012	8	3	12	1.9	81	2.4	155	2.0	127
2012	8	3	13	3.9	94	4.2	207	1.3	127
2012	8	3	14	4.7	90	5.1	224	1.1	152
2012	8	3	15	3.1	253	4.9	223	1.0	253
2012	8	3	16	2.4	233	4.3	216	1.8	270
2012	8	3	17	1.5	191	4.0	221	1.7	271
2012	8	3	18	1.5	136	4.8	221	2.0	269
2012	8	3	19	1.6	90	3.9	212	1.4	265
2012	8	3	20	4.0	93	2.6	205	1.3	261
2012	8	3	21	1.9	78	2.3	204	0.9	261
2012	8	3	22	0.9	98	0.9	65	0.7	269
2012	8	3	23	2.0	248	1.1	77	0.6	267

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	4	0	2.3	180	1.2	140	1.5	282
2012	8	4	1	1.5	118	0.7	110	1.5	278
2012	8	4	2	2.5	247	0.9	345	1.3	251
2012	8	4	3	1.4	237	0.9	265	1.4	280
2012	8	4	4	0.9	238	0.9	63	1.1	282
2012	8	4	5	0.6	85	0.8	15	1.3	281
2012	8	4	6	1.2	88	0.6	320	1.9	276
2012	8	4	7	0.4	77	0.8	81	1.0	271
2012	8	4	8	0.9	264	0.9	139	0.8	248
2012	8	4	9	1.7	286	1.3	116	1.5	245
2012	8	4	10	2.4	99	0.9	153	2.0	248
2012	8	4	11	2.4	184	2.1	187	1.7	254
2012	8	4	12	2.9	100	3.3	191	1.5	229
2012	8	4	13	3.8	99	3.8	197	1.1	235
2012	8	4	14	4.3	98	3.6	211	1.3	207
2012	8	4	15	4.5	96	3.7	214	1.6	228
2012	8	4	16	5.2	96	4.0	227	1.8	245
2012	8	4	17	6.2	99	3.4	219	2.4	254
2012	8	4	18	5.0	102	3.3	223	2.3	251
2012	8	4	19	4.7	101	3.6	217	2.1	261
2012	8	4	20	5.8	101	2.9	222	2.3	266
2012	8	4	21	2.9	90	1.1	260	2.1	278
2012	8	4	22	2.3	86	1.7	255	2.4	285
2012	8	4	23	3.2	96	1.8	287	2.1	281
2012	8	5	0	5.4	108	0.9	29	1.7	279
2012	8	5	1	3.4	119	1.1	355	0.8	244
2012	8	5	2	2.3	90	1.4	357	1.1	268
2012	8	5	3	2.8	97	1.4	14	1.1	261
2012	8	5	4	2.4	96	1.3	354	0.8	307
2012	8	5	5	2.9	104	1.0	354	0.8	272
2012	8	5	6	3.4	97	0.7	32	0.7	346
2012	8	5	7	4.3	100	0.9	69	0.5	352
2012	8	5	8	5.6	97	1.1	127	0.7	160
2012	8	5	9	6.5	95	2.0	173	0.9	210
2012	8	5	10	6.4	95	1.7	150	0.8	193
2012	8	5	11	6.3	95	2.7	156	1.0	165
2012	8	5	12	6.4	96	2.7	164	1.2	207
2012	8	5	13	6.3	100	2.7	161	1.0	202
2012	8	5	14	5.6	99	3.3	175	1.3	216
2012	8	5	15	6.5	99	2.5	212	1.2	228
2012	8	5	16	6.0	99	3.8	231	2.2	243
2012	8	5	17	5.6	101	3.9	222	2.3	249
2012	8	5	18	5.5	100	3.6	212	2.7	249
2012	8	5	19	4.2	104	3.9	218	2.2	267
2012	8	5	20	2.6	114	2.7	220	2.1	269
2012	8	5	21	2.7	114	2.3	228	2.3	267
2012	8	5	22	2.6	100	1.9	241	2.1	279
2012	8	5	23	2.9	104	1.5	289	1.8	271

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	6	0	3.3	98	1.2	16	1.3	266
2012	8	6	1	3.5	116	1.4	346	1.5	275
2012	8	6	2	3.5	102	1.3	349	1.1	289
2012	8	6	3	3.1	96	1.0	314	1.0	12
2012	8	6	4	4.4	109	0.7	339	0.8	19
2012	8	6	5	3.5	99	0.8	35	0.6	325
2012	8	6	6	5.6	103	0.6	200	1.2	11
2012	8	6	7	6.3	100	0.8	74	0.3	101
2012	8	6	8	6.2	100	0.9	104	0.4	233
2012	8	6	9	6.9	101	1.3	138	0.7	198
2012	8	6	10	9.1	99	1.9	167	1.0	207
2012	8	6	11	8.1	97	2.0	153	0.9	201
2012	8	6	12	7.7	95	2.2	171	0.9	204
2012	8	6	13	7.1	99	3.0	176	1.1	204
2012	8	6	14	6.8	98	3.6	179	1.3	194
2012	8	6	15	6.7	95	3.5	190	1.5	217
2012	8	6	16	6.3	100	3.3	199	1.2	211
2012	8	6	17	5.0	108	2.4	211	1.6	240
2012	8	6	18	5.1	108	1.9	213	1.7	263
2012	8	6	19	3.9	113	0.9	211	2.0	269
2012	8	6	20	3.4	109	2.0	235	2.4	275
2012	8	6	21	2.9	111	1.2	7	2.1	276
2012	8	6	22	2.6	105	1.3	350	2.3	302
2012	8	6	23	1.8	93	1.3	4	2.4	303
2012	8	7	0	3.3	100	1.4	356	1.9	316
2012	8	7	1	4.7	101	1.5	263	1.7	335
2012	8	7	2	2.5	94	1.3	350	1.7	341
2012	8	7	3	3.2	115	1.2	334	0.9	5
2012	8	7	4	4.5	114	1.5	333	1.2	319
2012	8	7	5	5.5	101	2.0	335	1.1	315
2012	8	7	6	1.5	100	0.9	208	1.7	349
2012	8	7	7	3.8	105	0.6	30	0.9	150
2012	8	7	8	6.3	99	0.9	56	0.3	246
2012	8	7	9	6.2	95	1.3	152	0.4	212
2012	8	7	10	7.0	93	1.7	181	0.8	209
2012	8	7	11	7.6	90	1.7	164	0.6	201
2012	8	7	12	7.7	94	1.8	148	1.3	135
2012	8	7	13	7.3	94	1.5	152	2.4	125
2012	8	7	14	7.8	93	2.3	185	2.7	120
2012	8	7	15	8.0	90	1.7	206	1.8	114
2012	8	7	16	5.9	103	2.3	206	1.0	232
2012	8	7	17	5.3	112	2.8	217	1.5	258
2012	8	7	18	4.6	117	2.8	218	1.4	261
2012	8	7	19	4.5	126	1.6	231	2.0	273
2012	8	7	20	4.9	125	1.1	24	2.0	277
2012	8	7	21	4.7	112	1.7	2	2.0	281
2012	8	7	22	4.7	110	1.1	16	1.5	287
2012	8	7	23	4.8	106	0.7	335	1.0	265

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	8	0	4.5	117	1.4	337	1.3	302
2012	8	8	1	4.9	110	0.6	20	1.6	351
2012	8	8	2	4.9	106	0.4	91	1.1	6
2012	8	8	3	5.3	105	0.6	87	0.7	332
2012	8	8	4	5.8	113	0.8	41	0.4	112
2012	8	8	5	5.8	102	0.9	31	0.5	349
2012	8	8	6	4.2	103	0.8	178	0.7	81
2012	8	8	7	3.2	134	0.7	360	0.5	59
2012	8	8	8	1.6	276	1.1	185	0.5	146
2012	8	8	9	1.5	270	1.9	193	0.8	197
2012	8	8	10	1.2	251	2.1	156	0.6	206
2012	8	8	11	2.1	278	3.3	175	1.0	188
2012	8	8	12	2.2	275	3.8	203	1.6	125
2012	8	8	13	4.6	104	4.3	208	1.5	154
2012	8	8	14	4.8	82	5.0	222	1.0	220
2012	8	8	15	7.5	86	3.0	204	2.1	256
2012	8	8	16	6.7	97	3.5	203	2.0	292
2012	8	8	17	7.1	96	3.3	197	1.1	338
2012	8	8	18	6.5	97	3.3	179	0.6	221
2012	8	8	19	8.1	85	2.9	182	1.6	148
2012	8	8	20	4.8	94	2.5	209	3.3	113
2012	8	8	21	2.5	315	4.4	208	3.3	118
2012	8	8	22	3.5	306	4.4	206	3.3	120
2012	8	8	23	3.1	293	4.4	208	1.4	193
2012	8	9	0	1.9	134	4.3	206	1.6	295
2012	8	9	1	2.5	286	4.1	203	1.9	297
2012	8	9	2	2.4	310	3.8	203	1.7	291
2012	8	9	3	1.2	315	3.3	194	1.1	263
2012	8	9	4	0.9	69	2.4	206	0.7	276
2012	8	9	5	1.9	281	2.2	200	0.5	21
2012	8	9	6	1.4	13	1.7	205	0.4	69
2012	8	9	7	1.2	136	1.2	179	0.6	67
2012	8	9	8	6.2	95	1.8	194	0.8	142
2012	8	9	9	7.1	91	2.0	195	1.1	145
2012	8	9	10	7.8	92	1.4	162	1.6	133
2012	8	9	11	7.0	90	1.5	161	0.9	178
2012	8	9	12	4.6	97	1.5	145	1.3	157
2012	8	9	13	2.3	79	1.6	167	1.0	196
2012	8	9	14	2.4	103	2.1	197	0.8	253
2012	8	9	15	2.7	305	2.3	194	0.9	259
2012	8	9	16	3.3	283	2.1	204	1.3	251
2012	8	9	17	3.0	283	3.4	194	0.8	286
2012	8	9	18	2.8	286	3.8	210	0.8	275
2012	8	9	19	1.8	274	4.6	221	1.3	239
2012	8	9	20	1.1	239	3.9	210	1.1	279
2012	8	9	21	0.6	263	2.5	212	0.9	357
2012	8	9	22	1.1	253	1.7	224	1.2	294
2012	8	9	23	1.0	306	1.9	246	1.0	272

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	10	0	0.8	255	1.2	245	0.5	239
2012	8	10	1	0.5	281	2.3	206	0.8	297
2012	8	10	2	0.9	251	2.6	190	0.3	262
2012	8	10	3	0.4	231	3.3	193	0.3	108
2012	8	10	4	0.4	214	1.6	196	0.2	158
2012	8	10	5	0.8	104	0.9	68	0.5	14
2012	8	10	6	1.3	82	1.0	145	0.5	288
2012	8	10	7	2.1	94	0.8	87	0.5	329
2012	8	10	8	1.2	94	1.3	131	0.6	243
2012	8	10	9	1.7	94	1.2	96	0.7	271
2012	8	10	10	1.7	228	1.6	66	0.7	272
2012	8	10	11	2.3	253	1.0	155	0.7	175
2012	8	10	12	2.8	236	3.5	204	1.1	274
2012	8	10	13	2.3	251	4.5	209	0.5	273
2012	8	10	14	2.1	233	4.8	204	1.0	233
2012	8	10	15	2.5	241	4.9	201	1.3	239
2012	8	10	16	2.7	246	4.4	214	1.2	213
2012	8	10	17	2.4	252	4.3	221	1.2	268
2012	8	10	18	1.9	251	3.3	227	1.0	257
2012	8	10	19	1.9	204	2.1	237	1.6	248
2012	8	10	20	3.1	105	1.2	245	1.7	303
2012	8	10	21	2.6	100	1.6	281	1.6	317
2012	8	10	22	2.3	109	0.8	78	1.7	301
2012	8	10	23	3.8	112	0.7	162	1.4	293
2012	8	11	0	4.4	110	1.2	245	1.1	276
2012	8	11	1	5.2	111	1.1	339	1.0	281
2012	8	11	2	5.7	104	1.1	355	1.3	310
2012	8	11	3	5.5	105	1.2	360	1.3	353
2012	8	11	4	7.6	102	1.6	1	1.7	7
2012	8	11	5	8.0	103	1.5	11	1.0	356
2012	8	11	6	7.9	105	0.6	37	1.3	351
2012	8	11	7	7.8	105	0.3	199	0.8	9
2012	8	11	8	7.6	101	0.6	186	0.7	12
2012	8	11	9	8.0	100	0.4	134	0.5	199
2012	8	11	10	8.8	95	0.7	115	0.3	189
2012	8	11	11	8.6	88	0.7	168	0.4	195
2012	8	11	12	8.9	90	0.8	157	0.3	184
2012	8	11	13	8.5	96	1.2	186	0.5	197
2012	8	11	14	8.2	94	0.8	156	0.6	198
2012	8	11	15	6.8	98	0.8	147	0.7	217
2012	8	11	16	6.6	100	0.9	188	0.7	232
2012	8	11	17	5.5	102	0.7	193	1.0	228
2012	8	11	18	5.4	98	0.7	3	0.8	239
2012	8	11	19	5.3	101	0.9	1	0.7	259
2012	8	11	20	4.5	101	0.6	3	0.7	282
2012	8	11	21	3.1	111	1.1	224	1.0	288
2012	8	11	22	4.2	105	1.2	349	1.0	306
2012	8	11	23	6.1	98	0.8	335	1.0	328

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	12	0	4.7	99	1.1	0	1.4	347
2012	8	12	1	5.1	102	0.7	313	1.6	9
2012	8	12	2	5.4	104	0.5	27	1.3	342
2012	8	12	3	4.6	99	0.4	192	1.5	359
2012	8	12	4	3.7	120	0.6	44	1.4	9
2012	8	12	5	1.0	239	0.6	213	1.2	10
2012	8	12	6	1.5	86	0.8	27	0.7	341
2012	8	12	7	0.4	140	0.7	119	0.5	323
2012	8	12	8	0.8	231	0.7	63	0.3	220
2012	8	12	9	1.1	244	1.0	110	0.7	245
2012	8	12	10	3.9	95	1.4	148	0.5	207
2012	8	12	11	6.0	92	1.4	155	1.1	218
2012	8	12	12	3.4	109	1.7	181	1.1	196
2012	8	12	13	2.0	265	1.6	180	1.0	235
2012	8	12	14	1.5	278	2.8	206	1.2	261
2012	8	12	15	1.4	286	3.0	210	1.1	245
2012	8	12	16	1.7	254	3.3	208	1.9	253
2012	8	12	17	2.2	277	3.6	223	1.9	259
2012	8	12	18	1.6	261	3.2	220	2.2	251
2012	8	12	19	1.7	296	4.4	218	2.2	256
2012	8	12	20	1.2	217	2.8	230	2.2	257
2012	8	12	21	1.0	88	2.2	240	1.7	269
2012	8	12	22	1.2	94	1.0	299	1.8	293
2012	8	12	23	1.3	89	1.0	345	2.1	299
2012	8	13	0	1.0	92	0.9	25	1.9	304
2012	8	13	1	0.6	83	0.9	336	1.6	319
2012	8	13	2	1.4	92	0.7	11	1.1	337
2012	8	13	3	3.5	103	1.3	1	0.9	5
2012	8	13	4	7.1	96	0.6	303	0.9	300
2012	8	13	5	5.8	100	0.5	238	1.2	345
2012	8	13	6	5.4	101	0.6	231	0.6	299
2012	8	13	7	5.9	99	0.5	215	0.7	293
2012	8	13	8	7.0	98	0.6	14	0.0	296
2012	8	13	9	6.6	101	0.5	235	0.1	3
2012	8	13	10	6.0	94	0.5	79	0.4	264
2012	8	13	11	5.7	94	0.5	91	0.5	239
2012	8	13	12	6.2	89	0.3	92	0.6	269
2012	8	13	13	6.1	89	1.1	176	0.8	251
2012	8	13	14	3.8	101	0.9	178	0.6	211
2012	8	13	15	1.3	274	1.2	189	0.3	219
2012	8	13	16	0.8	310	0.6	144	0.5	268
2012	8	13	17	0.6	282	0.5	248	0.6	248
2012	8	13	18	0.7	283	0.4	283	0.8	254
2012	8	13	19	0.6	303	0.5	314	1.0	295
2012	8	13	20	0.9	273	0.9	336	1.1	310
2012	8	13	21	0.5	294	2.1	346	1.3	327
2012	8	13	22	1.6	92	2.1	335	1.8	310
2012	8	13	23	1.3	84	2.2	325	2.0	324

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	14	0	0.8	119	1.4	321	2.3	337
2012	8	14	1	1.4	93	1.0	294	2.2	351
2012	8	14	2	1.5	46	1.9	345	2.6	360
2012	8	14	3	1.0	121	1.0	9	2.7	2
2012	8	14	4	1.2	87	1.4	332	3.0	355
2012	8	14	5	3.4	99	1.7	337	3.4	348
2012	8	14	6	5.9	104	2.9	1	3.1	346
2012	8	14	7	5.4	136	2.7	9	1.9	350
2012	8	14	8	5.4	90	1.0	54	1.0	316
2012	8	14	9	4.8	102	1.5	24	0.8	306
2012	8	14	10	5.3	97	1.2	46	0.6	284
2012	8	14	11	4.4	117	1.1	170	0.7	207
2012	8	14	12	6.2	95	1.6	174	0.9	203
2012	8	14	13	6.4	92	1.5	139	0.8	208
2012	8	14	14	5.9	94	1.7	158	0.9	170
2012	8	14	15	5.3	99	1.8	179	1.7	123
2012	8	14	16	5.0	102	1.9	195	1.4	135
2012	8	14	17	4.7	105	1.5	203	1.6	129
2012	8	14	18	4.7	108	1.3	215	2.0	120
2012	8	14	19	5.0	107	0.7	155	0.9	132
2012	8	14	20	4.8	109	1.1	4	1.0	264
2012	8	14	21	4.6	105	0.9	11	1.2	289
2012	8	14	22	3.1	87	1.2	4	1.0	283
2012	8	14	23	2.9	89	1.0	351	0.7	287
2012	8	15	0	2.9	88	0.8	360	1.4	350
2012	8	15	1	3.2	88	0.7	27	1.5	355
2012	8	15	2	3.0	89	0.5	47	1.1	353
2012	8	15	3	3.1	87	0.6	15	0.8	360
2012	8	15	4	3.5	88	1.0	327	1.4	358
2012	8	15	5	3.3	87	0.5	187	1.5	345
2012	8	15	6	4.0	89	0.4	66	1.3	11
2012	8	15	7	3.9	87	0.6	142	1.3	6
2012	8	15	8	4.3	100	0.8	85	0.4	239
2012	8	15	9	5.4	99	1.0	161	0.6	222
2012	8	15	10	5.6	99	1.4	176	0.8	192
2012	8	15	11	4.5	103	2.2	166	0.9	217
2012	8	15	12	4.5	100	2.0	162	0.9	161
2012	8	15	13	4.2	98	2.6	166	1.0	183
2012	8	15	14	3.1	115	3.4	188	1.2	217
2012	8	15	15	3.3	258	4.2	209	1.3	229
2012	8	15	16	2.5	243	3.5	219	1.4	251
2012	8	15	17	2.4	239	2.4	238	2.1	240
2012	8	15	18	2.7	278	2.2	262	2.3	252
2012	8	15	19	2.0	262	1.9	291	2.6	257
2012	8	15	20	1.1	264	1.2	343	2.3	261
2012	8	15	21	0.4	315	1.2	353	2.1	274
2012	8	15	22	0.6	290	1.2	351	2.3	295
2012	8	15	23	2.0	230	1.2	353	2.5	309

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	16	0	2.0	261	1.1	356	3.1	317
2012	8	16	1	2.9	216	1.3	327	3.1	312
2012	8	16	2	1.7	245	1.0	217	2.7	315
2012	8	16	3	1.0	259	1.1	140	1.8	325
2012	8	16	4	0.7	308	1.4	56	1.1	359
2012	8	16	5	0.7	111	1.1	239	1.0	10
2012	8	16	6	1.1	84	0.3	105	0.9	15
2012	8	16	7	0.8	108	0.8	54	1.2	335
2012	8	16	8	0.6	33	1.0	84	0.5	262
2012	8	16	9	1.5	268	1.3	114	0.8	260
2012	8	16	10	2.5	268	1.4	156	1.0	219
2012	8	16	11	2.9	261	2.0	179	1.0	228
2012	8	16	12	2.8	233	2.7	164	1.1	223
2012	8	16	13	3.0	235	3.8	186	0.9	204
2012	8	16	14	2.8	236	4.7	194	0.9	223
2012	8	16	15	3.1	231	4.7	209	1.0	213
2012	8	16	16	2.6	233	4.1	212	1.2	260
2012	8	16	17	2.5	234	2.8	216	1.7	245
2012	8	16	18	2.2	240	1.8	245	2.4	239
2012	8	16	19	1.9	233	1.6	266	2.4	247
2012	8	16	20	2.9	93	1.4	243	1.9	264
2012	8	16	21	3.5	90	1.0	10	2.1	282
2012	8	16	22	3.3	89	1.3	3	2.4	300
2012	8	16	23	2.9	87	1.1	25	2.1	294
2012	8	17	0	3.2	93	0.9	19	2.0	315
2012	8	17	1	3.1	98	0.9	22	1.7	318
2012	8	17	2	5.5	103	0.8	21	1.6	350
2012	8	17	3	6.1	102	0.6	352	1.8	2
2012	8	17	4	6.6	102	0.5	174	1.5	353
2012	8	17	5	7.0	104	0.4	114	1.2	357
2012	8	17	6	7.6	106	0.5	94	1.5	340
2012	8	17	7	7.1	101	0.7	55	0.9	12
2012	8	17	8	6.2	97	0.9	130	0.5	179
2012	8	17	9	8.7	96	1.1	163	0.6	194
2012	8	17	10	9.3	93	1.9	173	0.7	195
2012	8	17	11	8.5	95	1.7	169	0.7	198
2012	8	17	12	7.2	102	1.8	165	1.0	193
2012	8	17	13	6.8	101	2.2	166	1.5	136
2012	8	17	14	6.0	98	1.8	168	1.1	186
2012	8	17	15	6.0	99	2.3	166	1.4	138
2012	8	17	16	6.5	94	3.6	201	0.9	189
2012	8	17	17	6.2	102	3.7	211	0.8	167
2012	8	17	18	5.7	100	3.7	214	1.3	248
2012	8	17	19	5.3	93	3.8	214	1.5	264
2012	8	17	20	5.6	100	4.1	205	1.7	284
2012	8	17	21	6.2	103	3.9	205	1.4	284
2012	8	17	22	3.8	86	3.9	213	1.6	282
2012	8	17	23	1.9	77	3.9	226	1.2	293

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	18	0	6.8	96	3.4	214	0.5	296
2012	8	18	1	4.7	95	2.9	214	0.8	280
2012	8	18	2	1.8	108	1.9	222	0.6	254
2012	8	18	3	5.4	106	1.0	323	0.4	80
2012	8	18	4	6.2	108	0.8	196	0.5	110
2012	8	18	5	3.6	109	1.1	152	0.7	71
2012	8	18	6	5.1	108	1.0	165	0.7	278
2012	8	18	7	6.2	101	1.0	103	0.3	267
2012	8	18	8	6.8	92	1.0	103	0.2	202
2012	8	18	9	6.3	99	1.7	175	0.6	203
2012	8	18	10	6.6	96	1.8	171	0.9	212
2012	8	18	11	6.4	99	2.3	159	1.0	223
2012	8	18	12	5.2	100	2.2	166	0.6	231
2012	8	18	13	5.0	98	2.2	181	1.0	240
2012	8	18	14	4.9	98	2.5	202	1.6	252
2012	8	18	15	4.3	97	3.2	196	1.6	261
2012	8	18	16	2.9	103	3.0	215	1.7	265
2012	8	18	17	1.9	101	2.8	220	2.1	258
2012	8	18	18	2.3	95	1.5	233	2.5	257
2012	8	18	19	3.1	88	1.4	18	2.2	274
2012	8	18	20	3.7	93	1.1	1	2.4	315
2012	8	18	21	3.0	80	1.6	6	2.3	317
2012	8	18	22	2.7	89	0.8	354	2.2	298
2012	8	18	23	3.3	89	1.2	347	2.3	330
2012	8	19	0	4.7	107	0.9	37	1.9	347
2012	8	19	1	4.6	104	1.3	8	1.8	351
2012	8	19	2	3.9	104	1.4	353	2.0	346
2012	8	19	3	2.7	84	0.8	309	1.9	357
2012	8	19	4	3.0	90	1.4	261	2.3	1
2012	8	19	5	3.9	88	0.8	315	1.9	1
2012	8	19	6	3.7	92	0.7	206	1.8	4
2012	8	19	7	4.9	105	0.7	92	1.1	5
2012	8	19	8	4.0	97	0.8	122	0.5	275
2012	8	19	9	4.6	97	1.0	90	0.7	230
2012	8	19	10	5.5	94	1.5	139	1.0	214
2012	8	19	11	4.7	94	2.2	171	1.2	223
2012	8	19	12	4.1	99	3.1	166	1.3	242
2012	8	19	13	4.2	97	3.3	180	1.0	217
2012	8	19	14	3.9	97	3.6	228	1.2	213
2012	8	19	15	2.1	180	3.8	235	1.5	251
2012	8	19	16	2.0	199	3.7	230	2.1	246
2012	8	19	17	2.1	120	4.1	226	2.2	248
2012	8	19	18	2.5	287	4.0	233	2.6	248
2012	8	19	19	2.1	290	2.0	257	2.3	260
2012	8	19	20	0.6	358	1.3	318	1.9	264
2012	8	19	21	0.5	24	1.2	353	2.0	280
2012	8	19	22	1.0	116	1.6	205	2.7	288
2012	8	19	23	2.0	90	3.1	232	2.4	305

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	20	0	2.6	88	1.6	248	1.4	291
2012	8	20	1	1.3	87	1.1	271	2.1	295
2012	8	20	2	0.6	312	1.1	348	2.3	306
2012	8	20	3	1.4	252	1.0	36	2.5	306
2012	8	20	4	0.7	297	0.8	34	1.7	288
2012	8	20	5	1.3	232	1.1	41	0.7	303
2012	8	20	6	1.3	249	0.7	87	1.0	294
2012	8	20	7	1.4	226	0.8	132	0.9	280
2012	8	20	8	1.6	267	1.0	90	0.8	241
2012	8	20	9	1.0	282	1.4	117	1.7	230
2012	8	20	10	1.7	282	1.7	118	1.5	229
2012	8	20	11	2.2	258	3.3	183	1.7	229
2012	8	20	12	2.8	264	3.8	193	1.4	229
2012	8	20	13	2.9	254	4.1	205	1.5	232
2012	8	20	14	3.1	258	5.3	203	1.5	250
2012	8	20	15	3.6	252	6.8	200	2.0	250
2012	8	20	16	3.3	277	6.6	207	2.7	253
2012	8	20	17	3.0	276	5.6	212	3.2	252
2012	8	20	18	3.2	280	4.5	215	3.4	254
2012	8	20	19	1.9	275	4.9	216	2.9	260
2012	8	20	20	1.0	272	4.4	221	2.9	265
2012	8	20	21	1.0	269	3.8	227	2.9	264
2012	8	20	22	1.0	270	2.0	239	2.8	267
2012	8	20	23	1.4	263	1.8	218	2.5	280
2012	8	21	0	1.1	263	1.4	250	1.9	268
2012	8	21	1	0.4	285	0.6	288	1.4	267
2012	8	21	2	1.1	271	0.8	352	1.2	287
2012	8	21	3	1.1	252	0.7	266	1.1	282
2012	8	21	4	0.7	244	0.9	29	0.9	268
2012	8	21	5	0.6	276	0.8	347	0.5	274
2012	8	21	6	0.6	86	0.5	1	0.5	237
2012	8	21	7	1.1	293	0.4	106	1.0	245
2012	8	21	8	1.2	291	0.8	142	0.8	228
2012	8	21	9	2.1	258	1.3	102	1.2	238
2012	8	21	10	2.6	182	1.4	159	1.1	243
2012	8	21	11	2.5	142	2.3	206	0.9	220
2012	8	21	12	2.5	142	3.4	191	1.2	226
2012	8	21	13	2.3	137	4.0	192	1.4	250
2012	8	21	14	2.5	114	5.1	201	1.6	248
2012	8	21	15	3.6	92	5.9	210	2.0	254
2012	8	21	16	2.3	262	5.7	214	2.8	249
2012	8	21	17	1.8	266	5.9	212	2.4	256
2012	8	21	18	1.4	271	6.1	213	2.4	260
2012	8	21	19	1.2	277	4.4	223	2.7	257
2012	8	21	20	1.2	278	4.0	222	2.6	263
2012	8	21	21	1.5	292	4.3	219	2.2	259
2012	8	21	22	2.6	59	3.6	216	2.2	259
2012	8	21	23	3.4	112	2.1	225	1.8	267

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	22	0	1.6	110	2.9	219	1.7	262
2012	8	22	1	1.2	176	2.9	217	1.5	265
2012	8	22	2	1.7	137	2.3	224	1.0	254
2012	8	22	3	2.2	107	1.7	220	1.0	256
2012	8	22	4	2.2	298	2.6	206	0.4	67
2012	8	22	5	1.9	284	2.4	209	0.3	355
2012	8	22	6	1.7	267	1.0	227	0.1	56
2012	8	22	7	2.0	265	1.2	183	0.5	311
2012	8	22	8	1.8	264	1.3	211	0.4	266
2012	8	22	9	2.1	285	1.2	181	0.3	66
2012	8	22	10	2.3	252	2.2	179	0.9	8
2012	8	22	11	2.6	265	4.4	199	1.0	82
2012	8	22	12	3.0	254	3.9	191	1.7	110
2012	8	22	13	2.9	263	4.5	205	0.9	209
2012	8	22	14	3.4	284	4.8	208	1.6	123
2012	8	22	15	3.8	281	5.1	212	1.1	186
2012	8	22	16	2.8	246	4.5	214	1.1	181
2012	8	22	17	2.9	272	5.5	209	2.4	117
2012	8	22	18	3.3	293	6.3	215	1.1	193
2012	8	22	19	2.5	284	5.7	211	1.3	227
2012	8	22	20	2.3	266	4.3	217	1.5	244
2012	8	22	21	2.3	270	2.3	225	2.2	257
2012	8	22	22	2.1	267	2.3	249	2.2	256
2012	8	22	23	2.6	281	2.1	238	1.2	247
2012	8	23	0	2.7	282	1.6	259	0.7	286
2012	8	23	1	2.6	272	1.5	240	0.8	253
2012	8	23	2	2.5	285	1.0	268	0.6	257
2012	8	23	3	2.9	278	1.1	251	0.4	299
2012	8	23	4	2.7	281	1.5	226	0.4	50
2012	8	23	5	2.7	286	1.8	210	0.5	324
2012	8	23	6	2.9	282	1.6	199	0.8	74
2012	8	23	7	3.9	288	1.0	242	1.2	112
2012	8	23	8	3.9	284	1.6	184	1.6	117
2012	8	23	9	4.3	286	2.4	186	1.7	114
2012	8	23	10	4.4	285	1.5	182	2.0	119
2012	8	23	11	4.7	290	1.8	203	2.0	109
2012	8	23	12	4.7	280	2.4	212	1.4	110
2012	8	23	13	4.8	277	2.2	222	0.4	125
2012	8	23	14	4.8	276	1.9	240	0.6	143
2012	8	23	15	4.1	273	2.0	239	0.5	203
2012	8	23	16	3.7	270	2.7	231	0.9	214
2012	8	23	17	3.8	271	3.2	231	0.9	230
2012	8	23	18	3.4	274	2.9	230	0.6	223
2012	8	23	19	2.3	269	1.5	240	1.0	228
2012	8	23	20	2.8	269	2.3	232	0.9	229
2012	8	23	21	2.8	269	0.6	275	0.8	89
2012	8	23	22	2.3	244	0.9	3	0.7	38
2012	8	23	23	2.3	280	0.9	203	0.5	4

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	24	0	2.5	271	0.7	199	0.4	276
2012	8	24	1	2.3	272	1.2	270	0.3	40
2012	8	24	2	2.5	274	0.6	83	0.2	147
2012	8	24	3	2.4	285	0.5	174	0.6	91
2012	8	24	4	2.5	281	0.6	218	0.7	70
2012	8	24	5	2.3	264	0.3	140	0.9	66
2012	8	24	6	2.0	277	0.7	158	1.2	75
2012	8	24	7	2.4	278	0.8	136	1.0	80
2012	8	24	8	2.3	264	1.2	167	1.1	101
2012	8	24	9	1.9	237	1.7	170	1.1	105
2012	8	24	10	1.8	276	1.9	150	1.4	113
2012	8	24	11	1.9	270	2.9	167	1.2	152
2012	8	24	12	1.7	278	2.9	166	1.3	143
2012	8	24	13	2.5	277	3.1	189	1.4	124
2012	8	24	14	4.0	97	2.3	164	1.2	137
2012	8	24	15	2.9	328	1.7	155	1.3	120
2012	8	24	16	1.1	272	1.5	148	1.1	122
2012	8	24	17	1.1	86	1.7	170	1.5	109
2012	8	24	18	0.7	284	2.1	182	1.5	109
2012	8	24	19	3.2	95	2.3	211	1.1	80
2012	8	24	20	2.0	113	0.9	325	0.6	68
2012	8	24	21	0.9	282	0.7	247	0.5	356
2012	8	24	22	1.0	279	0.6	245	0.5	263
2012	8	24	23	0.3	223	1.0	238	0.8	288
2012	8	25	0	0.7	275	1.3	232	0.8	261
2012	8	25	1	0.5	250	1.0	8	0.7	233
2012	8	25	2	1.0	187	0.9	25	0.7	261
2012	8	25	3	2.8	112	0.8	333	0.7	266
2012	8	25	4	2.8	109	0.5	7	0.5	262
2012	8	25	5	2.2	125	0.8	16	0.3	288
2012	8	25	6	1.9	120	1.2	21	0.0	180
2012	8	25	7	6.0	103	0.6	44	0.6	11
2012	8	25	8	7.1	100	1.0	76	0.4	41
2012	8	25	9	6.3	98	1.2	125	0.4	172
2012	8	25	10	8.3	98	1.5	167	0.9	211
2012	8	25	11	8.2	98	1.8	150	0.9	187
2012	8	25	12	8.1	98	1.7	134	1.7	118
2012	8	25	13	7.8	96	2.0	133	3.2	109
2012	8	25	14	6.3	97	1.8	121	2.4	119
2012	8	25	15	5.6	94	1.5	136	1.6	137
2012	8	25	16	5.0	96	1.3	147	2.0	114
2012	8	25	17	4.6	96	1.2	209	1.2	135
2012	8	25	18	3.8	101	0.4	60	1.0	140
2012	8	25	19	3.0	111	0.6	83	0.5	253
2012	8	25	20	3.4	106	1.3	327	0.6	305
2012	8	25	21	4.8	98	1.1	349	0.8	287
2012	8	25	22	3.6	98	1.0	336	0.8	271
2012	8	25	23	2.0	113	1.5	334	1.4	345

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	26	0	4.6	102	1.2	358	2.0	359
2012	8	26	1	3.8	118	1.2	358	1.8	4
2012	8	26	2	4.8	111	0.8	323	2.0	9
2012	8	26	3	5.6	96	1.6	6	1.8	7
2012	8	26	4	6.8	94	1.2	334	1.9	10
2012	8	26	5	6.8	88	1.4	347	1.9	8
2012	8	26	6	6.4	91	0.9	345	2.0	3
2012	8	26	7	7.5	92	0.5	241	1.7	4
2012	8	26	8	7.3	96	1.1	26	1.1	9
2012	8	26	9	6.9	99	1.3	49	0.6	273
2012	8	26	10	7.1	101	1.1	113	0.9	237
2012	8	26	11	8.0	97	1.4	138	0.8	197
2012	8	26	12	8.2	95	1.7	174	0.8	206
2012	8	26	13	7.2	85	2.0	172	0.8	195
2012	8	26	14	6.9	99	2.0	173	0.9	182
2012	8	26	15	6.2	96	2.1	193	1.1	137
2012	8	26	16	6.0	96	2.2	207	1.1	182
2012	8	26	17	4.2	106	2.0	229	0.9	199
2012	8	26	18	3.7	101	1.1	325	1.0	223
2012	8	26	19	3.9	107	0.8	53	1.4	267
2012	8	26	20	3.9	99	1.7	337	1.6	285
2012	8	26	21	3.9	88	0.8	39	1.8	292
2012	8	26	22	3.8	83	0.8	2	1.5	329
2012	8	26	23	3.7	90	1.2	344	2.0	349
2012	8	27	0	3.4	90	0.9	94	2.1	351
2012	8	27	1	3.4	87	0.6	49	2.3	5
2012	8	27	2	3.7	89	0.7	264	2.3	358
2012	8	27	3	2.9	88	0.7	196	2.2	3
2012	8	27	4	2.8	85	1.2	343	1.8	351
2012	8	27	5	3.1	86	1.0	218	2.0	1
2012	8	27	6	2.7	87	0.5	24	1.9	12
2012	8	27	7	1.0	96	0.6	48	1.2	8
2012	8	27	8	1.5	236	0.8	74	0.9	303
2012	8	27	9	2.4	262	1.1	139	0.8	212
2012	8	27	10	3.0	269	2.4	159	0.7	197
2012	8	27	11	3.2	268	4.1	186	1.2	153
2012	8	27	12	3.6	294	5.7	196	1.5	125
2012	8	27	13	4.6	287	6.2	206	1.2	178
2012	8	27	14	5.3	297	7.6	206	1.5	220
2012	8	27	15	4.2	292	6.8	208	2.9	249
2012	8	27	16	3.8	291	7.2	202	3.6	245
2012	8	27	17	2.9	268	6.5	202	4.6	247
2012	8	27	18	2.5	280	5.9	199	3.6	255
2012	8	27	19	2.0	271	5.6	202	3.0	257
2012	8	27	20	1.3	258	4.5	216	1.9	263
2012	8	27	21	1.5	267	4.3	206	1.2	93
2012	8	27	22	1.8	281	4.0	193	1.9	119
2012	8	27	23	2.9	277	3.5	192	2.2	121

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	28	0	2.7	285	3.8	198	2.0	114
2012	8	28	1	2.1	106	4.2	206	2.2	108
2012	8	28	2	4.2	105	4.3	209	0.9	105
2012	8	28	3	1.7	17	3.6	204	1.3	123
2012	8	28	4	1.0	346	3.2	208	2.0	126
2012	8	28	5	1.2	104	2.4	210	2.6	124
2012	8	28	6	4.4	103	1.9	197	2.0	129
2012	8	28	7	4.9	106	1.9	194	2.3	129
2012	8	28	8	5.9	92	1.3	178	1.8	135
2012	8	28	9	6.2	94	1.3	168	1.7	127
2012	8	28	10	6.7	91	1.3	201	2.7	117
2012	8	28	11	6.9	89	1.4	183	2.8	118
2012	8	28	12	6.6	92	1.8	158	3.1	115
2012	8	28	13	5.6	102	1.4	146	3.1	113
2012	8	28	14	6.1	96	1.4	167	2.6	113
2012	8	28	15	5.1	97	1.9	175	2.4	117
2012	8	28	16	2.8	104	2.5	178	2.4	121
2012	8	28	17	4.1	100	2.1	165	2.1	124
2012	8	28	18	2.9	104	2.5	192	1.8	127
2012	8	28	19	5.4	104	3.0	205	0.8	153
2012	8	28	20	6.3	104	2.5	195	0.6	144
2012	8	28	21	7.5	94	2.6	206	0.5	160
2012	8	28	22	6.3	91	2.5	192	1.2	117
2012	8	28	23	5.4	107	1.6	195	1.7	127
2012	8	29	0	4.9	98	0.9	174	1.1	139
2012	8	29	1	4.9	102	1.3	216	1.8	124
2012	8	29	2	5.8	104	0.6	181	1.9	110
2012	8	29	3	4.2	97	0.7	265	1.4	101
2012	8	29	4	1.8	272	0.6	210	1.4	103
2012	8	29	5	1.9	102	0.8	199	1.1	136
2012	8	29	6	3.3	110	1.1	241	1.2	260
2012	8	29	7	4.5	102	0.8	99	1.2	353
2012	8	29	8	3.9	97	0.7	247	1.0	6
2012	8	29	9	4.4	93	0.5	59	1.6	16
2012	8	29	10	2.7	98	0.5	52	1.4	21
2012	8	29	11	1.6	249	1.2	162	0.7	17
2012	8	29	12	1.7	273	1.5	168	0.5	157
2012	8	29	13	2.3	265	0.9	154	0.7	248
2012	8	29	14	2.8	271	1.4	191	1.1	239
2012	8	29	15	2.7	266	1.0	212	1.2	234
2012	8	29	16	2.7	254	1.2	185	1.1	270
2012	8	29	17	2.3	277	1.1	331	0.9	250
2012	8	29	18	1.6	282	0.7	257	1.0	280
2012	8	29	19	1.5	276	0.6	311	0.8	264
2012	8	29	20	1.5	266	0.7	20	0.7	255
2012	8	29	21	0.7	272	0.8	262	0.5	247
2012	8	29	22	1.9	279	0.7	323	0.7	298
2012	8	29	23	2.2	271	0.7	226	1.3	321

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	8	30	0	1.8	269	0.3	306	1.4	1
2012	8	30	1	1.1	279	0.9	290	0.9	17
2012	8	30	2	1.4	277	0.9	290	1.4	317
2012	8	30	3	1.7	262	0.8	236	1.9	345
2012	8	30	4	1.4	253	0.9	221	1.9	359
2012	8	30	5	0.5	143	1.0	321	2.0	345
2012	8	30	6	0.8	228	0.6	245	2.2	358
2012	8	30	7	0.7	286	0.7	80	1.6	345
2012	8	30	8	0.4	12	0.9	99	1.1	8
2012	8	30	9	1.3	261	0.8	151	0.4	28
2012	8	30	10	1.6	277	0.8	127	0.5	195
2012	8	30	11	2.3	100	1.0	143	0.8	196
2012	8	30	12	2.7	97	1.2	172	1.0	194
2012	8	30	13	2.2	78	1.0	90	1.0	202
2012	8	30	14	2.5	273	1.2	190	1.0	219
2012	8	30	15	2.3	272	1.3	208	1.1	230
2012	8	30	16	2.0	256	0.5	236	1.2	244
2012	8	30	17	2.0	264	0.8	243	1.6	262
2012	8	30	18	1.6	255	0.8	13	1.5	280
2012	8	30	19	1.3	256	1.0	334	0.7	251
2012	8	30	20	1.4	264	1.2	15	0.6	222
2012	8	30	21	0.9	262	0.9	10	0.9	29
2012	8	30	22	0.9	273	1.0	353	0.7	314
2012	8	30	23	1.3	257	0.9	3	0.6	290
2012	8	31	0	0.8	256	1.0	348	0.8	270
2012	8	31	1	0.7	295	0.8	27	0.8	337
2012	8	31	2	1.6	253	0.9	358	1.3	354
2012	8	31	3	1.5	250	0.9	238	1.4	350
2012	8	31	4	0.9	278	0.2	258	1.3	10
2012	8	31	5	0.5	280	0.6	251	1.4	18
2012	8	31	6	0.5	272	0.5	81	0.7	21
2012	8	31	7	1.6	259	0.7	119	0.7	23
2012	8	31	8	2.1	245	0.7	85	0.5	144
2012	8	31	9	1.0	154	1.1	107	0.7	164
2012	8	31	10	1.5	256	1.6	142	0.7	172
2012	8	31	11	2.7	252	2.0	118	1.0	191
2012	8	31	12	4.4	274	1.8	125	1.0	182
2012	8	31	13	4.0	263	2.1	158	1.2	154
2012	8	31	14	4.1	269	3.1	169	1.3	156
2012	8	31	15	3.5	234	5.3	200	1.1	169
2012	8	31	16	3.6	252	5.2	208	1.0	195
2012	8	31	17	3.9	274	5.3	212	1.3	211
2012	8	31	18	3.2	275	4.0	222	1.0	215
2012	8	31	19	2.6	272	2.6	239	1.0	217
2012	8	31	20	1.8	253	2.4	241	1.1	260
2012	8	31	21	1.9	258	2.1	250	1.4	273
2012	8	31	22	0.7	300	1.6	254	1.2	260
2012	8	31	23	0.4	101	1.8	261	1.5	269

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	1	0	1.3	98	1.0	332	1.2	281
2012	9	1	1	1.8	92	1.0	5	1.0	273
2012	9	1	2	1.0	93	1.3	3	0.9	268
2012	9	1	3	0.5	88	1.5	12	0.6	263
2012	9	1	4	0.9	99	1.1	354	0.7	324
2012	9	1	5	1.8	95	1.0	29	1.0	18
2012	9	1	6	2.0	113	0.8	68	0.2	280
2012	9	1	7	2.1	104	0.9	71	0.3	37
2012	9	1	8	5.1	93	1.2	84	0.2	52
2012	9	1	9	5.7	97	1.7	150	0.4	196
2012	9	1	10	6.0	97	3.3	175	0.7	167
2012	9	1	11	7.0	93	3.4	174	1.8	126
2012	9	1	12	6.6	94	2.9	158	1.1	186
2012	9	1	13	6.4	98	4.0	180	1.2	154
2012	9	1	14	5.5	100	4.1	191	1.2	200
2012	9	1	15	3.9	103	4.4	198	1.2	207
2012	9	1	16	4.3	290	4.0	199	1.5	218
2012	9	1	17	3.3	278	3.5	200	1.2	231
2012	9	1	18	2.4	271	3.9	201	2.0	254
2012	9	1	19	1.7	269	4.4	198	1.9	256
2012	9	1	20	1.4	260	3.8	213	1.8	251
2012	9	1	21	1.3	250	3.9	204	1.9	254
2012	9	1	22	1.1	243	2.7	219	1.7	264
2012	9	1	23	1.2	266	2.8	216	1.5	260
2012	9	2	0	1.0	290	3.0	211	0.9	270
2012	9	2	1	1.2	301	2.4	208	0.6	229
2012	9	2	2	1.2	301	2.6	188	1.5	90
2012	9	2	3	1.0	145	1.2	197	1.7	102
2012	9	2	4	1.1	302	1.4	174	2.0	90
2012	9	2	5	1.3	295	1.0	184	2.0	108
2012	9	2	6	0.9	47	1.4	185	1.2	101
2012	9	2	7	1.9	243	1.1	100	1.2	115
2012	9	2	8	4.2	296	1.3	162	0.5	130
2012	9	2	9	3.6	301	3.0	212	0.9	146
2012	9	2	10	4.8	298	5.4	225	0.8	168
2012	9	2	11	4.1	304	6.9	235	1.8	251
2012	9	2	12	5.2	298	7.2	229	2.3	254
2012	9	2	13	4.9	294	7.3	232	2.8	248
2012	9	2	14	5.1	293	6.7	230	2.2	253
2012	9	2	15	5.6	289	7.0	225	2.6	252
2012	9	2	16	5.5	296	6.5	231	2.8	243
2012	9	2	17	2.7	286	4.3	239	2.4	233
2012	9	2	18	2.9	283	4.3	242	2.3	249
2012	9	2	19	2.7	283	3.6	225	2.1	265
2012	9	2	20	2.3	271	4.6	215	2.2	268
2012	9	2	21	2.4	255	3.8	216	2.2	261
2012	9	2	22	2.0	254	2.8	206	2.2	263
2012	9	2	23	1.2	224	2.1	197	1.8	271

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	3	0	1.5	98	1.9	189	1.0	260
2012	9	3	1	1.3	246	1.3	194	0.5	252
2012	9	3	2	2.5	254	1.2	196	0.4	287
2012	9	3	3	2.1	250	0.8	152	0.9	84
2012	9	3	4	2.4	254	0.6	156	0.8	65
2012	9	3	5	2.9	251	0.4	127	1.2	68
2012	9	3	6	2.1	250	0.5	177	1.1	72
2012	9	3	7	2.0	257	0.5	176	0.8	83
2012	9	3	8	1.8	240	1.1	153	0.8	90
2012	9	3	9	1.8	233	0.9	139	1.3	105
2012	9	3	10	2.5	266	0.7	163	1.3	119
2012	9	3	11	2.2	257	0.4	170	1.3	121
2012	9	3	12	1.9	245	1.0	172	1.0	109
2012	9	3	13	2.1	265	1.0	136	0.9	122
2012	9	3	14	2.6	268	0.6	140	0.8	126
2012	9	3	15	2.6	261	0.4	148	0.7	120
2012	9	3	16	3.1	271	0.5	181	0.3	172
2012	9	3	17	3.3	267	0.6	177	0.3	189
2012	9	3	18	2.6	260	0.5	258	0.2	229
2012	9	3	19	2.5	262	1.2	220	0.1	346
2012	9	3	20	2.4	243	1.5	221	0.1	100
2012	9	3	21	1.6	242	1.8	209	0.5	330
2012	9	3	22	2.2	258	1.6	228	0.3	38
2012	9	3	23	1.5	221	2.0	195	0.6	102
2012	9	4	0	1.0	106	2.4	176	1.3	85
2012	9	4	1	4.1	99	2.7	173	1.6	131
2012	9	4	2	5.7	101	2.2	163	1.9	115
2012	9	4	3	5.4	103	2.0	159	2.6	115
2012	9	4	4	5.1	103	1.8	159	2.7	116
2012	9	4	5	6.8	99	2.1	158	2.5	112
2012	9	4	6	3.6	102	1.7	159	2.8	116
2012	9	4	7	3.2	107	2.2	172	3.0	120
2012	9	4	8	2.3	258	1.8	159	3.2	111
2012	9	4	9	1.6	93	1.4	167	2.2	126
2012	9	4	10	3.1	279	2.1	150	3.1	112
2012	9	4	11	3.8	282	2.0	138	2.1	118
2012	9	4	12	4.1	291	2.4	191	1.8	130
2012	9	4	13	3.5	292	1.9	163	1.2	147
2012	9	4	14	4.1	278	2.7	208	1.3	97
2012	9	4	15	3.8	295	2.8	209	0.9	123
2012	9	4	16	3.4	281	3.6	200	1.0	185
2012	9	4	17	4.6	285	5.1	240	1.8	234
2012	9	4	18	3.1	267	5.1	250	2.3	242
2012	9	4	19	3.4	280	2.0	290	1.9	257
2012	9	4	20	2.8	278	1.8	280	1.5	272
2012	9	4	21	2.3	270	1.6	348	2.0	271
2012	9	4	22	2.4	271	1.4	296	2.1	284
2012	9	4	23	2.2	277	1.0	355	2.0	305

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	5	0	2.3	291	1.0	360	2.0	298
2012	9	5	1	2.4	284	1.0	1	2.0	291
2012	9	5	2	3.7	280	1.2	296	2.4	299
2012	9	5	3	3.2	270	0.9	302	2.4	302
2012	9	5	4	3.6	245	1.3	354	2.0	312
2012	9	5	5	3.2	254	1.0	315	2.1	309
2012	9	5	6	3.5	251	0.5	27	1.7	298
2012	9	5	7	3.6	245	0.8	64	1.8	297
2012	9	5	8	3.3	252	1.9	33	1.7	286
2012	9	5	9	3.0	247	1.3	56	0.9	228
2012	9	5	10	3.1	268	1.0	69	0.9	233
2012	9	5	11	3.2	262	2.2	171	1.6	233
2012	9	5	12	3.8	247	3.2	183	1.6	233
2012	9	5	13	4.1	269	3.0	189	1.5	236
2012	9	5	14	4.4	269	3.4	199	1.3	250
2012	9	5	15	4.6	267	4.1	223	1.8	253
2012	9	5	16	4.1	266	3.3	230	2.1	241
2012	9	5	17	3.1	247	3.0	236	1.6	252
2012	9	5	18	2.6	258	1.6	241	1.9	244
2012	9	5	19	2.0	262	1.5	252	1.9	250
2012	9	5	20	1.7	276	1.1	360	1.6	251
2012	9	5	21	3.0	246	1.4	299	1.1	267
2012	9	5	22	2.3	255	1.2	60	0.6	252
2012	9	5	23	2.1	257	1.0	166	0.5	245
2012	9	6	0	2.2	254	1.0	144	0.2	120
2012	9	6	1	2.6	253	0.8	198	0.6	99
2012	9	6	2	3.2	250	0.8	153	0.8	113
2012	9	6	3	2.7	265	0.7	215	0.8	83
2012	9	6	4	2.7	257	0.5	202	1.1	65
2012	9	6	5	3.5	261	0.6	219	0.8	72
2012	9	6	6	3.8	276	0.6	240	0.7	77
2012	9	6	7	2.5	280	0.7	230	0.9	54
2012	9	6	8	3.6	288	1.0	158	0.5	240
2012	9	6	9	2.8	270	1.4	112	0.2	283
2012	9	6	10	3.1	250	2.8	200	1.0	284
2012	9	6	11	3.9	266	4.1	199	1.1	239
2012	9	6	12	3.3	271	5.3	203	1.8	238
2012	9	6	13	4.0	275	5.9	219	2.0	258
2012	9	6	14	4.7	274	6.2	214	2.5	260
2012	9	6	15	5.1	274	6.1	213	2.9	257
2012	9	6	16	4.7	269	5.4	226	3.0	258
2012	9	6	17	5.1	276	4.3	225	2.8	261
2012	9	6	18	3.9	270	4.2	227	2.5	264
2012	9	6	19	2.7	271	2.9	237	2.7	271
2012	9	6	20	2.8	253	1.8	236	2.5	274
2012	9	6	21	2.6	255	1.6	275	2.6	274
2012	9	6	22	2.3	251	1.1	10	3.1	285
2012	9	6	23	2.3	251	1.5	329	2.8	302

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	7	0	2.0	264	2.4	355	3.2	308
2012	9	7	1	2.5	242	2.1	343	3.2	313
2012	9	7	2	1.5	256	2.4	348	2.5	313
2012	9	7	3	1.0	110	2.1	337	2.5	338
2012	9	7	4	1.2	98	2.3	352	2.6	341
2012	9	7	5	2.5	92	1.5	325	2.4	356
2012	9	7	6	3.8	119	1.2	348	2.5	358
2012	9	7	7	5.0	108	0.9	10	1.9	352
2012	9	7	8	5.7	104	0.7	88	1.4	10
2012	9	7	9	5.1	101	1.2	71	0.4	59
2012	9	7	10	5.7	101	1.4	112	0.7	214
2012	9	7	11	3.9	104	1.4	135	1.0	214
2012	9	7	12	3.1	120	1.8	112	1.0	184
2012	9	7	13	4.9	102	2.2	118	1.0	182
2012	9	7	14	3.1	104	2.6	144	1.1	164
2012	9	7	15	2.1	240	2.4	167	0.9	155
2012	9	7	16	3.5	268	2.2	170	0.8	185
2012	9	7	17	1.9	257	2.9	197	0.9	142
2012	9	7	18	1.4	254	3.6	201	0.6	191
2012	9	7	19	1.9	284	3.2	204	0.8	267
2012	9	7	20	1.3	254	2.1	222	1.0	266
2012	9	7	21	1.7	110	3.7	223	1.4	294
2012	9	7	22	1.2	191	3.7	215	1.1	18
2012	9	7	23	2.8	94	3.1	202	0.8	43
2012	9	8	0	3.6	100	1.8	193	0.5	238
2012	9	8	1	2.9	102	1.3	198	0.7	79
2012	9	8	2	2.2	90	1.4	207	1.3	96
2012	9	8	3	3.8	96	1.3	216	0.6	317
2012	9	8	4	4.2	99	1.6	229	1.6	77
2012	9	8	5	3.7	88	1.7	232	1.2	29
2012	9	8	6	7.0	105	1.8	217	1.4	55
2012	9	8	7	7.8	101	1.5	220	1.2	15
2012	9	8	8	9.5	95	1.3	210	0.4	91
2012	9	8	9	8.7	98	1.3	177	0.5	111
2012	9	8	10	9.1	97	1.6	166	0.8	201
2012	9	8	11	8.6	105	1.3	172	0.7	133
2012	9	8	12	7.4	111	1.0	183	0.9	133
2012	9	8	13	8.2	105	1.6	143	0.9	136
2012	9	8	14	7.0	95	2.1	175	1.7	115
2012	9	8	15	6.6	94	1.7	173	1.9	103
2012	9	8	16	6.4	94	2.4	180	1.8	110
2012	9	8	17	8.1	86	3.6	191	1.6	127
2012	9	8	18	7.9	99	4.6	207	1.3	147
2012	9	8	19	7.0	103	4.4	198	2.7	113
2012	9	8	20	7.8	107	4.6	205	3.1	112
2012	9	8	21	7.3	111	4.3	211	3.6	109
2012	9	8	22	8.2	106	4.4	206	3.2	116
2012	9	8	23	8.6	107	4.3	205	3.8	110

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	9	0	9.1	107	3.1	178	4.5	105
2012	9	9	1	8.1	112	2.9	182	4.6	107
2012	9	9	2	6.4	108	2.3	187	3.8	110
2012	9	9	3	2.2	323	1.9	181	3.4	115
2012	9	9	4	4.0	296	1.9	166	3.5	124
2012	9	9	5	3.6	288	2.9	198	3.8	107
2012	9	9	6	3.0	282	5.0	217	3.2	116
2012	9	9	7	1.5	257	3.9	215	2.5	249
2012	9	9	8	1.6	290	4.0	189	1.9	266
2012	9	9	9	3.1	37	4.3	203	1.8	276
2012	9	9	10	3.6	292	3.9	215	0.9	146
2012	9	9	11	1.8	282	4.3	209	2.9	124
2012	9	9	12	2.2	288	3.9	194	3.3	121
2012	9	9	13	3.1	113	5.6	195	2.8	122
2012	9	9	14	5.2	110	5.3	199	3.2	121
2012	9	9	15	7.4	91	4.0	202	3.8	118
2012	9	9	16	7.4	100	4.4	202	2.4	130
2012	9	9	17	5.9	96	4.6	206	3.8	123
2012	9	9	18	5.9	12	4.8	200	4.4	122
2012	9	9	19	4.1	308	4.1	216	4.0	126
2012	9	9	20	1.9	109	2.9	211	3.9	119
2012	9	9	21	3.3	280	2.0	176	2.4	175
2012	9	9	22	1.6	246	1.2	225	1.2	288
2012	9	9	23	2.0	107	0.8	205	1.5	91
2012	9	10	0	1.4	28	1.9	190	1.6	118
2012	9	10	1	1.7	277	1.1	178	2.0	118
2012	9	10	2	1.8	303	1.3	177	2.4	106
2012	9	10	3	2.6	293	1.3	186	2.2	122
2012	9	10	4	2.4	272	1.9	167	2.0	114
2012	9	10	5	1.8	252	1.4	153	2.3	121
2012	9	10	6	1.5	249	1.0	171	2.7	123
2012	9	10	7	1.9	243	1.1	159	2.6	123
2012	9	10	8	1.4	258	1.6	163	2.6	121
2012	9	10	9	2.1	254	2.3	186	1.3	140
2012	9	10	10	2.3	264	2.7	174	1.3	132
2012	9	10	11	2.0	277	2.5	173	1.0	150
2012	9	10	12	2.3	264	3.4	194	1.1	147
2012	9	10	13	2.4	278	3.5	203	1.1	150
2012	9	10	14	3.1	282	4.0	199	1.2	148
2012	9	10	15	3.2	281	4.5	223	0.9	191
2012	9	10	16	3.5	282	4.5	216	1.3	222
2012	9	10	17	2.7	297	4.5	219	2.3	247
2012	9	10	18	2.1	283	4.4	221	2.1	252
2012	9	10	19	2.7	272	4.2	212	1.9	261
2012	9	10	20	2.5	284	4.2	207	1.2	262
2012	9	10	21	2.4	251	3.7	209	1.0	246
2012	9	10	22	2.2	280	3.6	201	0.6	270
2012	9	10	23	1.6	246	1.6	227	1.0	81

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	11	0	1.7	259	0.7	264	0.5	230
2012	9	11	1	2.6	263	1.8	182	1.5	68
2012	9	11	2	1.7	269	1.7	202	1.5	109
2012	9	11	3	2.1	302	1.6	178	1.9	101
2012	9	11	4	2.3	280	3.5	199	1.9	115
2012	9	11	5	1.9	247	3.3	201	2.1	111
2012	9	11	6	2.5	253	2.3	172	2.2	121
2012	9	11	7	2.1	268	1.4	146	1.8	125
2012	9	11	8	1.5	259	0.9	131	2.0	118
2012	9	11	9	2.2	263	0.6	121	2.3	122
2012	9	11	10	2.6	262	1.2	161	1.7	121
2012	9	11	11	2.5	271	2.1	159	0.8	130
2012	9	11	12	3.6	292	2.6	161	0.8	163
2012	9	11	13	3.9	286	2.8	175	0.7	169
2012	9	11	14	3.3	272	2.9	191	0.7	195
2012	9	11	15	2.1	260	3.1	193	0.5	268
2012	9	11	16	0.6	274	2.1	176	0.4	245
2012	9	11	17	1.4	118	2.4	180	0.4	211
2012	9	11	18	3.4	92	2.5	184	0.7	144
2012	9	11	19	3.7	88	2.2	186	1.0	128
2012	9	11	20	3.1	84	2.0	186	2.2	121
2012	9	11	21	5.1	86	2.0	178	1.7	125
2012	9	11	22	7.6	91	1.5	170	2.3	118
2012	9	11	23	7.7	97	1.5	168	2.7	119
2012	9	12	0	7.4	100	1.4	166	2.6	107
2012	9	12	1	7.3	99	1.8	193	2.8	115
2012	9	12	2	8.0	99	1.8	184	4.0	118
2012	9	12	3	8.6	101	1.7	179	4.4	117
2012	9	12	4	8.5	98	2.0	173	4.0	121
2012	9	12	5	9.1	97	2.4	177	4.0	123
2012	9	12	6	9.1	91	2.5	172	3.2	128
2012	9	12	7	8.9	92	2.7	164	4.1	125
2012	9	12	8	8.6	95	2.4	165	4.4	123
2012	9	12	9	8.3	98	2.3	186	4.1	123
2012	9	12	10	8.0	104	2.3	177	3.1	126
2012	9	12	11	7.6	108	2.1	163	3.6	126
2012	9	12	12	7.5	107	1.7	162	4.1	120
2012	9	12	13	6.9	105	1.5	158	3.2	128
2012	9	12	14	4.8	105	1.4	142	3.0	125
2012	9	12	15	6.8	103	1.7	157	0.7	143
2012	9	12	16	7.3	103	1.7	161	0.4	217
2012	9	12	17	7.5	103	1.1	148	0.8	273
2012	9	12	18	7.5	107	1.2	168	0.4	318
2012	9	12	19	7.7	104	1.0	224	0.5	132
2012	9	12	20	6.5	103	1.2	202	1.2	138
2012	9	12	21	4.8	106	1.3	217	2.9	127
2012	9	12	22	5.1	111	1.7	196	3.9	120
2012	9	12	23	6.1	109	1.7	203	3.8	126

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	13	0	7.0	108	2.0	172	4.4	123
2012	9	13	1	6.9	108	1.8	177	4.0	129
2012	9	13	2	7.4	104	1.7	173	3.6	132
2012	9	13	3	7.0	107	1.5	188	4.6	121
2012	9	13	4	5.7	104	1.3	204	4.0	125
2012	9	13	5	8.1	102	1.3	183	4.7	121
2012	9	13	6	7.7	103	1.2	195	4.8	120
2012	9	13	7	8.2	103	1.8	203	4.7	121
2012	9	13	8	8.0	96	1.6	203	5.2	120
2012	9	13	9	8.7	98	1.7	194	5.2	117
2012	9	13	10	10.0	94	1.7	193	4.9	115
2012	9	13	11	10.7	87	1.7	177	5.4	116
2012	9	13	12	10.7	91	1.8	210	5.6	119
2012	9	13	13	9.7	94	2.5	149	4.1	126
2012	9	13	14	10.0	103	2.3	159	4.0	124
2012	9	13	15	9.0	102	2.3	175	4.5	119
2012	9	13	16	10.7	88	2.0	186	3.7	122
2012	9	13	17	12.2	88	1.8	172	3.1	133
2012	9	13	18	11.7	88	2.0	167	4.1	117
2012	9	13	19	8.9	97	3.4	142	4.3	118
2012	9	13	20	6.2	120	4.3	154	4.7	109
2012	9	13	21	6.4	125	6.0	209	5.9	109
2012	9	13	22	5.7	131	5.4	201	4.1	130
2012	9	13	23	4.8	272	4.2	208	2.2	134
2012	9	14	0	5.6	266	4.1	213	1.9	91
2012	9	14	1	4.5	280	5.2	230	1.7	3
2012	9	14	2	6.6	284	3.5	217	1.5	355
2012	9	14	3	6.7	294	2.0	196	0.9	266
2012	9	14	4	6.0	294	3.1	217	0.9	25
2012	9	14	5	7.7	290	3.9	217	0.9	32
2012	9	14	6	6.3	300	3.3	216	0.8	49
2012	9	14	7	2.8	291	2.0	210	1.5	77
2012	9	14	8	3.7	264	2.1	203	1.2	126
2012	9	14	9	3.7	262	2.8	196	1.3	106
2012	9	14	10	3.9	269	3.2	186	1.6	125
2012	9	14	11	3.9	276	4.0	204	1.7	101
2012	9	14	12	3.3	268	5.6	213	1.3	130
2012	9	14	13	3.4	272	5.8	222	1.5	145
2012	9	14	14	4.2	278	5.0	222	1.3	245
2012	9	14	15	3.3	282	4.0	223	1.8	259
2012	9	14	16	3.5	275	3.3	216	1.8	248
2012	9	14	17	2.7	284	1.5	240	1.8	241
2012	9	14	18	1.9	272	3.2	222	2.1	253
2012	9	14	19	1.1	255	2.3	238	2.1	266
2012	9	14	20	1.7	260	1.1	215	1.8	270
2012	9	14	21	1.6	260	1.1	283	1.1	260
2012	9	14	22	1.6	269	1.0	328	1.2	275
2012	9	14	23	1.2	254	0.9	32	1.8	321

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	15	0	1.2	272	1.1	311	2.1	309
2012	9	15	1	1.3	246	0.7	53	2.0	306
2012	9	15	2	1.3	272	0.9	90	1.6	317
2012	9	15	3	1.2	270	1.2	316	1.3	323
2012	9	15	4	1.5	232	0.9	186	1.6	339
2012	9	15	5	1.1	264	1.6	310	1.3	327
2012	9	15	6	1.0	270	0.5	314	1.0	351
2012	9	15	7	1.0	290	0.8	214	1.0	344
2012	9	15	8	0.8	195	0.7	115	0.5	237
2012	9	15	9	1.4	248	0.8	101	0.4	159
2012	9	15	10	1.9	259	1.0	87	0.7	215
2012	9	15	11	2.1	259	1.1	113	1.0	207
2012	9	15	12	2.6	269	1.0	117	0.8	221
2012	9	15	13	2.7	252	1.2	105	0.8	250
2012	9	15	14	3.0	259	1.4	122	0.8	235
2012	9	15	15	3.1	261	1.4	147	0.9	190
2012	9	15	16	3.3	263	1.4	179	0.8	215
2012	9	15	17	2.5	280	1.8	221	0.8	226
2012	9	15	18	1.8	247	1.3	332	0.4	227
2012	9	15	19	0.4	236	1.1	343	0.4	290
2012	9	15	20	0.9	178	1.3	125	0.8	266
2012	9	15	21	0.8	87	1.2	17	1.1	295
2012	9	15	22	0.9	116	1.7	348	1.5	328
2012	9	15	23	2.2	92	0.9	253	1.8	342
2012	9	16	0	2.5	111	0.8	16	1.8	0
2012	9	16	1	2.1	91	1.0	301	1.6	354
2012	9	16	2	3.2	90	0.7	140	1.0	346
2012	9	16	3	2.6	87	0.7	335	1.8	0
2012	9	16	4	3.0	88	0.9	223	2.0	3
2012	9	16	5	3.0	87	1.7	2	1.9	9
2012	9	16	6	3.6	89	1.0	10	1.9	4
2012	9	16	7	4.1	88	1.0	203	1.7	8
2012	9	16	8	3.6	91	0.5	93	0.6	14
2012	9	16	9	3.8	98	1.0	73	0.5	244
2012	9	16	10	2.2	115	1.2	98	0.5	187
2012	9	16	11	2.0	251	1.2	121	0.9	208
2012	9	16	12	2.6	265	1.7	170	0.9	197
2012	9	16	13	3.2	269	1.7	142	0.9	156
2012	9	16	14	3.6	268	1.8	116	0.8	183
2012	9	16	15	3.6	254	1.3	107	0.9	174
2012	9	16	16	3.2	250	0.8	112	0.8	185
2012	9	16	17	3.1	241	0.9	136	0.6	155
2012	9	16	18	3.4	226	0.9	58	0.4	197
2012	9	16	19	3.0	225	0.8	49	0.3	231
2012	9	16	20	1.2	102	1.1	12	0.5	284
2012	9	16	21	1.2	80	1.0	360	1.7	12
2012	9	16	22	3.2	88	0.4	0	2.1	8
2012	9	16	23	3.6	88	0.7	190	2.3	8

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	17	0	2.3	86	0.5	127	2.0	13
2012	9	17	1	3.5	88	0.8	2	1.9	358
2012	9	17	2	4.0	88	0.6	227	1.8	358
2012	9	17	3	4.2	89	0.9	2	1.1	333
2012	9	17	4	3.8	87	0.7	11	1.3	351
2012	9	17	5	3.3	86	1.0	26	1.2	16
2012	9	17	6	2.9	80	0.6	62	1.4	11
2012	9	17	7	2.7	83	0.5	105	1.1	18
2012	9	17	8	1.7	94	0.8	135	0.5	36
2012	9	17	9	3.9	79	1.2	186	0.6	191
2012	9	17	10	2.5	87	1.6	159	0.7	193
2012	9	17	11	2.1	292	1.2	181	0.7	185
2012	9	17	12	2.0	78	1.9	207	1.1	166
2012	9	17	13	2.3	273	1.0	157	0.6	223
2012	9	17	14	6.1	98	1.0	127	0.9	198
2012	9	17	15	2.6	78	0.9	118	0.9	253
2012	9	17	16	3.5	311	1.3	98	1.0	248
2012	9	17	17	2.5	257	2.7	173	1.1	251
2012	9	17	18	3.4	232	0.9	73	0.8	279
2012	9	17	19	2.8	260	0.8	357	1.0	348
2012	9	17	20	2.6	257	1.2	333	0.9	17
2012	9	17	21	2.0	271	0.8	142	0.8	358
2012	9	17	22	2.0	247	1.0	340	0.5	252
2012	9	17	23	2.0	257	0.7	5	1.1	300
2012	9	18	0	2.4	240	1.6	17	1.0	269
2012	9	18	1	2.3	257	1.0	297	1.4	298
2012	9	18	2	2.4	253	0.9	340	1.3	349
2012	9	18	3	2.3	273	1.2	283	0.6	246
2012	9	18	4	2.4	254	1.9	346	1.3	8
2012	9	18	5	1.6	248	1.7	320	1.9	339
2012	9	18	6	1.1	116	1.1	342	1.8	339
2012	9	18	7	0.7	74	1.6	345	1.3	323
2012	9	18	8	2.2	94	1.2	59	0.8	270
2012	9	18	9	4.8	101	1.2	86	0.2	233
2012	9	18	10	5.4	101	1.2	113	0.5	280
2012	9	18	11	3.6	103	1.0	118	0.6	292
2012	9	18	12	4.0	107	1.9	119	0.4	156
2012	9	18	13	1.5	260	1.4	105	0.8	202
2012	9	18	14	1.9	260	1.5	117	0.9	150
2012	9	18	15	1.7	264	1.1	169	0.9	220
2012	9	18	16	1.6	261	1.2	205	1.1	246
2012	9	18	17	1.9	271	1.1	188	1.0	240
2012	9	18	18	2.7	260	0.8	120	1.0	230
2012	9	18	19	0.9	287	0.6	114	0.8	258
2012	9	18	20	1.7	93	0.7	81	0.6	250
2012	9	18	21	1.1	107	1.1	10	0.7	307
2012	9	18	22	2.7	90	0.8	279	1.8	5
2012	9	18	23	4.0	89	1.1	324	2.1	6

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	19	0	3.5	89	0.5	251	1.2	3
2012	9	19	1	3.7	87	0.4	151	1.9	5
2012	9	19	2	2.3	85	1.3	353	1.1	346
2012	9	19	3	1.8	257	2.1	357	1.1	348
2012	9	19	4	2.4	168	0.9	353	2.0	4
2012	9	19	5	0.8	84	1.2	303	1.2	6
2012	9	19	6	1.0	241	1.9	359	1.4	346
2012	9	19	7	1.2	286	1.9	23	2.0	1
2012	9	19	8	1.0	248	0.7	65	1.2	349
2012	9	19	9	0.8	242	0.8	140	0.5	295
2012	9	19	10	2.1	263	1.0	112	0.6	226
2012	9	19	11	3.0	258	0.8	148	0.8	215
2012	9	19	12	3.0	266	1.1	189	0.9	199
2012	9	19	13	3.7	261	0.8	174	0.8	213
2012	9	19	14	4.1	266	0.7	146	0.9	242
2012	9	19	15	4.1	264	1.0	192	1.3	252
2012	9	19	16	3.3	254	0.8	192	0.8	227
2012	9	19	17	2.6	232	1.5	232	0.7	224
2012	9	19	18	1.5	255	1.0	74	0.9	266
2012	9	19	19	1.7	256	0.9	38	0.6	269
2012	9	19	20	1.0	271	1.4	342	0.6	253
2012	9	19	21	0.8	260	1.5	350	1.0	301
2012	9	19	22	1.7	263	1.3	309	2.0	351
2012	9	19	23	1.3	114	0.8	325	2.1	346
2012	9	20	0	1.6	245	1.0	301	1.8	344
2012	9	20	1	1.0	251	1.4	201	1.6	7
2012	9	20	2	2.9	90	1.1	20	1.3	16
2012	9	20	3	3.3	90	1.4	235	1.9	352
2012	9	20	4	4.5	89	0.8	73	2.3	6
2012	9	20	5	4.8	92	1.1	236	1.4	345
2012	9	20	6	6.5	103	1.2	318	2.3	6
2012	9	20	7	6.4	102	0.6	30	1.8	360
2012	9	20	8	5.9	100	1.0	13	1.5	328
2012	9	20	9	5.3	107	0.7	59	1.1	317
2012	9	20	10	6.2	106	1.0	167	0.5	245
2012	9	20	11	6.2	106	1.0	189	0.8	214
2012	9	20	12	5.4	101	1.1	155	0.8	207
2012	9	20	13	5.3	101	1.0	138	0.8	212
2012	9	20	14	4.7	105	1.0	151	0.7	217
2012	9	20	15	4.5	113	1.1	170	1.0	211
2012	9	20	16	4.7	125	1.1	196	0.7	197
2012	9	20	17	4.2	117	1.6	212	0.6	199
2012	9	20	18	4.7	104	1.6	207	0.4	224
2012	9	20	19	4.4	93	1.3	182	0.6	337
2012	9	20	20	3.8	91	0.6	41	1.0	72
2012	9	20	21	2.8	93	1.3	349	0.6	54
2012	9	20	22	3.5	91	1.2	0	0.7	10
2012	9	20	23	3.9	84	1.8	9	0.8	351

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	21	0	4.7	98	1.0	222	1.3	357
2012	9	21	1	5.4	101	0.7	154	0.7	349
2012	9	21	2	5.2	104	0.8	352	0.6	1
2012	9	21	3	4.2	95	1.2	356	1.1	349
2012	9	21	4	4.8	96	0.5	26	1.0	343
2012	9	21	5	4.4	99	0.9	351	1.0	350
2012	9	21	6	5.2	102	0.6	206	0.6	336
2012	9	21	7	5.7	103	0.5	172	0.4	108
2012	9	21	8	5.7	104	0.7	131	0.4	333
2012	9	21	9	6.0	103	0.7	109	0.4	228
2012	9	21	10	5.9	103	1.0	153	0.7	218
2012	9	21	11	6.8	100	1.1	175	0.6	183
2012	9	21	12	6.7	99	1.3	131	0.7	191
2012	9	21	13	5.9	106	1.2	137	0.8	194
2012	9	21	14	4.7	104	1.2	188	0.8	208
2012	9	21	15	3.4	108	1.3	195	0.9	217
2012	9	21	16	2.1	99	1.1	197	0.8	216
2012	9	21	17	1.3	102	0.7	199	1.2	242
2012	9	21	18	2.7	90	1.4	333	1.2	238
2012	9	21	19	3.1	85	1.2	8	1.6	298
2012	9	21	20	3.8	90	0.7	8	2.1	350
2012	9	21	21	4.8	103	0.9	98	2.0	353
2012	9	21	22	6.1	107	0.7	285	2.3	7
2012	9	21	23	5.8	121	1.1	199	2.3	2
2012	9	22	0	5.9	110	0.6	54	2.3	7
2012	9	22	1	5.5	114	1.1	205	2.1	4
2012	9	22	2	4.1	107	0.7	202	1.6	360
2012	9	22	3	5.1	112	0.6	125	1.3	336
2012	9	22	4	7.7	104	0.8	173	0.9	21
2012	9	22	5	7.0	106	0.8	147	0.3	136
2012	9	22	6	5.8	110	1.0	230	0.5	113
2012	9	22	7	3.4	116	1.4	198	0.4	317
2012	9	22	8	2.8	180	0.6	148	0.6	131
2012	9	22	9	7.9	101	1.0	132	0.5	198
2012	9	22	10	8.4	101	1.3	143	1.4	107
2012	9	22	11	7.3	102	1.4	154	1.6	108
2012	9	22	12	6.6	105	1.3	144	1.7	108
2012	9	22	13	9.4	97	1.3	145	1.5	103
2012	9	22	14	2.6	294	1.3	146	1.3	112
2012	9	22	15	2.5	265	1.2	141	0.8	151
2012	9	22	16	2.8	274	1.6	170	0.9	137
2012	9	22	17	1.8	283	1.7	184	1.1	118
2012	9	22	18	1.9	277	1.6	202	0.3	173
2012	9	22	19	0.8	262	2.0	191	1.0	109
2012	9	22	20	4.1	151	2.5	193	1.9	100
2012	9	22	21	2.2	264	2.3	210	1.7	87
2012	9	22	22	2.6	273	1.9	215	1.8	111
2012	9	22	23	1.3	269	2.9	216	1.8	119

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	23	0	1.6	273	1.6	290	1.9	123
2012	9	23	1	1.6	248	2.2	207	1.0	268
2012	9	23	2	1.3	246	1.3	333	0.8	272
2012	9	23	3	1.0	257	1.2	357	0.8	286
2012	9	23	4	0.6	199	1.0	298	0.2	323
2012	9	23	5	3.7	98	0.7	342	0.5	35
2012	9	23	6	5.0	109	0.7	190	0.4	22
2012	9	23	7	6.5	102	0.8	223	0.4	256
2012	9	23	8	6.1	104	0.6	305	0.2	281
2012	9	23	9	5.0	108	1.1	204	0.3	308
2012	9	23	10	7.4	101	0.8	162	0.5	285
2012	9	23	11	2.5	117	0.8	148	0.4	174
2012	9	23	12	1.6	253	0.9	207	1.1	110
2012	9	23	13	3.9	86	0.5	169	0.9	126
2012	9	23	14	5.5	97	1.2	192	1.5	105
2012	9	23	15	1.8	17	1.7	218	1.6	109
2012	9	23	16	2.0	119	1.4	215	1.6	99
2012	9	23	17	4.0	107	0.9	195	1.6	97
2012	9	23	18	4.1	112	0.9	205	2.2	98
2012	9	23	19	4.8	111	1.0	200	1.7	113
2012	9	23	20	2.4	88	1.4	215	1.2	103
2012	9	23	21	1.0	78	1.6	201	1.9	97
2012	9	23	22	2.1	298	1.2	181	1.3	133
2012	9	23	23	2.6	293	0.8	190	2.2	103
2012	9	24	0	1.6	262	1.1	185	1.7	107
2012	9	24	1	1.8	262	0.9	267	0.9	113
2012	9	24	2	1.9	248	0.8	350	0.6	89
2012	9	24	3	1.2	256	1.2	11	0.4	58
2012	9	24	4	1.6	251	0.9	10	0.9	24
2012	9	24	5	1.4	248	1.4	3	0.5	306
2012	9	24	6	0.8	279	1.0	26	0.4	329
2012	9	24	7	0.8	258	0.8	10	0.7	12
2012	9	24	8	0.5	240	0.7	39	1.1	351
2012	9	24	9	1.1	263	0.5	154	0.6	24
2012	9	24	10	2.0	282	0.6	96	0.3	191
2012	9	24	11	1.9	275	1.4	183	0.6	255
2012	9	24	12	3.3	273	4.1	210	0.8	246
2012	9	24	13	2.3	259	1.9	202	1.7	249
2012	9	24	14	3.0	268	2.6	200	2.5	245
2012	9	24	15	3.6	291	3.0	210	1.7	264
2012	9	24	16	2.7	294	2.5	216	1.6	264
2012	9	24	17	2.5	269	0.8	292	1.9	282
2012	9	24	18	2.9	287	1.1	307	1.9	284
2012	9	24	19	2.0	283	0.8	303	2.0	297
2012	9	24	20	1.6	278	1.5	300	2.0	297
2012	9	24	21	1.1	264	1.2	285	2.1	305
2012	9	24	22	1.3	277	1.2	340	2.2	314
2012	9	24	23	1.0	200	1.4	317	2.1	350

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	25	0	0.5	131	1.6	349	2.2	3
2012	9	25	1	0.4	40	1.4	321	2.3	359
2012	9	25	2	0.7	89	0.6	258	2.0	1
2012	9	25	3	1.7	91	1.7	350	2.1	3
2012	9	25	4	1.1	296	1.7	345	2.0	1
2012	9	25	5	4.2	99	1.6	345	2.1	359
2012	9	25	6	5.6	114	1.7	4	2.1	7
2012	9	25	7	6.5	107	0.9	43	2.0	354
2012	9	25	8	7.8	103	0.8	54	1.1	12
2012	9	25	9	9.7	99	1.4	74	0.5	194
2012	9	25	10	8.6	101	1.8	163	0.5	221
2012	9	25	11	9.0	98	1.8	161	0.9	185
2012	9	25	12	10.2	91	2.1	148	0.9	177
2012	9	25	13	9.7	93	2.5	164	1.9	124
2012	9	25	14	8.6	91	2.6	194	2.6	107
2012	9	25	15	6.5	93	2.5	199	3.1	112
2012	9	25	16	6.3	96	1.6	217	2.8	107
2012	9	25	17	6.0	90	1.1	198	2.8	109
2012	9	25	18	4.8	100	1.2	221	2.3	112
2012	9	25	19	10.1	89	2.8	206	2.2	110
2012	9	25	20	12.2	88	2.2	188	1.6	108
2012	9	25	21	11.0	88	1.9	194	2.5	93
2012	9	25	22	10.6	89	1.4	209	2.9	96
2012	9	25	23	11.6	86	1.5	208	2.4	95
2012	9	26	0	10.5	87	1.6	198	3.1	111
2012	9	26	1	10.1	84	1.6	197	3.1	113
2012	9	26	2	7.9	85	2.0	198	2.5	94
2012	9	26	3	4.6	81	2.1	199	2.9	110
2012	9	26	4	6.4	94	1.9	185	4.0	109
2012	9	26	5	6.4	98	1.5	189	4.4	115
2012	9	26	6	3.2	122	1.1	198	3.9	114
2012	9	26	7	5.8	94	1.0	184	3.9	118
2012	9	26	8	6.7	96	1.2	156	4.2	117
2012	9	26	9	8.0	89	1.5	168	4.6	114
2012	9	26	10	8.4	98	1.2	145	4.9	111
2012	9	26	11	9.8	91	1.4	198	5.1	108
2012	9	26	12	9.4	94	1.2	160	4.8	99
2012	9	26	13	9.0	104	1.4	191	4.8	109
2012	9	26	14	8.3	98	1.2	220	5.1	118
2012	9	26	15	9.3	89	1.4	190	3.5	121
2012	9	26	16	8.4	92	1.2	198	3.5	114
2012	9	26	17	8.7	93	1.6	204	3.6	104
2012	9	26	18	12.1	89	1.1	183	4.3	109
2012	9	26	19	13.1	83	1.3	198	4.0	108
2012	9	26	20	13.4	89	1.2	209	4.5	111
2012	9	26	21	14.7	89	1.2	238	5.0	107
2012	9	26	22	13.2	87	1.7	226	4.1	100
2012	9	26	23	11.9	90	1.8	220	4.2	107

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	27	0	11.6	88	2.3	174	4.9	109
2012	9	27	1	9.2	92	2.6	181	4.7	109
2012	9	27	2	10.4	95	2.3	195	4.7	111
2012	9	27	3	10.7	97	3.6	129	4.8	109
2012	9	27	4	12.2	87	2.2	161	4.6	107
2012	9	27	5	13.8	85	2.0	179	5.4	108
2012	9	27	6	12.7	85	1.6	205	5.0	111
2012	9	27	7	7.2	94	1.6	201	6.2	113
2012	9	27	8	4.2	91	2.6	151	5.7	119
2012	9	27	9	3.7	313	2.2	185	5.8	115
2012	9	27	10	3.6	299	1.4	177	5.6	118
2012	9	27	11	3.8	316	3.0	210	2.9	123
2012	9	27	12	3.8	265	3.0	201	1.8	170
2012	9	27	13	3.0	294	3.8	197	1.6	268
2012	9	27	14	2.4	280	3.8	191	1.4	256
2012	9	27	15	1.8	247	3.5	206	1.4	258
2012	9	27	16	1.7	246	3.3	211	1.2	342
2012	9	27	17	1.2	320	3.4	214	1.3	296
2012	9	27	18	2.2	81	3.9	230	1.4	277
2012	9	27	19	5.1	87	3.1	219	0.7	324
2012	9	27	20	4.7	100	2.0	223	0.4	298
2012	9	27	21	5.1	85	1.1	267	0.8	292
2012	9	27	22	4.9	92	0.9	266	0.7	256
2012	9	27	23	3.7	109	1.2	284	0.4	277
2012	9	28	0	3.2	99	1.3	168	0.4	345
2012	9	28	1	5.2	92	1.3	156	0.4	252
2012	9	28	2	2.7	72	1.1	157	1.3	27
2012	9	28	3	6.0	96	1.1	187	0.6	67
2012	9	28	4	3.9	107	0.8	163	1.1	33
2012	9	28	5	4.6	103	1.3	192	0.5	71
2012	9	28	6	4.4	109	1.1	196	0.5	91
2012	9	28	7	5.9	100	0.9	228	0.7	111
2012	9	28	8	5.6	100	1.2	179	0.7	83
2012	9	28	9	6.1	91	1.7	207	1.5	117
2012	9	28	10	7.6	89	1.5	185	1.5	113
2012	9	28	11	7.2	89	1.4	179	1.5	98
2012	9	28	12	7.7	86	1.6	153	1.7	107
2012	9	28	13	5.7	86	1.3	159	1.9	110
2012	9	28	14	7.1	89	1.3	148	0.8	172
2012	9	28	15	7.7	88	1.2	219	0.8	167
2012	9	28	16	8.3	85	1.2	190	1.2	131
2012	9	28	17	8.7	83	1.3	192	2.4	104
2012	9	28	18	7.3	80	1.2	216	3.1	100
2012	9	28	19	5.8	104	1.0	225	2.6	86
2012	9	28	20	4.8	83	1.1	197	2.3	105
2012	9	28	21	4.4	101	1.5	188	3.1	97
2012	9	28	22	4.7	103	1.4	195	3.3	118
2012	9	28	23	6.9	95	2.1	211	1.9	116

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	9	29	0	5.6	99	2.7	213	1.3	110
2012	9	29	1	6.8	94	2.1	215	1.2	134
2012	9	29	2	4.4	81	2.3	209	0.4	191
2012	9	29	3	1.5	288	2.4	213	0.6	162
2012	9	29	4	2.4	272	3.3	216	0.9	195
2012	9	29	5	1.7	264	2.6	205	0.6	218
2012	9	29	6	n/a	n/a	1.7	198	0.8	72
2012	9	29	7	6.3	97	1.4	167	1.6	92
2012	9	29	8	6.2	96	1.7	199	2.5	114
2012	9	29	9	5.9	96	1.7	186	3.4	119
2012	9	29	10	4.9	95	1.7	161	3.2	118
2012	9	29	11	6.5	96	2.0	152	3.4	126
2012	9	29	12	7.7	95	2.3	146	3.2	124
2012	9	29	13	6.9	85	1.7	158	3.1	126
2012	9	29	14	7.6	88	1.8	184	3.0	122
2012	9	29	15	8.7	82	2.6	217	3.4	121
2012	9	29	16	6.7	89	2.9	215	3.0	126
2012	9	29	17	6.0	102	3.8	213	3.5	122
2012	9	29	18	4.5	97	2.5	182	1.2	152
2012	9	29	19	5.8	101	1.0	176	0.9	235
2012	9	29	20	5.9	96	2.3	195	1.2	151
2012	9	29	21	3.0	100	2.5	205	0.9	143
2012	9	29	22	4.6	105	2.2	189	0.7	152
2012	9	29	23	3.3	93	1.4	170	2.4	127
2012	9	30	0	2.1	71	1.8	194	4.0	111
2012	9	30	1	4.1	101	1.2	185	3.3	107
2012	9	30	2	4.5	100	1.1	177	3.2	109
2012	9	30	3	4.3	94	1.2	162	3.4	116
2012	9	30	4	5.3	97	0.9	169	3.3	120
2012	9	30	5	3.4	67	0.7	163	2.9	118
2012	9	30	6	2.9	327	1.3	193	1.9	113
2012	9	30	7	3.1	110	1.2	211	1.7	118
2012	9	30	8	6.2	104	0.7	217	2.3	110
2012	9	30	9	4.7	99	0.6	187	3.2	106
2012	9	30	10	7.0	99	1.0	177	3.6	108
2012	9	30	11	7.1	105	1.3	193	2.9	109
2012	9	30	12	6.3	104	1.2	172	2.8	111
2012	9	30	13	7.8	104	0.7	183	2.9	111
2012	9	30	14	7.6	104	0.7	176	2.9	115
2012	9	30	15	8.1	97	0.8	207	3.1	111
2012	9	30	16	8.2	98	0.6	97	2.6	98
2012	9	30	17	8.7	97	1.0	17	2.3	97
2012	9	30	18	9.6	102	1.4	14	2.4	91
2012	9	30	19	9.4	103	1.3	16	3.0	100
2012	9	30	20	9.7	104	1.3	24	2.3	73
2012	9	30	21	10.1	100	1.3	4	2.0	59
2012	9	30	22	10.4	98	0.8	21	0.8	45
2012	9	30	23	11.3	101	0.8	8	0.9	31

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	1	0	10.9	102	0.5	16	1.1	29
2012	10	1	1	9.2	105	1.4	7	1.1	24
2012	10	1	2	5.8	91	1.7	17	0.8	32
2012	10	1	3	6.8	94	1.0	2	0.6	344
2012	10	1	4	2.2	153	1.0	274	1.0	23
2012	10	1	5	3.5	105	1.5	360	1.4	14
2012	10	1	6	5.8	98	1.2	15	1.5	15
2012	10	1	7	1.5	106	0.7	221	0.9	352
2012	10	1	8	2.0	260	0.3	61	0.8	309
2012	10	1	9	3.0	263	1.3	359	0.6	352
2012	10	1	10	3.3	259	1.0	355	0.9	343
2012	10	1	11	5.2	279	1.1	2	1.4	301
2012	10	1	12	7.5	292	1.8	356	1.9	318
2012	10	1	13	8.4	289	2.0	285	2.5	320
2012	10	1	14	8.9	292	6.5	242	2.6	330
2012	10	1	15	9.4	287	5.5	235	2.2	294
2012	10	1	16	9.5	284	4.2	233	2.8	249
2012	10	1	17	6.6	286	5.1	238	3.2	253
2012	10	1	18	6.1	291	5.9	241	3.1	276
2012	10	1	19	5.0	285	1.7	342	2.8	282
2012	10	1	20	3.6	290	1.5	327	1.9	273
2012	10	1	21	3.6	285	1.5	345	1.7	284
2012	10	1	22	2.9	282	2.1	329	2.5	316
2012	10	1	23	2.7	282	1.9	334	3.0	301
2012	10	2	0	2.7	289	2.1	320	3.0	301
2012	10	2	1	2.1	279	1.6	330	2.6	317
2012	10	2	2	1.1	244	1.9	338	1.9	324
2012	10	2	3	1.8	263	1.5	347	2.2	319
2012	10	2	4	3.3	267	1.8	330	2.5	319
2012	10	2	5	3.3	268	1.6	241	2.7	300
2012	10	2	6	1.2	286	1.2	284	3.0	297
2012	10	2	7	1.9	224	1.2	316	2.5	312
2012	10	2	8	1.8	203	1.4	21	2.7	315
2012	10	2	9	2.0	276	2.5	29	2.5	311
2012	10	2	10	3.2	296	3.7	33	2.2	303
2012	10	2	11	2.7	209	4.0	37	2.5	307
2012	10	2	12	2.2	169	3.0	36	2.6	302
2012	10	2	13	2.4	125	2.6	20	2.4	296
2012	10	2	14	2.1	132	2.2	348	1.9	286
2012	10	2	15	2.1	130	1.8	9	1.9	284
2012	10	2	16	2.7	120	1.4	347	1.9	287
2012	10	2	17	2.2	105	1.5	346	2.4	299
2012	10	2	18	2.9	116	2.0	349	2.4	313
2012	10	2	19	4.4	104	2.3	357	2.5	322
2012	10	2	20	3.5	105	1.7	345	2.1	3
2012	10	2	21	3.7	117	1.8	1	2.4	360
2012	10	2	22	4.9	102	1.9	356	2.3	350
2012	10	2	23	5.4	105	0.9	1	2.0	350

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	3	0	4.8	108	1.4	7	1.7	348
2012	10	3	1	6.9	99	1.4	9	1.7	6
2012	10	3	2	4.6	108	1.3	23	1.4	351
2012	10	3	3	2.0	103	0.6	333	1.1	324
2012	10	3	4	1.1	109	1.2	357	1.1	349
2012	10	3	5	3.5	106	1.9	4	0.9	6
2012	10	3	6	5.0	105	0.7	56	1.5	9
2012	10	3	7	7.2	100	0.7	341	1.0	15
2012	10	3	8	4.5	111	0.6	283	0.7	327
2012	10	3	9	3.7	88	0.4	54	0.5	355
2012	10	3	10	2.4	107	0.7	184	0.4	212
2012	10	3	11	1.1	211	0.8	190	0.5	216
2012	10	3	12	2.0	234	0.7	178	0.8	221
2012	10	3	13	2.4	230	0.9	191	0.8	199
2012	10	3	14	2.1	251	0.7	199	0.9	219
2012	10	3	15	1.8	238	0.3	206	0.7	222
2012	10	3	16	1.9	257	0.2	215	0.4	231
2012	10	3	17	1.6	247	0.4	285	0.1	222
2012	10	3	18	0.7	217	0.9	217	0.3	80
2012	10	3	19	0.7	269	1.3	4	0.5	46
2012	10	3	20	1.3	254	1.3	346	0.8	12
2012	10	3	21	1.0	102	0.8	328	0.6	329
2012	10	3	22	1.3	115	1.1	198	1.3	16
2012	10	3	23	1.1	258	0.4	180	1.5	348
2012	10	4	0	1.6	87	0.9	315	2.0	354
2012	10	4	1	2.2	89	1.0	323	2.0	11
2012	10	4	2	1.0	88	0.9	337	1.9	14
2012	10	4	3	2.6	92	1.0	356	1.9	3
2012	10	4	4	3.7	90	0.5	336	1.9	9
2012	10	4	5	3.5	87	0.6	9	1.9	9
2012	10	4	6	2.9	89	0.8	205	1.7	8
2012	10	4	7	1.8	89	0.9	341	1.1	4
2012	10	4	8	2.7	88	0.5	269	0.8	11
2012	10	4	9	2.3	93	0.5	57	0.3	188
2012	10	4	10	1.9	258	0.8	74	0.4	245
2012	10	4	11	3.1	256	1.1	145	0.7	194
2012	10	4	12	3.1	260	1.5	181	0.9	201
2012	10	4	13	3.5	252	0.9	114	1.0	207
2012	10	4	14	3.8	259	1.0	162	0.9	222
2012	10	4	15	3.6	257	1.2	182	0.9	210
2012	10	4	16	2.9	251	0.9	198	0.9	220
2012	10	4	17	2.6	248	1.0	215	0.5	250
2012	10	4	18	1.9	265	1.1	8	0.4	263
2012	10	4	19	1.5	258	0.8	48	0.2	320
2012	10	4	20	1.4	268	0.7	350	0.3	14
2012	10	4	21	1.4	260	0.5	52	0.5	2
2012	10	4	22	1.0	259	0.6	43	0.4	6
2012	10	4	23	1.4	253	0.6	15	0.5	40

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	5	0	1.8	263	0.5	322	1.1	356
2012	10	5	1	1.7	262	0.7	326	1.3	354
2012	10	5	2	1.7	256	0.9	347	0.9	18
2012	10	5	3	1.7	256	0.9	334	1.3	8
2012	10	5	4	1.2	270	0.8	271	1.8	2
2012	10	5	5	1.8	254	1.0	198	1.0	360
2012	10	5	6	1.2	273	0.4	69	1.8	16
2012	10	5	7	1.0	244	0.5	22	1.6	1
2012	10	5	8	1.2	275	0.6	104	1.3	6
2012	10	5	9	1.6	82	0.7	96	0.3	230
2012	10	5	10	1.7	251	0.7	69	0.6	187
2012	10	5	11	1.8	247	0.9	87	0.7	199
2012	10	5	12	2.4	248	0.8	61	0.8	213
2012	10	5	13	2.6	236	0.6	89	0.9	216
2012	10	5	14	3.2	245	0.7	42	1.0	226
2012	10	5	15	2.8	249	0.4	114	0.9	233
2012	10	5	16	2.4	258	0.4	10	0.8	225
2012	10	5	17	1.4	263	0.8	99	0.7	239
2012	10	5	18	1.0	228	0.9	356	0.7	280
2012	10	5	19	1.1	112	1.1	204	1.5	324
2012	10	5	20	2.3	91	0.5	74	1.8	355
2012	10	5	21	2.0	91	1.0	281	2.2	5
2012	10	5	22	3.1	90	1.1	189	1.9	360
2012	10	5	23	2.7	89	0.7	184	2.0	6
2012	10	6	0	3.3	87	1.9	14	1.8	352
2012	10	6	1	2.4	90	1.4	326	1.4	6
2012	10	6	2	2.6	89	1.3	227	1.7	357
2012	10	6	3	1.9	93	1.0	9	1.8	7
2012	10	6	4	1.7	90	1.0	212	1.8	360
2012	10	6	5	2.4	89	1.2	263	0.9	11
2012	10	6	6	2.0	94	0.4	21	1.0	358
2012	10	6	7	2.0	94	0.6	11	0.8	21
2012	10	6	8	1.3	99	0.5	79	0.9	6
2012	10	6	9	0.9	241	0.7	101	0.3	256
2012	10	6	10	2.1	241	0.9	107	0.4	190
2012	10	6	11	2.5	236	0.9	132	0.7	182
2012	10	6	12	2.8	239	1.1	154	0.7	203
2012	10	6	13	2.7	240	1.2	166	0.8	216
2012	10	6	14	3.0	248	1.3	182	0.7	191
2012	10	6	15	3.4	249	1.0	187	0.7	155
2012	10	6	16	3.4	245	1.1	357	0.6	143
2012	10	6	17	1.2	235	0.9	282	0.5	237
2012	10	6	18	1.2	244	1.4	351	0.6	314
2012	10	6	19	2.4	249	0.9	220	0.8	344
2012	10	6	20	2.3	251	1.4	7	1.5	350
2012	10	6	21	1.7	253	1.0	36	1.1	3
2012	10	6	22	2.7	253	1.1	309	1.1	15
2012	10	6	23	1.7	252	1.3	216	1.2	340

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	7	0	0.8	205	1.4	171	0.4	323
2012	10	7	1	1.1	230	0.7	134	0.5	329
2012	10	7	2	1.1	262	0.8	335	0.5	358
2012	10	7	3	0.9	269	1.3	293	0.8	64
2012	10	7	4	1.5	256	1.0	319	0.6	315
2012	10	7	5	1.2	252	1.1	351	1.2	360
2012	10	7	6	2.4	243	0.9	273	1.4	342
2012	10	7	7	0.6	231	0.7	201	1.1	355
2012	10	7	8	0.7	265	0.7	40	2.0	9
2012	10	7	9	1.2	244	0.6	51	0.9	354
2012	10	7	10	1.5	238	0.5	79	0.6	292
2012	10	7	11	2.2	250	0.8	112	0.8	249
2012	10	7	12	2.8	246	0.8	31	0.9	231
2012	10	7	13	2.9	252	0.8	132	0.8	205
2012	10	7	14	3.3	258	0.7	116	0.5	197
2012	10	7	15	2.3	261	1.2	198	0.8	252
2012	10	7	16	2.5	274	0.7	262	1.3	275
2012	10	7	17	1.6	254	0.9	71	1.4	279
2012	10	7	18	1.4	280	0.8	84	2.1	306
2012	10	7	19	1.6	90	1.0	296	2.5	309
2012	10	7	20	1.7	92	1.1	256	2.3	339
2012	10	7	21	1.8	96	1.5	300	2.4	347
2012	10	7	22	2.0	96	1.1	218	2.6	348
2012	10	7	23	2.7	89	1.3	97	1.9	341
2012	10	8	0	2.3	90	2.1	20	2.0	340
2012	10	8	1	2.7	90	1.3	253	1.8	356
2012	10	8	2	4.0	89	1.1	107	2.0	349
2012	10	8	3	4.1	89	1.5	356	1.5	341
2012	10	8	4	3.9	87	0.9	219	2.2	10
2012	10	8	5	4.2	97	0.9	313	1.3	344
2012	10	8	6	5.5	110	1.0	200	1.8	358
2012	10	8	7	4.8	111	0.6	220	2.3	10
2012	10	8	8	4.3	108	0.4	48	1.6	356
2012	10	8	9	4.1	111	1.1	17	0.4	300
2012	10	8	10	4.6	109	1.0	37	0.5	246
2012	10	8	11	4.7	110	0.9	122	0.6	212
2012	10	8	12	3.8	102	0.8	141	0.8	211
2012	10	8	13	3.0	100	0.5	75	0.9	228
2012	10	8	14	2.8	108	1.0	167	0.8	233
2012	10	8	15	1.6	211	0.9	51	0.8	228
2012	10	8	16	1.0	189	1.2	217	0.6	237
2012	10	8	17	1.2	108	1.4	324	0.6	233
2012	10	8	18	2.5	89	0.6	360	0.5	138
2012	10	8	19	2.0	92	1.4	327	0.9	308
2012	10	8	20	2.3	91	0.6	338	1.1	346
2012	10	8	21	3.8	88	0.6	218	1.8	352
2012	10	8	22	4.1	95	0.6	296	1.1	19
2012	10	8	23	3.3	93	0.5	177	1.5	351

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	9	0	3.3	88	0.8	27	0.3	207
2012	10	9	1	3.4	88	2.0	5	0.2	90
2012	10	9	2	2.8	87	1.3	13	1.3	346
2012	10	9	3	1.4	91	0.7	15	0.3	155
2012	10	9	4	1.8	210	0.6	38	0.5	346
2012	10	9	5	1.9	118	0.7	183	0.8	6
2012	10	9	6	2.6	87	1.0	35	0.6	285
2012	10	9	7	3.7	88	1.7	1	0.7	342
2012	10	9	8	3.3	90	0.6	70	0.8	354
2012	10	9	9	1.2	97	0.7	108	0.3	218
2012	10	9	10	0.9	211	0.8	108	0.5	202
2012	10	9	11	1.2	198	1.0	116	0.6	189
2012	10	9	12	2.3	257	1.2	146	0.7	211
2012	10	9	13	2.2	262	1.3	162	0.8	184
2012	10	9	14	2.9	263	1.4	158	0.7	181
2012	10	9	15	3.3	266	1.4	203	0.9	178
2012	10	9	16	3.5	260	1.0	310	0.6	176
2012	10	9	17	3.6	249	2.2	236	0.7	145
2012	10	9	18	1.5	262	2.3	228	1.1	95
2012	10	9	19	1.0	254	2.8	236	0.9	38
2012	10	9	20	1.5	247	1.7	321	0.7	300
2012	10	9	21	2.2	243	2.2	1	0.8	286
2012	10	9	22	2.0	253	1.3	44	0.7	306
2012	10	9	23	2.1	251	1.6	353	0.4	259
2012	10	10	0	1.0	284	2.0	3	1.2	309
2012	10	10	1	1.2	219	2.3	355	1.1	330
2012	10	10	2	1.9	114	2.0	344	1.9	319
2012	10	10	3	1.2	190	2.3	351	0.9	331
2012	10	10	4	0.9	249	2.2	346	1.2	5
2012	10	10	5	0.9	243	2.4	354	0.8	2
2012	10	10	6	1.0	285	2.0	354	1.2	18
2012	10	10	7	2.5	83	1.1	343	1.3	350
2012	10	10	8	2.1	104	0.8	60	1.2	304
2012	10	10	9	4.6	113	1.0	71	1.8	301
2012	10	10	10	4.5	109	1.0	125	0.8	238
2012	10	10	11	5.8	104	1.3	108	0.7	205
2012	10	10	12	6.2	99	1.7	156	0.7	180
2012	10	10	13	7.4	99	1.2	183	2.0	129
2012	10	10	14	7.6	101	1.6	204	3.3	116
2012	10	10	15	8.1	101	1.7	101	4.4	112
2012	10	10	16	7.7	99	1.5	160	5.0	108
2012	10	10	17	8.0	97	1.1	233	4.5	100
2012	10	10	18	7.6	96	1.0	220	5.7	106
2012	10	10	19	7.9	93	1.2	200	5.3	108
2012	10	10	20	8.1	96	1.6	60	5.4	115
2012	10	10	21	7.7	93	1.2	134	5.5	112
2012	10	10	22	7.3	96	1.0	125	5.0	109
2012	10	10	23	8.9	94	1.2	210	5.2	108

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	11	0	9.2	95	1.2	201	5.0	106
2012	10	11	1	7.9	95	1.6	201	5.3	107
2012	10	11	2	7.1	107	1.3	215	5.3	101
2012	10	11	3	8.2	102	1.2	342	4.8	108
2012	10	11	4	7.4	96	1.2	225	4.4	111
2012	10	11	5	7.4	96	1.2	232	4.2	103
2012	10	11	6	7.7	103	1.3	231	3.9	104
2012	10	11	7	7.3	101	1.5	230	3.8	107
2012	10	11	8	7.6	100	1.7	221	3.3	101
2012	10	11	9	7.2	99	1.3	218	3.7	102
2012	10	11	10	6.2	98	0.7	164	4.0	103
2012	10	11	11	6.3	99	0.9	201	3.2	93
2012	10	11	12	6.4	103	1.5	178	3.4	97
2012	10	11	13	6.7	100	1.7	210	3.2	103
2012	10	11	14	6.9	101	1.1	217	2.5	97
2012	10	11	15	7.7	100	1.1	212	1.8	105
2012	10	11	16	7.9	102	0.8	260	1.8	81
2012	10	11	17	9.1	102	0.5	153	1.8	65
2012	10	11	18	9.8	104	0.6	28	1.3	67
2012	10	11	19	9.3	100	0.9	30	1.0	73
2012	10	11	20	9.4	98	0.6	26	1.7	85
2012	10	11	21	8.2	103	0.3	80	1.7	96
2012	10	11	22	8.4	101	0.4	253	1.3	90
2012	10	11	23	8.9	102	0.0	219	0.6	84
2012	10	12	0	9.1	103	NAN	NAN	1.7	85
2012	10	12	1	10.2	100	NAN	NAN	1.3	95
2012	10	12	2	10.3	104	NAN	NAN	1.7	87
2012	10	12	3	10.2	101	NAN	NAN	1.4	86
2012	10	12	4	11.5	100	NAN	NAN	0.9	91
2012	10	12	5	12.3	100	NAN	NAN	1.7	94
2012	10	12	6	11.1	101	NAN	NAN	2.3	99
2012	10	12	7	11.5	102	NAN	NAN	2.7	100
2012	10	12	8	11.2	103	NAN	NAN	2.7	103
2012	10	12	9	10.7	102	NAN	NAN	3.2	98
2012	10	12	10	9.5	104	NAN	NAN	3.4	99
2012	10	12	11	9.0	103	0.4	187	3.4	104
2012	10	12	12	9.6	100	0.2	208	3.1	113
2012	10	12	13	9.5	96	0.1	173	2.5	113
2012	10	12	14	8.9	103	0.5	219	2.2	119
2012	10	12	15	5.4	140	1.0	213	1.0	129
2012	10	12	16	7.3	102	0.9	265	0.8	106
2012	10	12	17	7.1	98	1.0	319	1.0	82
2012	10	12	18	7.5	100	1.1	360	0.8	123
2012	10	12	19	7.8	90	1.1	12	0.8	41
2012	10	12	20	8.4	91	0.7	3	1.1	96
2012	10	12	21	8.5	92	0.5	161	1.2	122
2012	10	12	22	9.2	91	0.8	232	1.9	118
2012	10	12	23	9.5	89	0.5	254	1.3	122

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	13	0	5.9	101	1.0	188	2.7	102
2012	10	13	1	2.3	135	1.4	202	3.6	113
2012	10	13	2	6.8	99	1.0	208	2.0	130
2012	10	13	3	1.3	121	1.0	9	1.6	125
2012	10	13	4	2.1	54	0.9	1	0.9	121
2012	10	13	5	2.8	88	1.8	186	0.8	180
2012	10	13	6	3.2	91	1.6	220	1.5	128
2012	10	13	7	3.5	78	1.4	176	1.7	136
2012	10	13	8	6.1	89	1.4	177	2.4	121
2012	10	13	9	5.6	101	2.6	167	3.6	120
2012	10	13	10	7.4	95	2.4	182	3.9	114
2012	10	13	11	8.2	89	2.9	176	3.9	112
2012	10	13	12	8.6	90	2.9	166	4.2	109
2012	10	13	13	7.2	93	2.4	148	4.0	112
2012	10	13	14	6.8	95	2.5	154	4.1	109
2012	10	13	15	6.2	89	1.8	172	5.0	109
2012	10	13	16	7.1	85	2.3	200	4.8	123
2012	10	13	17	6.8	98	1.8	191	4.3	117
2012	10	13	18	8.0	100	1.9	183	4.0	101
2012	10	13	19	9.4	94	1.5	172	3.7	105
2012	10	13	20	10.1	98	1.0	198	3.3	104
2012	10	13	21	11.4	86	0.7	148	3.1	108
2012	10	13	22	9.8	93	1.2	344	3.4	99
2012	10	13	23	9.4	103	1.6	358	3.4	79
2012	10	14	0	10.3	109	2.1	358	3.3	90
2012	10	14	1	11.9	108	1.4	52	2.6	77
2012	10	14	2	13.3	104	1.7	52	0.8	85
2012	10	14	3	18.0	103	1.4	133	1.0	81
2012	10	14	4	16.5	103	2.0	87	3.1	113
2012	10	14	5	14.4	103	2.0	28	2.6	119
2012	10	14	6	13.0	100	1.5	298	1.8	108
2012	10	14	7	13.6	97	2.1	216	2.7	97
2012	10	14	8	11.0	99	2.1	222	4.5	90
2012	10	14	9	8.5	93	1.2	258	4.4	95
2012	10	14	10	10.5	81	1.5	223	3.7	95
2012	10	14	11	7.7	87	1.5	220	4.8	106
2012	10	14	12	9.0	99	1.2	204	5.1	111
2012	10	14	13	11.7	90	1.1	174	4.2	111
2012	10	14	14	12.0	89	1.1	304	2.9	103
2012	10	14	15	12.5	90	1.5	226	3.3	104
2012	10	14	16	14.7	84	1.8	230	4.2	116
2012	10	14	17	14.8	83	1.5	225	5.0	115
2012	10	14	18	12.0	78	2.1	229	4.5	120
2012	10	14	19	9.6	88	1.8	201	5.0	120
2012	10	14	20	6.7	102	1.9	208	5.5	119
2012	10	14	21	6.6	93	1.7	210	5.8	116
2012	10	14	22	5.1	100	1.4	223	5.6	116
2012	10	14	23	7.1	245	1.5	201	5.8	118

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	15	0	4.3	268	2.6	196	4.8	120
2012	10	15	1	3.7	94	1.9	195	3.3	113
2012	10	15	2	2.4	282	2.5	194	3.6	110
2012	10	15	3	3.4	85	3.4	203	3.6	114
2012	10	15	4	5.7	94	2.6	171	2.2	131
2012	10	15	5	7.0	97	1.7	162	2.5	111
2012	10	15	6	8.5	89	1.7	208	4.1	116
2012	10	15	7	7.9	100	1.6	182	3.9	114
2012	10	15	8	9.3	95	1.6	174	4.1	121
2012	10	15	9	10.3	91	1.3	171	4.1	121
2012	10	15	10	11.7	84	1.2	132	3.3	131
2012	10	15	11	11.6	88	1.4	153	3.2	128
2012	10	15	12	12.4	89	1.1	195	3.7	121
2012	10	15	13	11.8	91	1.0	146	3.9	118
2012	10	15	14	12.6	93	1.7	94	3.7	118
2012	10	15	15	12.0	94	2.6	80	2.3	94
2012	10	15	16	10.8	101	2.8	77	2.2	85
2012	10	15	17	12.2	106	1.5	51	2.4	92
2012	10	15	18	12.7	110	1.9	23	1.7	104
2012	10	15	19	11.4	103	1.2	22	1.1	99
2012	10	15	20	9.5	103	1.7	33	0.1	151
2012	10	15	21	9.1	108	2.4	40	0.1	15
2012	10	15	22	2.8	85	2.3	8	0.7	295
2012	10	15	23	1.1	289	1.4	327	0.8	288
2012	10	16	0	2.5	271	1.4	212	0.7	4
2012	10	16	1	3.7	282	3.5	212	0.8	243
2012	10	16	2	5.8	299	6.3	232	1.3	247
2012	10	16	3	6.4	294	8.4	242	1.0	242
2012	10	16	4	7.1	296	6.0	245	1.0	225
2012	10	16	5	5.4	291	4.4	220	1.1	328
2012	10	16	6	3.1	249	3.8	205	1.4	167
2012	10	16	7	3.0	272	3.1	203	1.6	89
2012	10	16	8	3.5	285	2.0	188	2.5	112
2012	10	16	9	3.0	293	2.8	198	2.5	105
2012	10	16	10	2.8	317	4.1	209	1.4	129
2012	10	16	11	3.1	299	3.1	212	1.1	241
2012	10	16	12	3.5	313	4.1	206	1.3	329
2012	10	16	13	3.1	295	3.4	225	1.6	120
2012	10	16	14	3.4	312	3.4	218	0.6	195
2012	10	16	15	3.9	316	3.7	216	1.6	250
2012	10	16	16	2.2	300	3.3	207	1.7	261
2012	10	16	17	2.0	14	3.3	212	1.8	291
2012	10	16	18	1.9	79	3.9	209	0.9	278
2012	10	16	19	4.5	99	3.2	205	1.4	70
2012	10	16	20	2.6	79	2.6	189	3.4	112
2012	10	16	21	2.3	17	2.3	177	2.7	108
2012	10	16	22	3.3	285	1.5	155	2.9	114
2012	10	16	23	3.1	309	1.4	170	3.0	119

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	17	0	3.2	287	1.5	181	3.5	113
2012	10	17	1	3.4	304	2.4	175	3.5	120
2012	10	17	2	2.9	307	2.5	194	2.6	121
2012	10	17	3	2.5	133	2.8	180	2.0	103
2012	10	17	4	5.9	93	1.9	181	1.6	107
2012	10	17	5	5.8	95	2.4	160	2.2	103
2012	10	17	6	7.7	90	1.5	162	3.2	107
2012	10	17	7	8.2	87	NAN	NAN	3.4	104
2012	10	17	8	9.8	88	NAN	NAN	3.7	107
2012	10	17	9	11.0	82	0.8	207	3.5	110
2012	10	17	10	12.7	84	1.6	127	4.0	102
2012	10	17	11	13.9	84	1.1	171	3.0	98
2012	10	17	12	14.6	86	1.5	148	3.7	116
2012	10	17	13	14.7	91	1.5	247	3.3	111
2012	10	17	14	14.9	93	1.3	195	3.4	106
2012	10	17	15	15.1	92	1.3	208	3.4	110
2012	10	17	16	15.1	91	1.1	212	3.6	106
2012	10	17	17	15.2	89	1.4	306	3.4	109
2012	10	17	18	14.9	89	1.4	268	3.3	100
2012	10	17	19	15.2	87	1.3	280	3.4	97
2012	10	17	20	14.2	87	1.0	285	3.3	96
2012	10	17	21	10.7	93	1.1	251	3.7	104
2012	10	17	22	8.1	103	0.6	245	3.7	99
2012	10	17	23	7.6	96	0.5	302	2.9	94
2012	10	18	0	5.9	108	1.0	213	3.2	103
2012	10	18	1	2.4	107	0.9	204	2.5	111
2012	10	18	2	1.7	270	0.7	190	0.2	132
2012	10	18	3	2.3	295	NAN	NAN	0.0	0
2012	10	18	4	3.5	321	NAN	NAN	0.0	0
2012	10	18	5	3.7	308	0.6	223	0.0	0
2012	10	18	6	2.0	298	1.7	239	0.0	0
2012	10	18	7	1.3	265	3.4	222	0.8	128
2012	10	18	8	1.1	236	2.6	230	0.5	127
2012	10	18	9	2.9	110	3.4	213	0.2	127
2012	10	18	10	2.3	108	2.1	207	0.6	204
2012	10	18	11	1.9	115	1.6	196	0.1	222
2012	10	18	12	2.3	120	2.5	197	0.5	300
2012	10	18	13	3.0	110	2.3	196	0.9	274
2012	10	18	14	3.5	116	1.5	205	1.2	273
2012	10	18	15	3.1	111	1.1	35	1.3	258
2012	10	18	16	4.4	116	0.7	295	1.1	261
2012	10	18	17	5.0	115	1.1	266	0.9	267
2012	10	18	18	5.4	107	0.8	39	1.1	323
2012	10	18	19	5.5	106	1.0	355	1.5	328
2012	10	18	20	5.7	100	1.6	333	1.7	1
2012	10	18	21	4.5	111	1.5	338	1.9	349
2012	10	18	22	4.0	106	0.8	239	2.3	347
2012	10	18	23	2.7	96	1.0	249	2.2	357

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	19	0	2.8	90	0.9	295	2.0	351
2012	10	19	1	2.2	90	0.7	288	1.9	355
2012	10	19	2	1.8	93	0.8	130	2.3	336
2012	10	19	3	2.3	87	0.6	57	2.1	337
2012	10	19	4	2.2	92	1.1	351	1.7	343
2012	10	19	5	2.0	88	0.7	333	1.9	343
2012	10	19	6	1.9	90	1.3	350	1.5	344
2012	10	19	7	2.1	89	0.8	255	1.1	319
2012	10	19	8	1.5	95	1.3	5	0.6	306
2012	10	19	9	1.6	95	1.0	13	0.8	22
2012	10	19	10	3.6	105	0.5	96	0.4	261
2012	10	19	11	3.2	116	0.9	92	0.5	293
2012	10	19	12	3.0	110	1.3	118	0.6	264
2012	10	19	13	3.9	106	1.2	98	0.5	263
2012	10	19	14	2.8	114	1.4	109	0.7	262
2012	10	19	15	3.3	122	1.0	144	0.5	188
2012	10	19	16	4.5	111	0.8	220	0.6	234
2012	10	19	17	4.5	118	0.7	43	0.4	343
2012	10	19	18	4.7	114	0.8	327	0.9	317
2012	10	19	19	4.8	104	0.8	335	1.5	332
2012	10	19	20	4.7	114	1.1	334	1.6	340
2012	10	19	21	3.7	113	0.9	342	1.8	348
2012	10	19	22	1.0	104	1.7	350	2.0	345
2012	10	19	23	2.1	95	1.4	336	2.2	347
2012	10	20	0	2.3	92	1.4	329	2.1	347
2012	10	20	1	1.6	87	1.9	340	2.0	345
2012	10	20	2	1.4	94	2.5	345	2.0	359
2012	10	20	3	1.8	91	2.1	329	2.1	349
2012	10	20	4	1.9	92	1.6	309	1.9	354
2012	10	20	5	1.7	91	1.9	347	2.3	338
2012	10	20	6	1.5	96	1.8	355	2.2	336
2012	10	20	7	1.7	96	1.9	359	2.1	359
2012	10	20	8	2.3	91	1.4	351	2.2	1
2012	10	20	9	2.3	87	1.6	14	2.0	10
2012	10	20	10	3.6	99	2.6	29	1.2	356
2012	10	20	11	2.7	104	2.0	33	0.8	12
2012	10	20	12	3.7	106	2.3	41	0.3	243
2012	10	20	13	4.6	101	2.2	45	0.7	266
2012	10	20	14	4.9	98	2.2	54	0.9	230
2012	10	20	15	4.9	107	2.3	39	0.2	162
2012	10	20	16	4.4	104	2.7	23	0.5	232
2012	10	20	17	3.7	78	3.2	16	1.0	278
2012	10	20	18	5.6	109	3.0	15	2.1	309
2012	10	20	19	6.7	119	3.0	12	2.0	310
2012	10	20	20	6.9	114	3.1	14	2.2	316
2012	10	20	21	7.1	116	3.0	21	2.8	329
2012	10	20	22	7.7	117	2.9	19	2.1	338
2012	10	20	23	8.6	114	2.8	14	1.2	309

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	21	0	11.1	112	2.9	13	0.9	316
2012	10	21	1	10.9	111	2.6	17	1.1	7
2012	10	21	2	12.0	101	2.8	19	1.8	17
2012	10	21	3	12.3	101	2.7	21	2.3	22
2012	10	21	4	10.5	103	3.3	33	2.4	24
2012	10	21	5	10.3	104	2.5	39	2.9	27
2012	10	21	6	9.9	104	2.6	41	3.0	32
2012	10	21	7	9.7	104	2.6	39	2.7	29
2012	10	21	8	9.9	103	2.6	24	2.7	21
2012	10	21	9	9.8	103	3.3	22	3.0	17
2012	10	21	10	9.9	100	4.4	27	3.0	21
2012	10	21	11	9.8	109	4.0	24	3.0	25
2012	10	21	12	8.5	123	4.0	25	3.1	16
2012	10	21	13	9.3	119	3.4	28	2.3	14
2012	10	21	14	9.9	108	3.1	32	2.8	16
2012	10	21	15	9.6	106	3.1	20	2.2	5
2012	10	21	16	9.3	108	3.2	24	2.1	7
2012	10	21	17	11.4	92	2.7	26	2.3	14
2012	10	21	18	10.9	98	2.6	23	2.4	21
2012	10	21	19	12.1	96	3.6	23	2.7	20
2012	10	21	20	13.4	92	2.7	20	2.2	11
2012	10	21	21	12.2	96	3.3	14	2.0	358
2012	10	21	22	10.4	113	3.6	12	2.2	337
2012	10	21	23	11.1	118	3.8	14	2.3	3
2012	10	22	0	10.4	120	3.2	360	1.5	2
2012	10	22	1	10.2	119	3.3	2	2.1	14
2012	10	22	2	10.5	116	3.4	1	1.8	343
2012	10	22	3	10.9	114	3.6	2	1.6	346
2012	10	22	4	11.2	117	3.4	5	1.7	336
2012	10	22	5	10.8	118	3.9	11	2.1	360
2012	10	22	6	10.5	123	4.0	15	1.7	341
2012	10	22	7	11.0	117	3.6	15	2.0	339
2012	10	22	8	10.1	120	3.3	16	2.1	345
2012	10	22	9	9.7	126	3.3	17	2.2	348
2012	10	22	10	8.9	129	3.3	25	1.9	326
2012	10	22	11	9.1	123	3.7	32	1.0	311
2012	10	22	12	8.5	125	4.2	28	1.2	294
2012	10	22	13	9.1	128	2.9	25	1.7	22
2012	10	22	14	9.4	123	2.8	11	1.3	9
2012	10	22	15	11.8	110	2.8	359	1.8	19
2012	10	22	16	13.6	101	2.6	8	1.3	3
2012	10	22	17	13.2	97	3.0	14	1.4	23
2012	10	22	18	13.6	97	3.0	2	2.7	27
2012	10	22	19	13.6	96	3.1	6	2.9	28
2012	10	22	20	14.4	96	2.8	10	2.1	28
2012	10	22	21	14.1	96	2.8	6	2.5	29
2012	10	22	22	15.5	92	3.0	3	2.6	31
2012	10	22	23	13.6	97	2.8	6	2.2	31

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	23	0	11.3	112	3.0	4	2.2	32
2012	10	23	1	12.4	118	3.2	6	1.7	27
2012	10	23	2	13.4	116	3.3	6	1.5	20
2012	10	23	3	12.4	119	3.4	8	1.7	27
2012	10	23	4	12.6	120	3.4	12	2.0	19
2012	10	23	5	12.4	117	3.3	10	2.1	18
2012	10	23	6	13.3	115	3.0	18	2.1	19
2012	10	23	7	13.1	114	2.7	10	1.8	9
2012	10	23	8	13.8	114	2.5	20	2.0	21
2012	10	23	9	14.4	113	2.4	31	2.0	24
2012	10	23	10	15.1	113	2.0	56	1.6	26
2012	10	23	11	14.8	111	3.3	73	1.5	31
2012	10	23	12	12.7	107	3.7	85	1.6	45
2012	10	23	13	12.6	105	3.2	74	2.2	62
2012	10	23	14	13.3	104	3.0	57	2.7	67
2012	10	23	15	12.7	101	2.9	55	1.8	48
2012	10	23	16	13.3	101	2.5	60	1.7	55
2012	10	23	17	11.9	108	2.7	53	1.9	44
2012	10	23	18	12.9	106	3.2	43	1.9	45
2012	10	23	19	14.0	107	2.9	37	1.0	53
2012	10	23	20	15.0	102	2.8	20	1.0	53
2012	10	23	21	16.2	91	2.5	28	1.8	60
2012	10	23	22	13.5	102	2.9	31	1.9	56
2012	10	23	23	14.3	100	2.9	27	1.7	58
2012	10	24	0	13.2	109	2.5	20	2.1	41
2012	10	24	1	14.5	107	2.8	28	1.6	55
2012	10	24	2	13.1	106	3.2	36	2.6	42
2012	10	24	3	12.5	112	3.0	35	2.4	39
2012	10	24	4	12.2	107	3.2	34	2.6	42
2012	10	24	5	11.3	106	2.4	36	2.6	46
2012	10	24	6	11.3	100	2.3	37	2.9	41
2012	10	24	7	12.3	100	2.4	33	2.9	44
2012	10	24	8	13.6	96	2.6	35	3.1	40
2012	10	24	9	13.6	99	2.6	53	2.4	50
2012	10	24	10	13.8	96	2.7	46	2.2	49
2012	10	24	11	12.9	98	3.3	54	3.1	62
2012	10	24	12	11.8	102	4.1	58	3.4	65
2012	10	24	13	11.4	105	4.1	66	2.9	60
2012	10	24	14	12.1	104	3.6	52	2.5	72
2012	10	24	15	11.5	107	3.1	42	2.0	68
2012	10	24	16	10.9	109	3.0	34	2.2	54
2012	10	24	17	10.3	111	2.4	45	2.5	48
2012	10	24	18	11.4	109	2.5	39	2.6	49
2012	10	24	19	10.8	110	2.3	49	2.9	48
2012	10	24	20	10.3	115	2.0	33	2.5	57
2012	10	24	21	9.7	115	2.0	37	2.0	75
2012	10	24	22	10.7	103	2.1	36	0.8	86
2012	10	24	23	9.4	112	2.4	25	1.7	45

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	25	0	8.9	116	2.3	14	1.4	44
2012	10	25	1	9.3	113	2.3	21	0.5	37
2012	10	25	2	9.4	114	2.5	21	0.7	69
2012	10	25	3	9.2	109	1.6	42	0.8	26
2012	10	25	4	7.9	107	1.0	80	0.8	79
2012	10	25	5	7.6	108	1.2	73	1.2	89
2012	10	25	6	8.2	111	2.1	27	1.2	73
2012	10	25	7	8.8	111	2.0	51	1.2	72
2012	10	25	8	8.5	112	2.6	53	0.7	81
2012	10	25	9	8.6	114	2.4	27	0.2	186
2012	10	25	10	8.6	109	1.9	66	0.3	301
2012	10	25	11	7.9	111	1.9	78	0.5	81
2012	10	25	12	7.8	105	1.9	59	1.1	75
2012	10	25	13	7.5	110	2.4	64	1.0	96
2012	10	25	14	7.0	112	1.9	66	1.4	96
2012	10	25	15	6.8	109	2.0	56	1.2	119
2012	10	25	16	7.1	111	1.7	61	0.5	120
2012	10	25	17	7.3	108	1.7	65	0.7	83
2012	10	25	18	7.2	108	1.4	39	1.3	57
2012	10	25	19	7.1	109	2.0	19	1.8	46
2012	10	25	20	8.0	105	1.6	13	2.1	51
2012	10	25	21	7.8	110	2.0	10	2.0	57
2012	10	25	22	8.3	101	2.2	10	1.6	38
2012	10	25	23	7.6	106	2.2	12	2.2	39
2012	10	26	0	8.2	100	2.1	14	1.5	41
2012	10	26	1	8.4	98	2.4	15	1.6	32
2012	10	26	2	8.5	97	2.3	13	1.8	18
2012	10	26	3	8.0	105	2.1	10	1.9	25
2012	10	26	4	7.7	105	2.3	14	1.7	22
2012	10	26	5	7.6	105	2.6	6	1.4	15
2012	10	26	6	7.2	102	2.6	12	1.1	7
2012	10	26	7	6.9	99	2.9	14	1.1	20
2012	10	26	8	7.5	100	2.8	14	1.4	3
2012	10	26	9	7.3	98	2.6	6	1.2	352
2012	10	26	10	6.2	105	3.0	28	1.1	6
2012	10	26	11	5.6	109	2.9	28	1.2	321
2012	10	26	12	4.7	102	2.7	30	1.1	293
2012	10	26	13	4.5	99	3.0	25	1.2	303
2012	10	26	14	3.9	104	2.8	33	1.5	303
2012	10	26	15	3.0	105	2.7	30	0.9	282
2012	10	26	16	2.9	112	2.5	30	0.9	308
2012	10	26	17	2.6	100	2.7	23	1.0	303
2012	10	26	18	2.3	91	2.7	19	1.2	301
2012	10	26	19	3.2	96	3.1	17	1.8	309
2012	10	26	20	5.8	105	3.5	7	2.1	311
2012	10	26	21	6.0	97	3.0	14	2.3	311
2012	10	26	22	6.4	94	2.8	18	2.3	314
2012	10	26	23	6.5	103	3.5	9	2.7	318

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	27	0	6.3	112	3.7	12	2.9	314
2012	10	27	1	6.0	109	4.1	16	3.1	317
2012	10	27	2	7.6	99	3.5	10	3.5	317
2012	10	27	3	7.4	102	3.8	16	3.3	310
2012	10	27	4	6.7	100	3.9	21	3.4	320
2012	10	27	5	6.7	101	3.9	18	3.2	316
2012	10	27	6	7.6	100	4.1	17	3.5	316
2012	10	27	7	7.7	95	4.2	15	3.5	317
2012	10	27	8	8.4	94	3.2	9	3.0	329
2012	10	27	9	7.6	91	3.7	12	3.5	331
2012	10	27	10	8.1	93	4.0	16	3.5	326
2012	10	27	11	5.9	99	3.9	11	2.6	324
2012	10	27	12	4.8	102	3.6	29	2.2	332
2012	10	27	13	6.6	103	3.2	24	2.3	324
2012	10	27	14	6.9	99	3.5	27	1.1	333
2012	10	27	15	7.8	99	3.7	21	2.0	309
2012	10	27	16	6.7	99	3.5	22	1.5	317
2012	10	27	17	7.0	100	3.8	23	1.9	319
2012	10	27	18	5.9	96	4.2	23	2.4	311
2012	10	27	19	6.2	94	4.2	20	2.9	309
2012	10	27	20	5.1	98	4.6	19	3.1	310
2012	10	27	21	3.5	108	4.6	19	3.4	313
2012	10	27	22	1.3	258	5.4	23	3.6	313
2012	10	27	23	0.6	197	4.8	15	3.7	320
2012	10	28	0	0.6	141	4.8	13	3.6	319
2012	10	28	1	0.4	281	5.7	14	3.8	321
2012	10	28	2	0.5	38	5.6	14	4.0	321
2012	10	28	3	0.4	264	5.6	11	3.9	319
2012	10	28	4	0.5	103	5.5	13	3.8	317
2012	10	28	5	0.8	104	6.3	13	3.5	317
2012	10	28	6	1.3	95	5.9	12	3.9	317
2012	10	28	7	0.8	60	5.4	15	3.9	315
2012	10	28	8	2.0	91	5.3	14	3.9	317
2012	10	28	9	0.9	269	4.9	18	3.3	320
2012	10	28	10	1.8	220	4.9	17	3.2	319
2012	10	28	11	3.7	109	5.0	21	3.0	317
2012	10	28	12	1.4	254	5.0	25	2.5	321
2012	10	28	13	1.6	256	4.8	25	2.6	322
2012	10	28	14	0.9	243	4.6	23	2.5	320
2012	10	28	15	2.7	109	4.3	21	1.9	323
2012	10	28	16	3.6	109	4.4	19	2.2	320
2012	10	28	17	1.6	269	4.8	22	2.2	322
2012	10	28	18	4.2	105	4.8	20	2.7	317
2012	10	28	19	5.9	101	4.6	20	3.2	320
2012	10	28	20	6.7	97	4.6	19	3.2	316
2012	10	28	21	6.5	101	4.6	17	3.2	316
2012	10	28	22	6.1	106	4.5	20	3.5	316
2012	10	28	23	6.3	108	4.9	21	3.5	308

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	29	0	6.2	110	5.0	21	3.7	311
2012	10	29	1	6.6	106	5.0	18	3.6	316
2012	10	29	2	7.3	105	5.0	20	3.6	316
2012	10	29	3	6.7	108	4.9	18	3.5	316
2012	10	29	4	6.9	105	5.0	21	3.4	311
2012	10	29	5	7.2	105	4.8	19	3.4	311
2012	10	29	6	6.9	98	5.3	21	3.6	315
2012	10	29	7	7.5	101	4.8	19	3.6	315
2012	10	29	8	7.6	97	4.9	19	3.7	320
2012	10	29	9	7.3	101	4.8	21	3.7	318
2012	10	29	10	6.5	104	5.1	20	3.5	319
2012	10	29	11	4.3	109	5.3	20	3.4	311
2012	10	29	12	0.7	208	5.0	25	2.9	306
2012	10	29	13	2.4	121	4.9	23	3.0	309
2012	10	29	14	3.1	118	4.5	24	2.9	308
2012	10	29	15	1.4	129	4.1	21	2.7	312
2012	10	29	16	0.7	127	4.2	20	2.5	314
2012	10	29	17	1.0	99	4.1	16	2.9	314
2012	10	29	18	1.0	111	4.7	13	3.0	312
2012	10	29	19	1.6	92	4.8	14	3.5	320
2012	10	29	20	1.1	90	4.5	14	3.5	314
2012	10	29	21	1.5	96	4.3	3	3.5	313
2012	10	29	22	0.9	96	3.5	359	3.5	317
2012	10	29	23	1.5	98	3.1	1	3.1	324
2012	10	30	0	2.6	88	2.6	357	2.7	331
2012	10	30	1	3.9	90	2.1	357	2.1	340
2012	10	30	2	5.7	111	2.0	6	2.0	341
2012	10	30	3	4.8	108	2.2	9	1.7	4
2012	10	30	4	5.6	105	2.3	7	2.1	353
2012	10	30	5	5.6	109	1.8	1	1.9	6
2012	10	30	6	4.7	108	1.9	9	1.7	360
2012	10	30	7	5.1	103	2.0	10	1.6	350
2012	10	30	8	5.2	111	1.6	10	1.7	357
2012	10	30	9	6.5	107	0.8	19	1.6	9
2012	10	30	10	7.7	107	1.0	77	0.9	349
2012	10	30	11	8.6	105	1.2	102	0.7	323
2012	10	30	12	9.2	102	1.0	147	0.7	150
2012	10	30	13	9.1	105	0.9	82	0.7	180
2012	10	30	14	10.0	101	0.5	26	1.1	168
2012	10	30	15	9.5	101	0.4	29	0.7	131
2012	10	30	16	10.6	102	1.2	105	1.2	120
2012	10	30	17	11.6	104	1.4	55	1.3	84
2012	10	30	18	12.8	105	1.5	19	0.8	102
2012	10	30	19	12.5	105	1.6	44	1.5	79
2012	10	30	20	12.3	103	1.9	21	1.9	76
2012	10	30	21	11.9	104	1.8	15	1.5	58
2012	10	30	22	12.0	104	1.9	11	0.6	87
2012	10	30	23	12.1	103	2.0	4	1.2	72

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	10	31	0	12.0	104	2.3	7	1.1	55
2012	10	31	1	12.8	105	2.2	2	0.6	53
2012	10	31	2	12.9	105	2.3	5	0.7	78
2012	10	31	3	13.0	104	2.5	17	0.4	46
2012	10	31	4	13.8	101	2.7	24	1.3	65
2012	10	31	5	12.8	100	1.7	0	1.8	57
2012	10	31	6	13.1	99	1.4	19	1.4	71
2012	10	31	7	13.8	104	0.7	68	0.7	242
2012	10	31	8	13.9	107	1.6	13	0.3	271
2012	10	31	9	13.3	108	1.5	34	0.6	158
2012	10	31	10	13.6	105	2.0	40	1.2	132
2012	10	31	11	13.7	104	1.8	37	1.6	113
2012	10	31	12	11.8	98	1.7	54	2.1	109
2012	10	31	13	12.9	101	2.3	27	1.0	157
2012	10	31	14	13.5	103	3.2	20	2.2	110
2012	10	31	15	14.0	104	2.5	24	2.8	102
2012	10	31	16	13.8	103	2.3	17	2.3	76
2012	10	31	17	13.5	103	2.7	8	1.9	66
2012	10	31	18	13.6	106	2.4	10	1.4	58
2012	10	31	19	13.1	106	2.3	358	0.5	119
2012	10	31	20	13.0	105	2.2	359	0.5	86
2012	10	31	21	13.3	109	2.3	7	0.6	52
2012	10	31	22	12.0	106	2.2	14	0.5	69
2012	10	31	23	11.6	103	1.9	15	0.6	296
2012	11	1	0	11.6	101	1.7	17	1.3	0
2012	11	1	1	11.3	101	1.2	30	2.0	3
2012	11	1	2	10.8	105	0.7	351	2.6	20
2012	11	1	3	11.2	105	0.8	358	1.9	16
2012	11	1	4	11.8	106	1.0	18	0.5	0
2012	11	1	5	11.4	107	0.5	101	0.5	340
2012	11	1	6	10.7	109	0.7	131	0.6	82
2012	11	1	7	10.1	103	0.8	13	0.7	41
2012	11	1	8	11.6	109	0.5	266	0.4	317
2012	11	1	9	12.8	110	0.5	85	0.2	175
2012	11	1	10	11.8	107	0.6	90	0.3	225
2012	11	1	11	11.0	105	0.9	137	0.5	220
2012	11	1	12	10.7	109	1.1	174	0.6	207
2012	11	1	13	10.2	106	0.7	159	0.6	173
2012	11	1	14	10.5	107	0.5	180	0.5	122
2012	11	1	15	11.7	108	1.1	215	0.6	161
2012	11	1	16	12.6	105	1.3	234	0.8	119
2012	11	1	17	12.9	107	1.1	194	0.7	110
2012	11	1	18	11.1	105	0.9	201	0.6	81
2012	11	1	19	12.7	101	0.8	347	0.7	37
2012	11	1	20	11.7	103	1.3	19	0.6	106
2012	11	1	21	11.5	98	0.6	38	0.4	98
2012	11	1	22	13.2	96	0.9	14	0.3	128
2012	11	1	23	11.5	95	1.0	216	0.7	77

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	2	0	11.0	98	1.8	9	0.5	238
2012	11	2	1	12.9	101	1.1	33	0.9	338
2012	11	2	2	13.5	100	1.1	22	0.8	120
2012	11	2	3	13.9	99	1.6	26	0.7	72
2012	11	2	4	14.3	97	1.4	18	1.6	87
2012	11	2	5	14.6	95	1.8	20	1.9	96
2012	11	2	6	14.6	95	0.8	24	1.1	135
2012	11	2	7	14.8	93	1.5	41	0.7	93
2012	11	2	8	15.3	100	1.4	32	1.1	62
2012	11	2	9	15.5	98	0.9	216	2.0	70
2012	11	2	10	15.5	97	1.1	215	1.2	96
2012	11	2	11	14.6	100	0.8	222	1.6	111
2012	11	2	12	14.8	96	0.9	56	1.6	102
2012	11	2	13	15.2	94	0.8	95	1.7	94
2012	11	2	14	14.7	95	0.8	105	1.5	89
2012	11	2	15	14.0	94	0.9	44	1.8	88
2012	11	2	16	14.2	96	0.9	104	2.1	86
2012	11	2	17	14.7	92	0.7	116	2.5	89
2012	11	2	18	14.0	97	0.8	152	2.6	83
2012	11	2	19	13.5	96	1.0	32	2.9	91
2012	11	2	20	12.5	95	1.1	138	3.0	88
2012	11	2	21	13.7	93	1.6	175	3.2	87
2012	11	2	22	11.8	96	1.5	189	3.2	90
2012	11	2	23	10.3	101	1.0	200	3.6	97
2012	11	3	0	6.3	100	1.7	224	3.2	98
2012	11	3	1	5.6	99	1.6	216	3.6	106
2012	11	3	2	7.7	91	1.6	202	3.5	123
2012	11	3	3	8.5	95	1.1	210	1.5	135
2012	11	3	4	9.7	82	0.7	235	1.8	118
2012	11	3	5	8.2	99	0.6	8	2.7	117
2012	11	3	6	8.6	105	1.1	320	2.4	114
2012	11	3	7	10.0	100	0.8	169	2.2	94
2012	11	3	8	10.0	88	1.0	177	2.1	91
2012	11	3	9	11.1	88	0.9	202	2.6	81
2012	11	3	10	13.4	79	0.7	184	3.0	81
2012	11	3	11	11.9	91	1.0	165	3.6	100
2012	11	3	12	10.0	93	1.1	160	4.1	109
2012	11	3	13	10.7	91	1.2	141	3.7	102
2012	11	3	14	9.7	100	1.1	190	4.3	110
2012	11	3	15	7.2	106	0.8	254	4.0	109
2012	11	3	16	6.6	103	1.1	207	3.8	109
2012	11	3	17	8.5	96	1.2	219	4.2	110
2012	11	3	18	10.0	87	1.0	194	4.5	112
2012	11	3	19	9.7	85	1.1	198	4.7	113
2012	11	3	20	9.0	95	0.9	216	4.3	112
2012	11	3	21	8.5	105	0.9	204	4.1	111
2012	11	3	22	9.0	93	1.2	192	4.5	115
2012	11	3	23	7.1	94	1.0	193	4.3	114

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	4	0	8.0	108	0.8	225	4.7	114
2012	11	4	1	11.5	88	0.9	155	4.6	113
2012	11	4	2	11.0	85	1.1	217	5.1	117
2012	11	4	3	10.9	89	0.8	299	4.6	114
2012	11	4	4	10.9	93	0.9	204	3.9	105
2012	11	4	5	9.9	96	1.2	304	3.5	98
2012	11	4	6	10.3	99	2.0	16	3.7	99
2012	11	4	7	12.8	102	1.8	5	2.7	91
2012	11	4	8	16.9	97	1.6	333	2.8	94
2012	11	4	9	19.5	94	2.0	321	3.3	91
2012	11	4	10	17.1	97	2.0	349	3.1	88
2012	11	4	11	15.8	96	2.7	13	3.0	82
2012	11	4	12	15.7	95	2.3	353	3.5	85
2012	11	4	13	15.0	92	1.9	245	4.7	95
2012	11	4	14	13.2	99	2.0	221	5.3	94
2012	11	4	15	12.4	90	1.6	194	5.2	108
2012	11	4	16	14.5	90	2.1	177	5.4	113
2012	11	4	17	12.8	93	2.2	154	5.8	108
2012	11	4	18	13.5	90	2.6	151	4.6	109
2012	11	4	19	12.7	90	3.1	149	4.9	117
2012	11	4	20	10.6	96	3.0	183	5.3	119
2012	11	4	21	8.0	118	3.3	183	5.7	120
2012	11	4	22	6.1	92	3.5	177	5.8	116
2012	11	4	23	6.3	329	3.3	167	6.4	117
2012	11	5	0	8.3	272	2.0	171	6.5	116
2012	11	5	1	9.5	262	2.4	177	6.0	113
2012	11	5	2	6.4	263	3.9	189	6.3	112
2012	11	5	3	4.6	275	3.6	183	5.7	113
2012	11	5	4	3.9	288	4.1	195	4.1	118
2012	11	5	5	4.8	294	3.2	185	4.4	118
2012	11	5	6	6.4	290	2.2	192	3.8	121
2012	11	5	7	4.3	319	2.2	193	4.0	122
2012	11	5	8	4.1	293	2.6	207	4.8	118
2012	11	5	9	4.9	275	2.2	192	5.2	117
2012	11	5	10	3.7	274	2.4	198	3.6	126
2012	11	5	11	4.2	280	2.6	200	3.5	117
2012	11	5	12	6.3	266	3.2	204	2.6	124
2012	11	5	13	4.7	256	4.0	209	1.9	136
2012	11	5	14	3.7	296	4.5	199	3.5	114
2012	11	5	15	2.1	294	3.5	200	3.8	108
2012	11	5	16	3.0	122	2.5	210	2.4	131
2012	11	5	17	7.2	95	2.1	184	2.9	120
2012	11	5	18	7.7	93	1.9	182	3.1	103
2012	11	5	19	5.5	98	1.9	190	3.4	111
2012	11	5	20	6.4	102	1.3	187	3.5	107
2012	11	5	21	5.7	100	1.2	173	3.6	105
2012	11	5	22	4.1	91	0.9	157	3.7	105
2012	11	5	23	9.2	85	0.9	202	3.3	97

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	6	0	9.2	84	1.0	180	3.9	102
2012	11	6	1	9.0	86	1.1	195	4.3	92
2012	11	6	2	8.6	90	0.8	183	4.7	93
2012	11	6	3	9.4	93	0.9	215	4.4	98
2012	11	6	4	9.9	92	0.8	42	4.2	87
2012	11	6	5	12.0	91	0.8	194	4.6	92
2012	11	6	6	12.6	94	1.3	331	3.9	95
2012	11	6	7	13.3	91	1.3	352	3.3	97
2012	11	6	8	12.8	91	1.5	356	2.9	99
2012	11	6	9	12.4	98	1.6	4	3.0	83
2012	11	6	10	11.4	95	1.6	11	3.0	87
2012	11	6	11	11.1	91	1.4	11	2.2	73
2012	11	6	12	9.9	98	1.8	16	1.4	91
2012	11	6	13	8.7	103	2.1	22	1.4	90
2012	11	6	14	9.6	104	2.1	4	0.4	157
2012	11	6	15	9.3	99	2.2	5	0.4	58
2012	11	6	16	9.1	101	1.4	17	0.3	155
2012	11	6	17	10.2	98	1.2	59	0.2	286
2012	11	6	18	10.6	98	1.0	270	1.4	100
2012	11	6	19	10.2	100	1.7	8	2.3	95
2012	11	6	20	8.3	94	2.2	21	2.0	92
2012	11	6	21	7.9	86	2.0	11	1.4	100
2012	11	6	22	7.4	98	2.0	6	1.2	105
2012	11	6	23	7.2	101	1.7	5	1.1	112
2012	11	7	0	6.2	99	1.1	13	1.2	106
2012	11	7	1	5.8	104	0.5	226	1.0	108
2012	11	7	2	5.2	109	0.8	203	0.6	114
2012	11	7	3	5.1	102	1.4	213	0.4	113
2012	11	7	4	4.2	101	1.3	223	0.1	120
2012	11	7	5	3.4	105	0.9	218	0.0	0
2012	11	7	6	1.5	98	0.7	201	0.0	0
2012	11	7	7	0.1	172	0.3	132	0.0	0
2012	11	7	8	0.4	107	0.6	169	0.0	0
2012	11	7	9	0.8	267	0.7	192	0.0	0
2012	11	7	10	1.5	249	0.7	153	0.0	0
2012	11	7	11	1.7	255	0.2	117	0.0	0
2012	11	7	12	2.0	263	0.1	156	0.0	256
2012	11	7	13	2.0	281	0.5	133	0.2	241
2012	11	7	14	2.1	284	0.4	147	0.4	213
2012	11	7	15	2.1	274	0.3	118	0.3	204
2012	11	7	16	1.7	276	0.5	153	0.2	208
2012	11	7	17	0.9	261	0.4	223	0.2	206
2012	11	7	18	1.1	271	0.2	177	0.5	267
2012	11	7	19	1.1	262	0.3	348	0.6	251
2012	11	7	20	1.0	278	0.3	274	0.7	263
2012	11	7	21	1.0	280	0.4	297	0.4	293
2012	11	7	22	1.3	261	0.6	7	0.5	336
2012	11	7	23	1.6	270	1.8	12	0.7	313

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	8	0	1.4	268	1.6	2	0.6	32
2012	11	8	1	0.4	198	3.3	360	0.8	26
2012	11	8	2	0.3	276	3.3	9	1.5	325
2012	11	8	3	0.3	167	3.7	9	2.1	317
2012	11	8	4	0.5	270	3.9	9	1.9	313
2012	11	8	5	0.7	262	3.9	7	3.0	322
2012	11	8	6	0.6	254	4.1	7	3.1	318
2012	11	8	7	0.5	190	4.8	13	3.4	310
2012	11	8	8	1.5	84	4.8	11	3.3	313
2012	11	8	9	1.1	67	4.6	13	3.2	317
2012	11	8	10	0.7	72	4.8	12	3.6	319
2012	11	8	11	0.9	44	4.9	13	3.0	316
2012	11	8	12	0.7	45	4.4	14	3.0	314
2012	11	8	13	1.3	109	4.1	11	2.9	317
2012	11	8	14	0.6	62	3.7	11	2.7	321
2012	11	8	15	2.2	81	3.3	5	1.6	316
2012	11	8	16	1.8	84	3.3	9	1.6	292
2012	11	8	17	3.5	86	3.5	13	1.9	319
2012	11	8	18	3.2	88	3.9	12	2.6	321
2012	11	8	19	4.2	84	3.7	11	2.6	339
2012	11	8	20	4.3	92	3.2	12	2.4	352
2012	11	8	21	5.0	101	3.0	14	2.1	351
2012	11	8	22	5.6	104	2.9	6	2.1	344
2012	11	8	23	5.3	102	3.3	11	1.6	334
2012	11	9	0	3.8	101	3.5	15	1.8	335
2012	11	9	1	4.1	101	2.7	9	1.9	339
2012	11	9	2	3.7	85	2.6	3	2.2	349
2012	11	9	3	4.1	86	3.2	11	2.3	351
2012	11	9	4	3.7	86	3.3	10	2.5	347
2012	11	9	5	3.3	89	2.6	10	2.3	339
2012	11	9	6	4.0	87	2.5	15	1.5	355
2012	11	9	7	3.6	88	3.2	16	1.2	1
2012	11	9	8	5.1	94	3.2	12	1.5	0
2012	11	9	9	6.5	108	3.8	11	1.7	357
2012	11	9	10	5.6	105	3.5	13	1.5	0
2012	11	9	11	6.9	99	3.2	19	1.0	44
2012	11	9	12	8.0	102	3.7	22	1.0	29
2012	11	9	13	6.5	107	4.1	21	2.2	19
2012	11	9	14	7.5	106	3.6	23	2.0	28
2012	11	9	15	3.2	113	3.2	24	1.1	329
2012	11	9	16	7.2	105	2.9	21	0.6	12
2012	11	9	17	8.0	105	3.3	23	1.4	343
2012	11	9	18	9.7	104	3.1	13	2.0	339
2012	11	9	19	10.8	100	2.6	2	1.7	348
2012	11	9	20	9.8	101	2.3	4	2.1	10
2012	11	9	21	10.2	103	1.8	6	2.2	9
2012	11	9	22	11.4	101	1.9	358	1.8	11
2012	11	9	23	10.6	104	1.3	356	1.9	19

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	10	0	9.0	110	0.5	350	1.5	15
2012	11	10	1	9.4	107	0.4	74	1.6	4
2012	11	10	2	9.0	106	0.3	89	0.8	39
2012	11	10	3	8.0	110	0.6	63	0.9	333
2012	11	10	4	9.3	106	0.7	69	0.5	31
2012	11	10	5	9.5	107	0.5	124	0.8	352
2012	11	10	6	8.7	108	0.5	191	0.5	25
2012	11	10	7	9.4	107	0.4	57	0.2	33
2012	11	10	8	9.5	111	0.5	192	0.4	69
2012	11	10	9	9.8	107	0.7	152	0.1	226
2012	11	10	10	9.9	106	0.7	157	0.2	192
2012	11	10	11	9.7	108	0.5	187	0.4	159
2012	11	10	12	9.5	107	0.9	177	0.5	135
2012	11	10	13	8.4	110	0.8	167	0.5	167
2012	11	10	14	8.0	105	0.8	183	0.7	153
2012	11	10	15	7.6	100	0.9	200	1.0	109
2012	11	10	16	8.0	106	0.4	156	0.5	136
2012	11	10	17	8.3	105	0.4	153	0.5	119
2012	11	10	18	8.8	106	0.4	126	0.4	101
2012	11	10	19	9.1	107	0.4	118	0.3	136
2012	11	10	20	10.6	103	0.5	198	0.4	135
2012	11	10	21	10.4	102	0.5	206	0.3	211
2012	11	10	22	8.7	102	0.7	142	0.9	84
2012	11	10	23	8.8	98	0.3	185	1.2	70
2012	11	11	0	10.2	96	0.4	146	1.5	70
2012	11	11	1	10.3	93	0.3	40	1.9	79
2012	11	11	2	10.7	98	0.6	0	2.3	85
2012	11	11	3	12.6	103	0.7	356	1.2	79
2012	11	11	4	12.1	103	1.1	21	1.5	86
2012	11	11	5	12.5	99	1.0	14	1.1	92
2012	11	11	6	13.2	103	1.0	21	0.4	107
2012	11	11	7	13.4	102	0.7	16	1.2	92
2012	11	11	8	12.7	104	0.4	345	1.3	90
2012	11	11	9	12.3	105	0.6	2	1.1	100
2012	11	11	10	12.7	103	1.0	26	1.8	93
2012	11	11	11	12.3	102	0.5	155	1.8	89
2012	11	11	12	11.9	102	1.0	224	2.1	93
2012	11	11	13	11.6	101	1.0	215	2.3	101
2012	11	11	14	11.8	103	1.1	214	1.3	116
2012	11	11	15	12.2	102	1.0	186	1.0	110
2012	11	11	16	12.3	104	1.1	225	1.3	96
2012	11	11	17	12.2	104	0.7	230	1.3	99
2012	11	11	18	11.8	104	0.4	141	1.4	108
2012	11	11	19	11.4	105	0.4	99	0.7	125
2012	11	11	20	11.3	105	0.2	111	0.8	108
2012	11	11	21	10.8	104	0.4	128	1.4	90
2012	11	11	22	11.5	104	0.3	125	0.9	82
2012	11	11	23	10.9	106	0.4	148	0.6	104

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	12	0	11.4	104	0.3	175	0.3	94
2012	11	12	1	11.2	103	0.3	197	0.2	174
2012	11	12	2	10.4	103	0.3	213	0.7	95
2012	11	12	3	9.1	106	0.5	142	0.6	65
2012	11	12	4	10.3	109	0.3	221	0.8	78
2012	11	12	5	10.0	111	0.3	211	1.0	84
2012	11	12	6	10.4	107	0.5	168	1.0	89
2012	11	12	7	9.9	104	0.4	197	0.5	100
2012	11	12	8	9.9	106	0.2	174	1.2	82
2012	11	12	9	8.8	108	0.4	204	0.7	94
2012	11	12	10	8.4	107	0.3	166	1.0	106
2012	11	12	11	7.9	105	0.2	221	0.2	262
2012	11	12	12	7.3	102	0.4	194	0.3	218
2012	11	12	13	6.3	107	0.2	84	0.4	209
2012	11	12	14	6.0	109	NAN	NAN	0.3	202
2012	11	12	15	5.6	110	NAN	NAN	0.5	205
2012	11	12	16	5.5	107	NAN	NAN	0.4	213
2012	11	12	17	5.2	111	NAN	NAN	0.3	220
2012	11	12	18	5.0	103	NAN	NAN	0.0	235
2012	11	12	19	4.4	108	NAN	NAN	0.1	279
2012	11	12	20	3.9	105	NAN	NAN	0.3	347
2012	11	12	21	4.3	104	NAN	NAN	0.1	280
2012	11	12	22	4.5	106	NAN	NAN	0.1	310
2012	11	12	23	3.2	92	NAN	NAN	0.1	332
2012	11	13	0	2.3	86	NAN	NAN	0.2	105
2012	11	13	1	1.8	87	NAN	NAN	0.1	350
2012	11	13	2	0.8	183	NAN	NAN	0.4	17
2012	11	13	3	1.5	261	NAN	NAN	0.3	343
2012	11	13	4	1.5	247	NAN	NAN	0.3	12
2012	11	13	5	1.7	254	NAN	NAN	0.1	319
2012	11	13	6	2.0	254	NAN	NAN	0.1	288
2012	11	13	7	0.8	266	NAN	NAN	0.3	312
2012	11	13	8	0.9	195	NAN	NAN	0.2	301
2012	11	13	9	1.3	86	NAN	NAN	0.2	324
2012	11	13	10	1.3	87	NAN	NAN	0.2	321
2012	11	13	11	1.8	241	0.1	324	0.1	179
2012	11	13	12	2.3	240	0.5	255	0.2	205
2012	11	13	13	2.1	255	0.9	205	0.5	202
2012	11	13	14	1.8	255	0.6	305	0.4	161
2012	11	13	15	2.1	252	0.8	320	0.4	178
2012	11	13	16	1.6	236	1.3	212	0.6	56
2012	11	13	17	2.4	116	1.6	201	0.9	132
2012	11	13	18	1.8	204	1.5	214	2.2	107
2012	11	13	19	2.6	249	0.9	213	1.6	105
2012	11	13	20	3.5	261	0.8	201	1.9	104
2012	11	13	21	3.1	256	0.6	189	2.1	120
2012	11	13	22	3.4	258	0.3	233	1.2	123
2012	11	13	23	3.6	247	1.1	339	1.2	124

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	14	0	2.8	241	0.7	360	1.0	109
2012	11	14	1	3.1	259	0.6	231	0.3	114
2012	11	14	2	2.1	281	0.6	224	0.6	105
2012	11	14	3	2.7	303	0.6	263	0.8	98
2012	11	14	4	3.0	298	0.6	284	0.5	108
2012	11	14	5	3.1	272	0.6	346	0.9	96
2012	11	14	6	3.2	288	0.6	316	0.9	107
2012	11	14	7	2.4	277	1.0	244	1.2	88
2012	11	14	8	2.6	269	0.9	208	1.3	96
2012	11	14	9	3.6	279	0.9	220	1.7	104
2012	11	14	10	3.2	282	0.6	219	1.4	82
2012	11	14	11	2.6	272	1.3	205	1.9	105
2012	11	14	12	2.4	289	1.3	221	1.4	114
2012	11	14	13	3.1	261	1.5	214	2.2	105
2012	11	14	14	7.5	244	1.2	218	1.9	114
2012	11	14	15	6.4	258	1.6	203	2.6	110
2012	11	14	16	4.1	221	2.1	212	3.6	115
2012	11	14	17	5.7	92	2.5	205	3.9	111
2012	11	14	18	8.1	89	2.5	195	3.7	115
2012	11	14	19	10.1	83	2.4	179	4.6	108
2012	11	14	20	9.8	81	1.8	172	4.7	108
2012	11	14	21	9.0	95	1.5	193	4.6	110
2012	11	14	22	9.6	93	1.5	170	5.0	116
2012	11	14	23	7.5	100	1.5	191	4.5	118
2012	11	15	0	5.2	325	1.3	172	6.5	115
2012	11	15	1	4.7	309	2.1	204	6.7	115
2012	11	15	2	1.8	325	2.3	195	5.7	118
2012	11	15	3	3.6	277	2.8	226	2.7	95
2012	11	15	4	3.1	315	4.3	214	1.3	28
2012	11	15	5	4.1	110	4.0	215	1.6	31
2012	11	15	6	5.6	102	2.5	195	0.7	91
2012	11	15	7	6.2	108	2.0	218	1.7	108
2012	11	15	8	8.5	118	2.7	221	1.8	119
2012	11	15	9	7.4	108	2.7	207	1.2	125
2012	11	15	10	6.9	105	1.5	191	1.5	89
2012	11	15	11	5.6	100	1.0	182	1.2	118
2012	11	15	12	6.0	97	1.0	194	1.4	118
2012	11	15	13	8.7	83	1.2	175	1.7	103
2012	11	15	14	8.8	94	0.7	191	1.9	90
2012	11	15	15	8.7	93	0.9	337	2.3	91
2012	11	15	16	8.2	98	1.2	9	2.1	88
2012	11	15	17	8.4	95	1.6	6	2.1	70
2012	11	15	18	9.9	92	1.5	354	1.6	73
2012	11	15	19	10.2	97	1.5	12	1.1	77
2012	11	15	20	9.4	96	1.6	11	1.0	70
2012	11	15	21	10.5	96	1.2	11	1.4	66
2012	11	15	22	9.6	95	0.9	357	1.7	76
2012	11	15	23	10.1	96	2.0	8	1.5	55

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	16	0	8.8	99	2.0	8	1.1	44
2012	11	16	1	10.1	95	1.9	14	0.7	84
2012	11	16	2	12.3	94	1.9	19	1.2	75
2012	11	16	3	12.5	97	2.1	14	1.5	76
2012	11	16	4	12.0	98	2.2	10	2.2	67
2012	11	16	5	14.1	89	2.3	15	2.7	63
2012	11	16	6	13.0	97	1.9	0	3.3	81
2012	11	16	7	13.0	94	1.4	327	3.0	87
2012	11	16	8	13.7	94	1.1	8	2.9	89
2012	11	16	9	13.0	94	1.4	355	3.0	89
2012	11	16	10	13.2	94	1.3	74	2.9	89
2012	11	16	11	12.6	95	1.1	286	2.8	98
2012	11	16	12	13.1	95	1.5	300	2.4	96
2012	11	16	13	4.9	89	1.8	322	2.6	99
2012	11	16	14	1.4	252	1.4	206	3.1	107
2012	11	16	15	1.4	183	1.5	193	3.3	118
2012	11	16	16	7.5	94	1.1	217	4.5	120
2012	11	16	17	7.5	110	1.0	187	4.4	106
2012	11	16	18	8.8	92	0.4	174	2.9	109
2012	11	16	19	9.0	94	0.8	347	3.1	102
2012	11	16	20	8.1	100	0.9	55	3.0	89
2012	11	16	21	6.8	91	1.4	1	1.6	90
2012	11	16	22	8.4	92	1.7	10	1.3	79
2012	11	16	23	9.1	100	1.8	9	0.8	38
2012	11	17	0	9.1	96	1.1	13	NAN	NAN
2012	11	17	1	8.2	100	0.8	27	NAN	NAN
2012	11	17	2	7.4	95	1.7	3	NAN	NAN
2012	11	17	3	7.5	101	2.2	19	NAN	NAN
2012	11	17	4	8.0	94	2.1	17	NAN	NAN
2012	11	17	5	6.9	105	2.2	25	NAN	NAN
2012	11	17	6	10.6	116	3.0	17	NAN	NAN
2012	11	17	7	11.8	116	2.9	13	NAN	NAN
2012	11	17	8	13.6	112	3.2	13	NAN	NAN
2012	11	17	9	12.5	114	3.1	19	NAN	NAN
2012	11	17	10	8.2	121	2.9	21	NAN	NAN
2012	11	17	11	9.2	115	2.8	17	NAN	NAN
2012	11	17	12	8.4	102	2.3	6	NAN	NAN
2012	11	17	13	9.2	100	2.2	14	NAN	NAN
2012	11	17	14	6.3	100	1.5	360	NAN	NAN
2012	11	17	15	4.6	104	0.4	355	NAN	NAN
2012	11	17	16	6.5	104	NAN	NAN	NAN	NAN
2012	11	17	17	6.7	97	1.3	13	NAN	NAN
2012	11	17	18	7.2	97	3.0	9	NAN	NAN
2012	11	17	19	7.2	101	3.4	12	NAN	NAN
2012	11	17	20	7.0	102	3.1	18	NAN	NAN
2012	11	17	21	3.6	140	3.6	12	NAN	NAN
2012	11	17	22	1.4	257	3.5	17	NAN	NAN
2012	11	17	23	1.1	255	3.3	15	NAN	NAN

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	18	0	1.4	257	3.2	12	NAN	NAN
2012	11	18	1	1.2	247	3.5	9	NAN	NAN
2012	11	18	2	0.8	265	3.8	9	NAN	NAN
2012	11	18	3	1.4	25	4.5	14	NAN	NAN
2012	11	18	4	1.1	94	4.5	15	NAN	NAN
2012	11	18	5	7.7	89	4.4	11	NAN	NAN
2012	11	18	6	8.9	99	4.3	14	NAN	NAN
2012	11	18	7	9.3	94	3.6	16	NAN	NAN
2012	11	18	8	8.7	102	2.9	11	NAN	NAN
2012	11	18	9	7.7	101	2.8	11	NAN	NAN
2012	11	18	10	7.1	85	2.6	11	NAN	NAN
2012	11	18	11	5.8	102	2.2	3	NAN	NAN
2012	11	18	12	7.9	97	2.6	9	NAN	NAN
2012	11	18	13	8.4	107	2.4	10	NAN	NAN
2012	11	18	14	8.7	95	2.9	14	NAN	NAN
2012	11	18	15	8.2	101	3.1	21	NAN	NAN
2012	11	18	16	9.3	106	3.4	15	NAN	NAN
2012	11	18	17	10.5	98	3.6	13	NAN	NAN
2012	11	18	18	10.6	103	3.8	16	NAN	NAN
2012	11	18	19	15.0	111	3.9	9	NAN	NAN
2012	11	18	20	15.6	111	3.3	12	NAN	NAN
2012	11	18	21	16.4	111	3.1	3	NAN	NAN
2012	11	18	22	17.1	103	2.4	1	NAN	NAN
2012	11	18	23	16.5	102	2.4	7	NAN	NAN
2012	11	19	0	13.1	112	3.3	10	NAN	NAN
2012	11	19	1	13.4	109	2.4	5	NAN	NAN
2012	11	19	2	14.4	108	2.3	6	NAN	NAN
2012	11	19	3	11.6	107	2.4	3	NAN	NAN
2012	11	19	4	9.9	101	2.7	5	NAN	NAN
2012	11	19	5	8.9	97	2.5	14	NAN	NAN
2012	11	19	6	9.8	100	3.0	13	NAN	NAN
2012	11	19	7	8.6	103	2.7	10	NAN	NAN
2012	11	19	8	8.5	106	2.5	359	NAN	NAN
2012	11	19	9	8.5	101	3.0	1	NAN	NAN
2012	11	19	10	9.1	97	3.0	3	NAN	NAN
2012	11	19	11	8.3	101	2.7	354	NAN	NAN
2012	11	19	12	8.7	101	3.1	6	NAN	NAN
2012	11	19	13	8.7	100	3.1	10	NAN	NAN
2012	11	19	14	8.7	99	3.3	5	NAN	NAN
2012	11	19	15	8.2	102	3.3	9	NAN	NAN
2012	11	19	16	6.4	96	3.7	18	NAN	NAN
2012	11	19	17	5.9	95	3.8	17	NAN	NAN
2012	11	19	18	7.7	94	4.3	13	NAN	NAN
2012	11	19	19	8.0	98	4.1	19	NAN	NAN
2012	11	19	20	7.5	100	4.4	19	NAN	NAN
2012	11	19	21	7.0	97	4.4	21	NAN	NAN
2012	11	19	22	7.9	91	4.1	19	NAN	NAN
2012	11	19	23	6.1	97	4.0	25	NAN	NAN

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	20	0	4.9	102	4.2	19	NAN	NAN
2012	11	20	1	6.3	95	4.2	22	NAN	NAN
2012	11	20	2	5.9	105	4.2	21	NAN	NAN
2012	11	20	3	6.6	103	3.8	21	NAN	NAN
2012	11	20	4	6.3	92	3.8	23	NAN	NAN
2012	11	20	5	6.6	106	4.1	18	NAN	NAN
2012	11	20	6	6.1	100	4.1	20	NAN	NAN
2012	11	20	7	7.3	96	4.0	20	NAN	NAN
2012	11	20	8	7.9	95	4.6	20	NAN	NAN
2012	11	20	9	9.0	98	4.5	15	NAN	NAN
2012	11	20	10	NAN	NAN	4.1	19	NAN	NAN
2012	11	20	11	NAN	NAN	3.9	20	NAN	NAN
2012	11	20	12	NAN	NAN	3.6	22	NAN	NAN
2012	11	20	13	NAN	NAN	3.4	15	NAN	NAN
2012	11	20	14	NAN	NAN	3.7	9	NAN	NAN
2012	11	20	15	NAN	NAN	3.8	2	NAN	NAN
2012	11	20	16	NAN	NAN	3.2	5	NAN	NAN
2012	11	20	17	NAN	NAN	4.0	10	NAN	NAN
2012	11	20	18	NAN	NAN	4.0	6	NAN	NAN
2012	11	20	19	NAN	NAN	4.1	2	NAN	NAN
2012	11	20	20	NAN	NAN	3.6	2	NAN	NAN
2012	11	20	21	NAN	NAN	4.7	11	NAN	NAN
2012	11	20	22	NAN	NAN	4.7	8	NAN	NAN
2012	11	20	23	NAN	NAN	4.8	5	NAN	NAN
2012	11	20	0	NAN	NAN	4.4	6	NAN	NAN
2012	11	21	1	NAN	NAN	3.9	1	NAN	NAN
2012	11	21	2	NAN	NAN	3.2	19	NAN	NAN
2012	11	21	3	NAN	NAN	3.6	8	NAN	NAN
2012	11	21	4	NAN	NAN	3.9	7	NAN	NAN
2012	11	21	5	NAN	NAN	3.6	19	NAN	NAN
2012	11	21	6	NAN	NAN	3.5	11	NAN	NAN
2012	11	21	7	NAN	NAN	3.2	8	NAN	NAN
2012	11	21	8	NAN	NAN	3.0	4	NAN	NAN
2012	11	21	9	11.0	101	2.8	4	NAN	NAN
2012	11	21	10	11.5	101	2.4	7	NAN	NAN
2012	11	21	11	12.1	91	2.0	21	NAN	NAN
2012	11	21	12	11.1	92	2.0	13	NAN	NAN
2012	11	21	13	11.4	93	2.1	3	NAN	NAN
2012	11	21	14	11.7	93	2.1	4	NAN	NAN
2012	11	21	15	11.2	99	2.1	3	NAN	NAN
2012	11	21	16	11.0	100	2.2	359	NAN	NAN
2012	11	21	17	10.4	101	2.0	359	NAN	NAN
2012	11	21	18	10.2	101	2.1	356	NAN	NAN
2012	11	21	19	10.5	100	2.0	2	NAN	NAN
2012	11	21	20	10.7	105	1.8	1	NAN	NAN
2012	11	21	21	10.9	106	2.2	2	NAN	NAN
2012	11	21	22	10.8	104	1.8	4	NAN	NAN
2012	11	21	23	10.6	103	1.8	4	NAN	NAN

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	22	0	11.5	105	2.5	8	NAN	NAN
2012	11	22	1	12.0	100	2.6	9	NAN	NAN
2012	11	22	2	12.4	100	3.1	7	NAN	NAN
2012	11	22	3	12.9	98	2.9	10	NAN	NAN
2012	11	22	4	12.3	101	3.1	9	NAN	NAN
2012	11	22	5	11.4	101	3.2	15	NAN	NAN
2012	11	22	6	11.5	102	3.2	11	NAN	NAN
2012	11	22	7	12.3	99	3.4	15	NAN	NAN
2012	11	22	8	16.2	104	3.8	12	NAN	NAN
2012	11	22	9	18.5	105	3.8	8	NAN	NAN
2012	11	22	10	19.9	102	3.4	5	NAN	NAN
2012	11	22	11	20.0	103	2.3	354	NAN	NAN
2012	11	22	12	20.5	105	1.9	351	NAN	NAN
2012	11	22	13	19.2	108	1.1	11	NAN	NAN
2012	11	22	14	16.5	107	2.3	39	NAN	NAN
2012	11	22	15	18.1	106	2.7	3	NAN	NAN
2012	11	22	16	16.0	102	2.8	14	NAN	NAN
2012	11	22	17	16.7	107	3.2	8	NAN	NAN
2012	11	22	18	17.2	110	3.0	1	NAN	NAN
2012	11	22	19	16.9	107	2.4	346	NAN	NAN
2012	11	22	20	18.0	106	2.3	8	NAN	NAN
2012	11	22	21	16.4	109	2.8	8	NAN	NAN
2012	11	22	22	14.3	97	1.8	339	NAN	NAN
2012	11	22	23	13.1	99	2.1	353	NAN	NAN
2012	11	23	0	12.7	90	2.2	356	NAN	NAN
2012	11	23	1	12.9	90	1.7	359	NAN	NAN
2012	11	23	2	11.5	97	1.3	270	NAN	NAN
2012	11	23	3	10.1	100	1.7	252	NAN	NAN
2012	11	23	4	9.7	102	1.7	17	NAN	NAN
2012	11	23	5	11.3	95	1.5	21	NAN	NAN
2012	11	23	6	11.7	95	1.3	44	NAN	NAN
2012	11	23	7	11.4	99	0.6	265	NAN	NAN
2012	11	23	8	11.3	97	0.5	135	NAN	NAN
2012	11	23	9	11.6	97	0.7	173	NAN	NAN
2012	11	23	10	11.1	99	0.4	207	NAN	NAN
2012	11	23	11	10.3	101	0.5	333	NAN	NAN
2012	11	23	12	10.7	103	1.3	218	NAN	NAN
2012	11	23	13	11.2	94	1.2	224	NAN	NAN
2012	11	23	14	10.1	103	0.6	359	NAN	NAN
2012	11	23	15	10.3	94	1.1	341	NAN	NAN
2012	11	23	16	10.7	102	0.8	241	NAN	NAN
2012	11	23	17	11.0	96	0.6	216	NAN	NAN
2012	11	23	18	11.7	101	1.0	225	NAN	NAN
2012	11	23	19	12.2	97	0.6	225	NAN	NAN
2012	11	23	20	12.9	93	0.6	216	NAN	NAN
2012	11	23	21	14.3	89	0.9	236	NAN	NAN
2012	11	23	22	13.4	93	1.2	350	NAN	NAN
2012	11	23	23	13.2	93	1.1	351	NAN	NAN

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	24	0	13.4	87	1.0	276	NAN	NAN
2012	11	24	1	12.7	91	0.4	207	NAN	NAN
2012	11	24	2	11.7	98	0.8	237	NAN	NAN
2012	11	24	3	12.5	92	1.3	212	NAN	NAN
2012	11	24	4	12.9	92	1.1	224	NAN	NAN
2012	11	24	5	14.0	87	1.4	231	NAN	NAN
2012	11	24	6	13.2	89	1.1	216	NAN	NAN
2012	11	24	7	13.7	84	1.3	229	NAN	NAN
2012	11	24	8	12.3	94	1.3	216	NAN	NAN
2012	11	24	9	12.9	91	2.0	223	NAN	NAN
2012	11	24	10	10.9	98	1.4	234	NAN	NAN
2012	11	24	11	10.3	97	1.6	210	1.6	116
2012	11	24	12	9.6	88	1.7	207	4.9	116
2012	11	24	13	10.2	82	1.7	210	4.7	116
2012	11	24	14	9.7	90	1.2	216	4.2	121
2012	11	24	15	10.2	99	1.1	213	3.9	122
2012	11	24	16	9.1	102	0.7	218	3.7	126
2012	11	24	17	8.2	94	1.4	217	3.6	127
2012	11	24	18	7.1	98	1.3	219	3.4	127
2012	11	24	19	4.9	103	0.9	218	3.6	113
2012	11	24	20	4.3	105	NAN	NAN	3.8	113
2012	11	24	21	1.9	205	NAN	NAN	3.1	120
2012	11	24	22	2.4	265	NAN	NAN	0.9	129
2012	11	24	23	2.9	270	NAN	NAN	0.2	133
2012	11	25	0	3.1	287	NAN	NAN	1.1	101
2012	11	25	1	2.5	277	NAN	NAN	1.7	115
2012	11	25	2	3.3	304	NAN	NAN	1.5	118
2012	11	25	3	2.8	315	NAN	NAN	1.1	106
2012	11	25	4	2.2	291	NAN	NAN	0.5	107
2012	11	25	5	2.2	290	NAN	NAN	0.3	104
2012	11	25	6	2.5	285	NAN	NAN	0.3	93
2012	11	25	7	1.8	281	NAN	NAN	0.8	80
2012	11	25	8	1.6	270	NAN	NAN	0.5	87
2012	11	25	9	1.3	275	NAN	NAN	0.8	101
2012	11	25	10	0.8	283	NAN	NAN	0.4	91
2012	11	25	11	2.6	101	NAN	NAN	0.8	105
2012	11	25	12	2.7	97	NAN	NAN	0.8	110
2012	11	25	13	1.6	90	NAN	NAN	1.1	108
2012	11	25	14	2.2	93	NAN	NAN	1.1	104
2012	11	25	15	2.0	89	NAN	NAN	1.5	111
2012	11	25	16	1.4	263	NAN	NAN	2.3	110
2012	11	25	17	1.8	268	NAN	NAN	2.1	121
2012	11	25	18	1.5	281	NAN	NAN	2.0	118
2012	11	25	19	2.0	126	NAN	NAN	2.3	119
2012	11	25	20	1.6	109	NAN	NAN	1.9	127
2012	11	25	21	1.2	109	NAN	NAN	0.8	133
2012	11	25	22	1.3	96	NAN	NAN	1.5	115
2012	11	25	23	0.4	10	NAN	NAN	1.9	116

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	26	0	1.6	250	NAN	NAN	1.2	113
2012	11	26	1	1.5	255	NAN	NAN	2.0	112
2012	11	26	2	1.9	249	NAN	NAN	2.1	112
2012	11	26	3	1.3	261	NAN	NAN	1.7	105
2012	11	26	4	1.2	264	NAN	NAN	1.7	97
2012	11	26	5	1.0	256	NAN	NAN	1.8	94
2012	11	26	6	0.6	258	NAN	NAN	0.6	109
2012	11	26	7	0.8	233	NAN	NAN	0.3	334
2012	11	26	8	0.7	85	NAN	NAN	0.5	7
2012	11	26	9	1.7	97	NAN	NAN	0.2	6
2012	11	26	10	2.8	108	NAN	NAN	NAN	NAN
2012	11	26	11	2.4	106	NAN	NAN	NAN	NAN
2012	11	26	12	2.2	94	NAN	NAN	NAN	NAN
2012	11	26	13	2.8	90	NAN	NAN	NAN	NAN
2012	11	26	14	3.1	88	NAN	NAN	NAN	NAN
2012	11	26	15	3.5	92	NAN	NAN	NAN	NAN
2012	11	26	16	3.8	97	NAN	NAN	NAN	NAN
2012	11	26	17	5.0	100	NAN	NAN	NAN	NAN
2012	11	26	18	6.1	103	NAN	NAN	NAN	NAN
2012	11	26	19	7.0	105	NAN	NAN	1.0	25
2012	11	26	20	7.5	101	NAN	NAN	2.2	22
2012	11	26	21	6.9	109	NAN	NAN	2.4	20
2012	11	26	22	7.6	110	NAN	NAN	2.4	21
2012	11	26	23	7.2	103	NAN	NAN	2.1	23
2012	11	27	0	7.4	105	NAN	NAN	2.3	14
2012	11	27	1	7.9	107	NAN	NAN	2.0	16
2012	11	27	2	7.9	106	NAN	NAN	1.9	20
2012	11	27	3	7.7	107	NAN	NAN	1.9	8
2012	11	27	4	8.4	110	NAN	NAN	2.1	14
2012	11	27	5	8.9	110	NAN	NAN	1.7	16
2012	11	27	6	8.6	107	NAN	NAN	1.5	17
2012	11	27	7	9.0	107	NAN	NAN	1.8	16
2012	11	27	8	9.3	104	NAN	NAN	1.8	12
2012	11	27	9	10.1	102	NAN	NAN	1.7	15
2012	11	27	10	9.7	103	NAN	NAN	1.6	23
2012	11	27	11	9.5	103	NAN	NAN	1.4	9
2012	11	27	12	9.2	107	NAN	NAN	0.5	35
2012	11	27	13	9.6	104	NAN	NAN	0.3	85
2012	11	27	14	8.9	107	NAN	NAN	0.4	106
2012	11	27	15	9.9	103	NAN	NAN	0.1	162
2012	11	27	16	10.6	102	NAN	NAN	0.1	133
2012	11	27	17	9.9	103	NAN	NAN	0.4	109
2012	11	27	18	9.8	100	NAN	NAN	0.6	85
2012	11	27	19	10.0	103	NAN	NAN	0.5	33
2012	11	27	20	9.1	107	NAN	NAN	0.8	344
2012	11	27	21	7.9	108	NAN	NAN	0.3	48
2012	11	27	22	8.7	101	NAN	NAN	0.4	32
2012	11	27	23	9.5	102	NAN	NAN	0.7	24

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	28	0	7.7	109	NAN	NAN	0.9	24
2012	11	28	1	7.8	109	NAN	NAN	0.6	20
2012	11	28	2	7.6	106	NAN	NAN	1.2	21
2012	11	28	3	8.5	104	NAN	NAN	0.9	19
2012	11	28	4	8.3	101	NAN	NAN	0.7	8
2012	11	28	5	10.6	97	NAN	NAN	0.8	21
2012	11	28	6	9.7	101	NAN	NAN	0.6	36
2012	11	28	7	9.9	101	NAN	NAN	0.4	33
2012	11	28	8	10.6	103	NAN	NAN	0.6	83
2012	11	28	9	10.2	98	NAN	NAN	0.3	91
2012	11	28	10	11.2	97	NAN	NAN	0.4	47
2012	11	28	11	11.0	103	NAN	NAN	1.3	20
2012	11	28	12	10.0	97	NAN	NAN	0.3	17
2012	11	28	13	10.3	95	NAN	NAN	0.8	24
2012	11	28	14	10.4	96	NAN	NAN	1.3	345
2012	11	28	15	10.3	103	NAN	NAN	0.9	21
2012	11	28	16	10.2	106	NAN	NAN	0.6	47
2012	11	28	17	10.5	98	NAN	NAN	0.7	35
2012	11	28	18	11.4	93	NAN	NAN	1.6	12
2012	11	28	19	10.2	102	NAN	NAN	1.5	359
2012	11	28	20	12.3	94	NAN	NAN	1.3	17
2012	11	28	21	12.4	89	NAN	NAN	1.5	19
2012	11	28	22	12.9	92	NAN	NAN	1.2	18
2012	11	28	23	14.3	87	NAN	NAN	1.3	22
2012	11	29	0	13.0	89	NAN	NAN	1.1	30
2012	11	29	1	11.2	102	NAN	NAN	1.3	18
2012	11	29	2	13.4	98	NAN	NAN	1.5	27
2012	11	29	3	13.6	101	NAN	NAN	1.6	35
2012	11	29	4	13.0	93	NAN	NAN	1.2	24
2012	11	29	5	12.6	93	NAN	NAN	1.1	31
2012	11	29	6	13.3	94	NAN	NAN	1.4	26
2012	11	29	7	12.8	93	NAN	NAN	1.5	27
2012	11	29	8	11.5	95	NAN	NAN	1.5	17
2012	11	29	9	10.4	103	NAN	NAN	1.5	22
2012	11	29	10	12.5	102	NAN	NAN	1.6	38
2012	11	29	11	11.6	103	NAN	NAN	1.9	22
2012	11	29	12	12.1	104	NAN	NAN	1.4	22
2012	11	29	13	11.8	108	NAN	NAN	1.6	19
2012	11	29	14	8.0	102	NAN	NAN	1.8	353
2012	11	29	15	11.6	105	NAN	NAN	1.5	25
2012	11	29	16	10.7	97	NAN	NAN	0.9	25
2012	11	29	17	11.0	103	NAN	NAN	0.3	37
2012	11	29	18	9.2	105	NAN	NAN	1.2	16
2012	11	29	19	10.8	106	NAN	NAN	2.0	19
2012	11	29	20	11.1	108	NAN	NAN	2.0	26
2012	11	29	21	10.6	104	NAN	NAN	2.0	17
2012	11	29	22	12.1	108	NAN	NAN	2.0	18
2012	11	29	23	11.4	104	NAN	NAN	1.8	15

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	11	30	0	12.6	101	NAN	NAN	2.1	10
2012	11	30	1	12.3	95	NAN	NAN	2.0	355
2012	11	30	2	12.1	102	NAN	NAN	2.0	359
2012	11	30	3	11.9	96	NAN	NAN	1.6	351
2012	11	30	4	12.4	94	NAN	NAN	1.4	344
2012	11	30	5	11.9	95	NAN	NAN	1.5	341
2012	11	30	6	9.4	100	0.3	12	1.6	339
2012	11	30	7	8.8	103	5.0	16	2.5	341
2012	11	30	8	10.0	93	4.5	22	2.1	344
2012	11	30	9	10.0	100	4.9	19	1.4	345
2012	11	30	10	10.5	105	4.9	21	1.0	336
2012	11	30	11	7.8	99	4.9	20	2.0	341
2012	11	30	12	8.2	98	5.0	23	1.6	354
2012	11	30	13	8.7	96	5.1	24	1.0	344
2012	11	30	14	9.6	95	5.2	20	1.1	323
2012	11	30	15	12.2	109	4.7	18	1.5	318
2012	11	30	16	12.1	95	5.2	23	0.6	285
2012	11	30	17	11.2	89	5.2	21	0.4	207
2012	11	30	18	11.5	86	4.8	19	0.5	344
2012	11	30	19	12.3	89	5.2	20	0.8	10
2012	11	30	20	11.3	101	4.9	16	1.2	353
2012	11	30	21	11.6	102	4.8	14	0.7	17
2012	11	30	22	12.5	105	4.8	19	0.7	11
2012	11	30	23	12.8	101	4.5	24	1.2	359
2012	12	1	0	13.1	103	4.5	22	1.3	347
2012	12	1	1	12.9	100	4.4	17	1.2	10
2012	12	1	2	12.5	103	4.1	17	2.0	4
2012	12	1	3	12.0	101	4.1	28	1.7	4
2012	12	1	4	12.4	105	4.3	25	2.0	357
2012	12	1	5	12.0	103	4.3	25	2.3	15
2012	12	1	6	11.6	106	4.2	23	1.8	10
2012	12	1	7	11.2	106	4.2	23	1.8	12
2012	12	1	8	10.1	107	4.0	17	1.9	14
2012	12	1	9	9.7	104	4.2	19	2.0	18
2012	12	1	10	10.4	101	4.2	23	1.7	18
2012	12	1	11	8.7	102	4.0	23	1.1	15
2012	12	1	12	11.0	105	3.7	25	0.4	70
2012	12	1	13	11.9	106	3.8	17	0.3	136
2012	12	1	14	12.6	98	3.5	15	0.8	38
2012	12	1	15	11.1	100	3.3	13	1.3	14
2012	12	1	16	13.2	106	3.1	12	1.6	16
2012	12	1	17	13.1	105	2.8	5	1.6	18
2012	12	1	18	12.2	104	2.7	7	1.3	21
2012	12	1	19	12.5	106	3.0	16	1.7	13
2012	12	1	20	11.8	105	3.3	23	1.8	14
2012	12	1	21	13.0	106	3.0	17	1.7	9
2012	12	1	22	13.8	102	3.2	12	1.8	7
2012	12	1	23	13.6	101	2.9	15	2.0	13

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	2	0	13.5	98	3.0	19	1.7	8
2012	12	2	1	13.9	97	2.9	15	1.8	3
2012	12	2	2	13.7	100	2.5	9	1.5	18
2012	12	2	3	13.6	102	2.7	14	1.0	31
2012	12	2	4	12.7	102	2.6	8	1.1	21
2012	12	2	5	12.5	103	3.0	19	1.5	10
2012	12	2	6	12.8	104	2.8	21	1.5	5
2012	12	2	7	12.5	102	2.9	22	1.8	13
2012	12	2	8	13.0	104	3.0	20	2.0	14
2012	12	2	9	12.7	98	2.3	2	1.8	16
2012	12	2	10	12.7	96	2.4	13	1.5	17
2012	12	2	11	12.5	100	2.5	13	1.3	19
2012	12	2	12	12.7	102	1.6	11	1.0	33
2012	12	2	13	12.4	101	1.6	11	0.6	28
2012	12	2	14	13.0	99	2.0	13	0.3	72
2012	12	2	15	13.1	97	1.7	5	0.4	64
2012	12	2	16	12.4	98	2.0	353	0.5	43
2012	12	2	17	12.2	99	1.6	354	0.3	48
2012	12	2	18	12.4	97	1.8	2	0.7	80
2012	12	2	19	12.4	98	1.9	355	0.6	43
2012	12	2	20	11.7	100	1.7	350	0.4	55
2012	12	2	21	12.5	98	1.4	351	0.7	19
2012	12	2	22	12.6	96	1.9	356	0.3	41
2012	12	2	23	11.9	98	1.8	347	0.4	35
2012	12	3	0	12.4	98	1.4	212	0.4	36
2012	12	3	1	11.5	102	0.6	164	0.4	90
2012	12	3	2	9.7	100	0.6	164	0.4	284
2012	12	3	3	10.6	97	1.2	32	0.5	9
2012	12	3	4	10.5	98	1.1	22	0.6	63
2012	12	3	5	11.8	98	1.1	30	0.8	94
2012	12	3	6	10.9	101	0.6	86	0.3	44
2012	12	3	7	11.0	100	0.3	100	0.4	277
2012	12	3	8	10.9	104	0.4	100	0.3	317
2012	12	3	9	11.5	97	0.3	99	0.2	3
2012	12	3	10	11.3	101	0.3	100	0.4	105
2012	12	3	11	11.1	105	0.3	101	0.8	109
2012	12	3	12	10.8	107	0.6	102	1.3	125
2012	12	3	13	9.9	111	0.2	103	2.3	121
2012	12	3	14	10.8	96	0.2	102	3.6	110
2012	12	3	15	11.0	99	0.2	101	2.7	117
2012	12	3	16	11.8	93	0.3	99	0.8	120
2012	12	3	17	12.6	102	0.6	91	0.4	271
2012	12	3	18	11.6	98	2.4	14	0.6	171
2012	12	3	19	14.5	104	2.3	23	0.3	325
2012	12	3	20	13.5	104	2.2	4	0.3	258
2012	12	3	21	14.7	100	1.9	20	0.3	77
2012	12	3	22	14.2	101	2.6	359	0.0	101
2012	12	3	23	14.2	102	2.2	2	0.2	112

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	4	0	13.8	102	1.8	357	0.0	0
2012	12	4	1	13.3	102	2.1	350	0.0	0
2012	12	4	2	13.0	101	2.0	6	0.6	41
2012	12	4	3	13.2	100	2.1	10	0.9	76
2012	12	4	4	13.4	100	2.5	18	0.9	79
2012	12	4	5	12.3	102	2.5	10	0.6	66
2012	12	4	6	9.9	101	3.4	18	1.2	336
2012	12	4	7	10.1	114	3.1	20	1.4	317
2012	12	4	8	7.9	96	2.5	19	0.3	59
2012	12	4	9	7.9	93	2.0	12	0.1	10
2012	12	4	10	6.5	96	1.9	3	0.0	0
2012	12	4	11	3.4	112	0.4	9	0.0	0
2012	12	4	12	0.6	276	0.8	219	0.0	0
2012	12	4	13	1.0	298	1.0	174	0.0	0
2012	12	4	14	1.0	35	1.1	177	0.0	0
2012	12	4	15	1.7	339	1.5	191	3.2	105
2012	12	4	16	2.7	305	1.3	201	3.5	106
2012	12	4	17	2.5	277	1.1	204	4.6	113
2012	12	4	18	2.1	275	1.2	195	5.0	120
2012	12	4	19	1.7	277	1.7	208	3.4	119
2012	12	4	20	0.7	80	1.0	192	2.8	113
2012	12	4	21	3.4	95	0.6	187	3.5	102
2012	12	4	22	3.2	94	0.3	313	2.9	104
2012	12	4	23	4.9	107	1.3	349	2.7	111
2012	12	5	0	5.1	100	1.3	348	1.7	119
2012	12	5	1	6.0	92	1.1	344	1.0	108
2012	12	5	2	6.9	85	1.0	338	0.3	73
2012	12	5	3	7.5	84	0.3	270	0.6	46
2012	12	5	4	7.4	93	0.4	86	0.3	72
2012	12	5	5	8.4	85	0.6	133	0.6	55
2012	12	5	6	7.9	85	0.5	94	0.5	66
2012	12	5	7	6.5	97	0.6	131	0.4	71
2012	12	5	8	7.2	92	0.8	1	0.7	104
2012	12	5	9	7.6	103	1.0	23	1.0	90
2012	12	5	10	7.5	99	0.8	237	1.2	107
2012	12	5	11	7.2	99	1.0	154	2.6	107
2012	12	5	12	6.5	103	0.6	186	3.6	109
2012	12	5	13	7.3	101	0.4	278	4.3	117
2012	12	5	14	9.2	94	0.7	347	3.7	112
2012	12	5	15	11.2	86	1.1	355	3.6	110
2012	12	5	16	10.8	90	1.5	350	3.0	103
2012	12	5	17	10.7	88	0.5	24	2.7	94
2012	12	5	18	10.1	93	0.6	161	3.4	109
2012	12	5	19	8.0	98	0.9	255	3.4	117
2012	12	5	20	7.5	105	0.6	257	3.8	117
2012	12	5	21	7.3	101	0.5	198	4.0	115
2012	12	5	22	7.4	104	0.7	212	4.3	117
2012	12	5	23	6.9	104	0.6	229	3.6	116

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	6	0	5.0	105	0.8	205	4.0	117
2012	12	6	1	5.8	94	0.8	183	4.1	117
2012	12	6	2	7.8	89	0.7	179	4.5	113
2012	12	6	3	9.8	88	0.9	171	3.5	109
2012	12	6	4	10.6	82	0.5	96	3.9	114
2012	12	6	5	11.0	78	0.7	179	3.5	106
2012	12	6	6	10.5	82	0.8	160	3.0	104
2012	12	6	7	9.4	95	0.8	190	3.4	111
2012	12	6	8	8.9	99	1.0	206	3.6	115
2012	12	6	9	8.7	95	0.7	219	3.5	121
2012	12	6	10	7.6	97	0.6	223	3.6	119
2012	12	6	11	7.3	108	0.6	326	3.1	102
2012	12	6	12	8.0	99	0.5	15	3.2	94
2012	12	6	13	7.9	100	0.1	29	3.9	105
2012	12	6	14	8.1	100	0.1	351	3.6	108
2012	12	6	15	7.7	100	0.1	317	3.9	115
2012	12	6	16	8.4	101	1.0	357	3.4	110
2012	12	6	17	10.1	98	1.4	358	3.1	105
2012	12	6	18	9.7	102	1.4	352	3.2	105
2012	12	6	19	10.1	100	1.5	3	3.0	109
2012	12	6	20	11.0	102	1.5	28	2.8	102
2012	12	6	21	10.2	104	1.5	20	2.1	90
2012	12	6	22	9.4	103	1.9	15	1.2	63
2012	12	6	23	9.1	102	2.1	15	0.2	65
2012	12	7	0	9.3	97	1.9	11	0.4	86
2012	12	7	1	9.7	95	1.9	13	1.3	30
2012	12	7	2	10.5	99	1.9	11	1.5	33
2012	12	7	3	10.9	97	1.7	11	0.8	58
2012	12	7	4	9.1	103	1.3	1	0.5	2
2012	12	7	5	8.1	101	0.1	340	0.9	56
2012	12	7	6	6.4	105	0.0	315	0.4	58
2012	12	7	7	4.1	91	NAN	NAN	0.3	64
2012	12	7	8	2.1	80	NAN	NAN	0.9	71
2012	12	7	9	1.3	89	NAN	NAN	0.8	78
2012	12	7	10	0.7	120	NAN	NAN	0.5	15
2012	12	7	11	1.3	256	NAN	NAN	0.2	93
2012	12	7	12	1.8	260	NAN	NAN	0.1	197
2012	12	7	13	1.1	258	NAN	NAN	0.2	240
2012	12	7	14	1.9	242	NAN	NAN	0.1	263
2012	12	7	15	1.5	243	NAN	NAN	0.2	355
2012	12	7	16	2.0	195	NAN	NAN	0.1	187
2012	12	7	17	2.1	87	NAN	NAN	0.3	33
2012	12	7	18	2.9	86	NAN	NAN	0.3	15
2012	12	7	19	2.6	88	NAN	NAN	0.5	22
2012	12	7	20	2.1	88	NAN	NAN	1.1	19
2012	12	7	21	1.2	132	NAN	NAN	1.1	21
2012	12	7	22	0.7	119	NAN	NAN	1.6	19
2012	12	7	23	0.8	104	NAN	NAN	1.5	13

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	8	0	2.5	88	NAN	NAN	1.5	359
2012	12	8	1	3.8	89	NAN	NAN	1.6	20
2012	12	8	2	3.4	88	NAN	NAN	1.7	15
2012	12	8	3	3.9	89	NAN	NAN	1.3	26
2012	12	8	4	4.5	98	NAN	NAN	1.7	19
2012	12	8	5	4.7	103	NAN	NAN	1.5	21
2012	12	8	6	5.2	107	NAN	NAN	1.2	20
2012	12	8	7	5.8	103	NAN	NAN	0.7	23
2012	12	8	8	6.5	105	NAN	NAN	1.0	12
2012	12	8	9	6.1	103	NAN	NAN	0.5	13
2012	12	8	10	6.0	103	NAN	NAN	1.0	7
2012	12	8	11	6.3	104	NAN	NAN	1.0	18
2012	12	8	12	5.8	106	NAN	NAN	0.9	358
2012	12	8	13	6.1	105	NAN	NAN	0.7	14
2012	12	8	14	5.8	103	NAN	NAN	0.8	34
2012	12	8	15	6.1	110	NAN	NAN	0.1	90
2012	12	8	16	7.2	102	NAN	NAN	0.1	61
2012	12	8	17	9.4	101	NAN	NAN	0.3	35
2012	12	8	18	10.1	99	NAN	NAN	0.2	115
2012	12	8	19	10.0	100	NAN	NAN	0.4	51
2012	12	8	20	10.5	98	NAN	NAN	0.2	76
2012	12	8	21	12.7	96	NAN	NAN	0.2	78
2012	12	8	22	12.8	99	NAN	NAN	0.6	102
2012	12	8	23	12.6	98	NAN	NAN	2.3	101
2012	12	9	0	12.0	98	NAN	NAN	2.7	102
2012	12	9	1	13.2	98	NAN	NAN	2.0	98
2012	12	9	2	11.0	104	NAN	NAN	2.5	103
2012	12	9	3	8.4	102	NAN	NAN	1.8	110
2012	12	9	4	5.9	106	NAN	NAN	2.1	117
2012	12	9	5	3.5	97	NAN	NAN	0.5	164
2012	12	9	6	3.7	97	NAN	NAN	1.8	103
2012	12	9	7	4.2	103	NAN	NAN	2.0	89
2012	12	9	8	3.1	229	NAN	NAN	1.1	110
2012	12	9	9	6.8	264	NAN	NAN	1.2	120
2012	12	9	10	9.9	283	NAN	NAN	0.9	110
2012	12	9	11	9.4	288	NAN	NAN	0.6	113
2012	12	9	12	11.3	287	NAN	NAN	0.7	185
2012	12	9	13	11.3	287	NAN	NAN	1.1	97
2012	12	9	14	8.4	295	NAN	NAN	1.3	89
2012	12	9	15	6.7	299	NAN	NAN	0.9	86
2012	12	9	16	5.6	300	NAN	NAN	1.0	65
2012	12	9	17	7.9	291	NAN	NAN	0.5	49
2012	12	9	18	7.8	289	NAN	NAN	0.3	34
2012	12	9	19	11.0	292	NAN	NAN	0.9	55
2012	12	9	20	11.9	281	NAN	NAN	1.1	101
2012	12	9	21	11.5	285	NAN	NAN	1.2	99
2012	12	9	22	11.2	285	NAN	NAN	1.0	31
2012	12	9	23	12.9	280	1.8	282	0.9	92

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	10	0	10.3	287	2.2	4	1.2	38
2012	12	10	1	6.3	292	2.2	208	1.0	75
2012	12	10	2	6.6	290	2.2	194	0.8	99
2012	12	10	3	7.5	288	2.5	212	0.8	77
2012	12	10	4	7.1	283	1.3	140	1.0	68
2012	12	10	5	8.4	283	1.2	338	0.9	62
2012	12	10	6	9.5	283	2.1	359	1.0	45
2012	12	10	7	5.4	266	0.9	341	0.7	49
2012	12	10	8	4.3	280	1.5	334	0.7	52
2012	12	10	9	3.2	289	1.4	344	0.7	13
2012	12	10	10	2.3	252	0.7	221	0.6	63
2012	12	10	11	3.5	96	0.5	257	0.5	47
2012	12	10	12	6.7	105	0.7	216	0.4	79
2012	12	10	13	8.0	100	1.2	207	0.5	87
2012	12	10	14	6.2	91	1.4	214	1.8	102
2012	12	10	15	6.3	102	0.8	207	2.4	121
2012	12	10	16	6.6	101	1.3	210	2.7	124
2012	12	10	17	8.7	95	2.2	228	3.7	120
2012	12	10	18	9.4	92	2.0	223	4.5	120
2012	12	10	19	8.1	81	1.3	205	5.0	114
2012	12	10	20	9.8	86	1.6	187	4.9	122
2012	12	10	21	11.1	83	2.2	200	5.1	122
2012	12	10	22	10.5	82	2.5	199	5.3	122
2012	12	10	23	10.1	82	2.1	191	4.5	121
2012	12	11	0	9.4	87	2.1	202	4.5	121
2012	12	11	1	8.9	88	1.7	172	4.1	116
2012	12	11	2	7.9	86	0.7	223	3.8	109
2012	12	11	3	7.3	94	1.2	354	4.2	112
2012	12	11	4	6.5	102	0.7	6	3.3	108
2012	12	11	5	5.7	98	0.9	7	2.8	98
2012	12	11	6	4.9	107	0.9	243	2.4	100
2012	12	11	7	3.5	105	0.7	321	2.5	106
2012	12	11	8	3.6	88	0.9	325	1.6	102
2012	12	11	9	3.0	85	0.9	338	0.7	105
2012	12	11	10	1.0	259	0.9	242	0.5	349
2012	12	11	11	1.2	268	0.6	231	0.8	350
2012	12	11	12	1.7	272	0.1	222	0.7	315
2012	12	11	13	2.5	263	0.4	4	0.6	337
2012	12	11	14	3.3	273	1.0	10	0.3	322
2012	12	11	15	3.5	255	0.8	281	1.5	321
2012	12	11	16	2.2	274	1.6	4	2.5	316
2012	12	11	17	2.6	279	2.1	5	3.4	307
2012	12	11	18	2.8	261	3.7	359	3.7	306
2012	12	11	19	1.6	272	4.1	360	3.3	305
2012	12	11	20	1.1	271	3.8	7	3.9	308
2012	12	11	21	1.4	272	3.8	2	4.0	310
2012	12	11	22	1.2	279	4.5	22	3.0	308
2012	12	11	23	1.5	234	5.0	18	2.9	315

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	12	0	1.0	288	4.2	359	3.1	311
2012	12	12	1	2.1	266	3.7	352	3.4	326
2012	12	12	2	3.1	257	4.1	351	4.1	330
2012	12	12	3	2.5	260	2.8	343	3.8	335
2012	12	12	4	1.0	274	2.8	341	4.3	334
2012	12	12	5	0.5	255	1.5	317	2.5	334
2012	12	12	6	2.3	84	2.2	349	2.7	347
2012	12	12	7	1.9	88	1.9	346	2.0	353
2012	12	12	8	2.7	86	1.9	13	1.9	13
2012	12	12	9	1.6	89	1.4	1	2.0	8
2012	12	12	10	2.1	89	1.0	330	1.7	350
2012	12	12	11	2.6	255	0.6	234	1.3	11
2012	12	12	12	3.3	245	0.4	113	0.5	106
2012	12	12	13	3.3	260	0.5	202	0.3	140
2012	12	12	14	3.2	247	0.5	38	0.5	124
2012	12	12	15	2.5	247	1.2	215	0.3	197
2012	12	12	16	3.3	242	1.0	239	0.5	132
2012	12	12	17	2.1	252	0.5	299	0.8	40
2012	12	12	18	6.8	106	0.5	190	0.6	326
2012	12	12	19	7.8	105	0.7	247	0.2	86
2012	12	12	20	8.2	101	0.6	276	0.8	76
2012	12	12	21	8.2	102	1.3	215	0.8	81
2012	12	12	22	6.7	109	1.1	211	0.8	111
2012	12	12	23	7.5	106	1.0	209	1.3	99
2012	12	13	0	4.0	115	1.1	202	2.7	100
2012	12	13	1	2.9	274	1.2	334	2.4	102
2012	12	13	2	5.4	115	1.0	353	2.0	101
2012	12	13	3	6.4	105	1.6	217	1.8	93
2012	12	13	4	5.0	236	1.3	216	2.8	105
2012	12	13	5	4.1	289	1.4	344	2.8	119
2012	12	13	6	4.5	295	1.6	3	2.9	114
2012	12	13	7	5.9	271	1.9	359	3.4	115
2012	12	13	8	4.8	276	2.0	358	3.0	124
2012	12	13	9	5.7	274	0.9	329	1.3	84
2012	12	13	10	6.3	274	1.6	203	2.1	108
2012	12	13	11	5.1	274	1.4	61	1.8	122
2012	12	13	12	2.9	270	2.0	207	1.6	107
2012	12	13	13	3.5	269	2.1	10	1.5	97
2012	12	13	14	4.0	265	1.5	249	1.3	96
2012	12	13	15	3.2	268	1.3	165	1.3	71
2012	12	13	16	5.3	281	1.8	187	0.8	132
2012	12	13	17	4.0	301	1.6	289	0.9	51
2012	12	13	18	2.8	278	1.5	192	1.4	93
2012	12	13	19	3.4	274	1.9	218	0.8	346
2012	12	13	20	2.6	259	2.5	205	1.1	90
2012	12	13	21	4.2	277	2.1	182	0.7	31
2012	12	13	22	3.1	285	1.8	195	1.1	78
2012	12	13	23	2.7	269	1.6	191	1.6	88

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	14	0	2.1	258	1.6	180	1.2	93
2012	12	14	1	2.7	264	1.2	165	1.5	95
2012	12	14	2	3.0	255	0.9	230	1.9	93
2012	12	14	3	2.4	263	0.6	227	1.6	95
2012	12	14	4	2.7	277	0.8	228	1.1	114
2012	12	14	5	2.7	274	0.8	227	1.7	87
2012	12	14	6	1.8	239	0.7	241	1.6	92
2012	12	14	7	2.5	228	0.8	208	0.9	83
2012	12	14	8	6.9	100	1.0	205	1.5	78
2012	12	14	9	9.1	85	0.7	205	2.1	97
2012	12	14	10	10.9	81	0.7	204	2.9	105
2012	12	14	11	11.2	88	0.6	226	3.1	107
2012	12	14	12	11.7	83	0.8	217	3.6	103
2012	12	14	13	11.5	81	1.1	205	4.2	105
2012	12	14	14	12.0	81	1.0	164	4.6	120
2012	12	14	15	12.4	82	1.2	173	4.4	123
2012	12	14	16	12.8	82	1.3	195	4.9	121
2012	12	14	17	12.5	94	1.6	173	4.6	120
2012	12	14	18	12.0	106	1.1	240	4.9	118
2012	12	14	19	13.0	91	1.4	242	5.8	120
2012	12	14	20	14.3	94	1.3	188	6.3	116
2012	12	14	21	16.8	87	1.4	127	5.8	119
2012	12	14	22	16.6	87	1.7	72	5.6	118
2012	12	14	23	16.6	88	1.5	14	4.6	107
2012	12	15	0	16.3	88	1.3	19	4.1	104
2012	12	15	1	15.2	88	1.4	71	4.1	110
2012	12	15	2	14.8	89	1.8	54	4.1	106
2012	12	15	3	14.0	90	1.3	25	3.6	98
2012	12	15	4	13.9	89	1.6	91	3.9	110
2012	12	15	5	13.0	90	1.2	111	4.0	111
2012	12	15	6	12.7	87	1.2	154	4.0	112
2012	12	15	7	13.3	89	1.2	243	3.9	114
2012	12	15	8	13.3	89	1.4	104	4.4	118
2012	12	15	9	13.1	88	1.4	214	4.8	120
2012	12	15	10	12.9	86	1.3	248	4.5	119
2012	12	15	11	13.5	83	1.4	222	5.2	114
2012	12	15	12	8.0	97	1.6	193	4.5	118
2012	12	15	13	5.4	102	1.1	194	3.7	123
2012	12	15	14	2.0	112	1.1	192	4.2	118
2012	12	15	15	1.6	95	1.1	204	3.9	107
2012	12	15	16	5.1	306	1.3	219	4.2	99
2012	12	15	17	4.3	310	2.4	200	3.3	108
2012	12	15	18	3.3	302	3.0	220	2.8	117
2012	12	15	19	2.6	298	3.2	213	1.8	89
2012	12	15	20	2.5	315	2.6	218	1.7	113
2012	12	15	21	1.8	136	2.1	206	1.6	112
2012	12	15	22	2.6	96	1.3	263	1.3	88
2012	12	15	23	4.7	101	0.7	191	1.2	109

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	16	0	5.6	103	1.0	215	2.0	117
2012	12	16	1	7.1	92	0.9	202	2.8	96
2012	12	16	2	7.2	96	0.8	235	2.4	103
2012	12	16	3	7.6	91	0.3	131	1.5	105
2012	12	16	4	8.2	103	0.5	1	1.2	91
2012	12	16	5	8.3	102	0.7	55	1.0	93
2012	12	16	6	7.4	100	0.7	19	1.4	110
2012	12	16	7	7.6	102	0.8	351	0.6	74
2012	12	16	8	7.7	103	0.7	205	1.6	86
2012	12	16	9	8.2	101	0.4	220	2.5	104
2012	12	16	10	9.4	98	0.6	100	3.2	117
2012	12	16	11	10.4	91	0.9	46	4.2	118
2012	12	16	12	10.2	90	0.9	131	4.1	108
2012	12	16	13	11.8	85	1.0	212	3.7	93
2012	12	16	14	9.8	92	0.9	204	3.9	105
2012	12	16	15	8.6	95	0.8	314	4.0	102
2012	12	16	16	8.7	100	1.0	356	3.3	93
2012	12	16	17	8.9	103	0.9	24	2.6	95
2012	12	16	18	8.4	105	0.4	202	2.5	92
2012	12	16	19	8.2	110	0.5	214	2.0	86
2012	12	16	20	6.8	109	0.3	94	2.0	93
2012	12	16	21	5.4	110	0.3	77	1.4	107
2012	12	16	22	6.8	105	0.7	1	1.0	89
2012	12	16	23	6.5	104	0.6	16	0.2	11
2012	12	17	0	7.2	104	0.6	10	0.8	338
2012	12	17	1	7.4	110	1.2	9	0.5	355
2012	12	17	2	6.6	105	1.5	3	1.1	4
2012	12	17	3	4.6	106	1.4	8	1.2	345
2012	12	17	4	5.3	112	1.6	10	0.9	352
2012	12	17	5	5.0	117	2.0	13	1.0	17
2012	12	17	6	5.3	105	2.0	16	1.0	7
2012	12	17	7	5.3	108	1.9	10	1.1	350
2012	12	17	8	4.4	99	1.7	8	1.5	1
2012	12	17	9	4.2	108	1.9	10	1.2	3
2012	12	17	10	4.5	99	1.7	10	1.2	3
2012	12	17	11	5.7	102	1.4	12	1.0	24
2012	12	17	12	3.6	94	0.9	5	0.7	28
2012	12	17	13	2.4	88	0.5	349	0.6	356
2012	12	17	14	2.4	86	0.3	327	0.4	22
2012	12	17	15	1.4	86	0.3	342	0.3	264
2012	12	17	16	2.2	82	0.6	352	0.2	285
2012	12	17	17	1.8	103	0.3	301	0.3	2
2012	12	17	18	2.0	94	0.7	325	0.7	358
2012	12	17	19	3.2	118	1.2	352	0.7	2
2012	12	17	20	1.4	129	1.5	8	0.8	8
2012	12	17	21	2.0	96	1.5	9	1.0	13
2012	12	17	22	1.5	117	1.6	10	1.5	327
2012	12	17	23	2.3	91	1.3	359	1.2	338

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	18	0	2.8	106	1.3	355	0.5	15
2012	12	18	1	2.4	102	1.4	7	1.0	12
2012	12	18	2	4.9	107	1.7	5	1.1	10
2012	12	18	3	5.7	104	1.8	2	1.2	6
2012	12	18	4	5.1	107	1.4	354	1.2	350
2012	12	18	5	4.0	102	0.7	16	0.9	16
2012	12	18	6	4.7	109	1.1	342	0.7	351
2012	12	18	7	5.7	106	1.1	355	0.6	21
2012	12	18	8	6.8	104	0.7	12	0.6	57
2012	12	18	9	7.5	99	0.4	343	0.4	92
2012	12	18	10	7.8	97	1.1	349	0.3	37
2012	12	18	11	7.7	96	1.0	13	0.4	94
2012	12	18	12	8.1	96	0.4	280	0.3	122
2012	12	18	13	9.0	95	NAN	NAN	0.5	168
2012	12	18	14	8.5	98	0.1	273	0.3	193
2012	12	18	15	9.1	101	0.2	359	0.4	111
2012	12	18	16	10.1	99	0.5	233	0.3	117
2012	12	18	17	9.9	96	0.5	12	0.1	202
2012	12	18	18	9.8	99	1.3	11	0.3	71
2012	12	18	19	10.9	97	1.1	7	1.2	85
2012	12	18	20	12.3	91	0.8	359	1.2	96
2012	12	18	21	12.1	93	1.1	8	0.5	266
2012	12	18	22	11.6	103	1.4	2	0.6	106
2012	12	18	23	10.1	102	2.4	18	0.3	324
2012	12	19	0	11.6	103	2.6	13	0.5	70
2012	12	19	1	12.8	105	2.6	2	0.6	73
2012	12	19	2	13.8	109	2.8	14	0.2	330
2012	12	19	3	14.7	110	2.7	15	0.4	56
2012	12	19	4	14.6	113	2.4	21	0.4	39
2012	12	19	5	14.2	109	2.4	26	0.4	83
2012	12	19	6	14.8	112	2.8	13	0.4	56
2012	12	19	7	15.1	113	3.1	9	0.3	287
2012	12	19	8	13.4	111	2.8	25	0.7	304
2012	12	19	9	12.9	107	2.9	22	0.9	322
2012	12	19	10	12.8	109	3.1	22	0.4	26
2012	12	19	11	12.1	105	2.5	21	0.1	130
2012	12	19	12	10.9	104	2.9	19	0.3	80
2012	12	19	13	11.4	111	3.0	27	0.1	133
2012	12	19	14	10.8	112	2.8	28	0.1	249
2012	12	19	15	11.4	109	1.7	28	0.2	74
2012	12	19	16	12.8	116	2.1	19	0.3	111
2012	12	19	17	12.8	114	1.7	19	0.5	105
2012	12	19	18	10.6	111	1.6	30	1.2	88
2012	12	19	19	11.2	111	2.1	16	1.1	80
2012	12	19	20	10.0	100	2.1	10	0.5	71
2012	12	19	21	10.6	98	2.3	15	0.4	56
2012	12	19	22	10.6	103	2.9	9	0.8	33
2012	12	19	23	10.1	100	2.7	18	1.3	21

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	20	0	10.0	99	2.0	20	1.5	14
2012	12	20	1	10.5	93	1.9	30	1.6	15
2012	12	20	2	9.0	92	2.9	8	1.7	20
2012	12	20	3	9.2	101	3.0	10	1.9	16
2012	12	20	4	8.3	103	3.1	16	2.1	21
2012	12	20	5	9.4	103	3.0	10	2.1	21
2012	12	20	6	8.1	101	3.5	8	2.2	24
2012	12	20	7	8.0	101	3.6	358	2.2	19
2012	12	20	8	7.3	108	3.2	11	1.9	19
2012	12	20	9	6.2	101	3.9	10	1.7	360
2012	12	20	10	7.1	103	4.5	11	2.4	341
2012	12	20	11	5.2	99	4.0	7	1.9	341
2012	12	20	12	7.3	91	4.3	16	1.2	15
2012	12	20	13	7.3	105	4.5	12	2.0	339
2012	12	20	14	6.7	108	4.1	7	2.2	333
2012	12	20	15	6.4	104	4.6	13	2.3	325
2012	12	20	16	7.2	100	4.8	14	2.4	329
2012	12	20	17	7.6	97	4.6	13	2.4	330
2012	12	20	18	8.3	95	5.0	14	3.0	323
2012	12	20	19	8.4	103	5.4	12	2.9	324
2012	12	20	20	6.4	104	5.2	11	3.5	324
2012	12	20	21	7.6	105	5.1	14	3.3	320
2012	12	20	22	7.6	105	4.9	17	3.0	325
2012	12	20	23	8.7	105	5.0	15	3.0	325
2012	12	21	0	9.0	101	4.9	10	1.7	332
2012	12	21	1	8.1	102	5.0	12	0.9	5
2012	12	21	2	8.4	95	4.8	11	1.0	355
2012	12	21	3	9.5	94	4.7	8	1.5	4
2012	12	21	4	9.3	95	4.6	9	1.7	2
2012	12	21	5	9.9	93	4.5	10	1.1	9
2012	12	21	6	8.7	97	4.5	13	1.1	8
2012	12	21	7	9.8	96	4.3	15	2.1	19
2012	12	21	8	10.6	96	4.8	8	1.9	12
2012	12	21	9	11.6	104	4.8	358	2.0	10
2012	12	21	10	12.6	110	4.2	4	2.1	17
2012	12	21	11	13.6	108	3.8	10	1.6	23
2012	12	21	12	13.8	110	3.9	5	1.9	15
2012	12	21	13	12.2	104	4.1	3	2.0	8
2012	12	21	14	13.3	93	3.9	5	1.3	12
2012	12	21	15	13.4	100	3.6	356	1.2	20
2012	12	21	16	12.9	99	4.0	9	1.9	20
2012	12	21	17	12.7	96	4.5	20	2.2	4
2012	12	21	18	14.6	90	3.5	17	2.0	332
2012	12	21	19	13.2	92	4.2	12	1.7	9
2012	12	21	20	17.1	107	4.0	8	1.8	6
2012	12	21	21	16.5	108	3.6	9	2.2	25
2012	12	21	22	15.5	101	3.9	5	1.7	24
2012	12	21	23	15.3	100	4.4	6	1.7	13

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	22	0	16.1	107	3.7	2	1.8	19
2012	12	22	1	16.0	108	3.2	10	1.8	19
2012	12	22	2	14.6	95	2.8	28	1.8	3
2012	12	22	3	14.0	99	2.5	39	1.2	15
2012	12	22	4	14.5	104	3.0	23	1.3	25
2012	12	22	5	12.8	100	2.9	19	0.9	18
2012	12	22	6	13.2	104	3.4	14	1.5	14
2012	12	22	7	13.8	104	3.4	11	1.1	13
2012	12	22	8	15.3	109	3.7	4	0.8	9
2012	12	22	9	16.0	105	3.8	14	1.1	39
2012	12	22	10	15.9	101	3.4	10	0.8	60
2012	12	22	11	15.5	100	3.3	30	0.5	83
2012	12	22	12	14.7	100	2.7	26	0.5	41
2012	12	22	13	14.7	103	2.8	28	0.4	130
2012	12	22	14	15.5	107	3.1	27	0.3	98
2012	12	22	15	15.2	103	3.1	15	0.5	96
2012	12	22	16	14.3	104	3.6	9	0.8	21
2012	12	22	17	14.1	105	3.2	16	0.7	30
2012	12	22	18	14.1	97	2.6	44	1.0	57
2012	12	22	19	12.9	92	2.8	41	0.6	85
2012	12	22	20	13.4	89	3.5	9	0.5	358
2012	12	22	21	14.8	87	3.1	13	1.1	328
2012	12	22	22	13.7	90	3.8	8	2.1	13
2012	12	22	23	13.0	89	4.0	8	2.0	11
2012	12	23	0	11.6	95	4.1	8	2.3	11
2012	12	23	1	10.1	93	3.8	1	2.6	7
2012	12	23	2	12.0	91	3.3	6	2.1	23
2012	12	23	3	13.2	89	2.9	357	1.2	110
2012	12	23	4	12.2	89	3.2	359	2.0	89
2012	12	23	5	12.9	98	3.0	1	2.7	96
2012	12	23	6	13.3	94	3.1	8	2.6	97
2012	12	23	7	13.4	94	3.1	6	2.8	92
2012	12	23	8	13.6	103	3.3	9	3.1	97
2012	12	23	9	15.2	95	3.3	13	3.3	101
2012	12	23	10	16.6	88	2.9	13	3.2	91
2012	12	23	11	16.0	87	2.6	18	3.1	93
2012	12	23	12	15.4	86	2.7	18	3.3	88
2012	12	23	13	15.3	84	2.6	13	3.3	89
2012	12	23	14	14.3	86	2.6	9	2.8	91
2012	12	23	15	13.8	87	2.3	18	3.1	90
2012	12	23	16	14.1	87	2.7	11	3.3	83
2012	12	23	17	13.5	87	2.7	9	3.3	85
2012	12	23	18	12.9	92	2.5	27	3.1	97
2012	12	23	19	12.4	97	2.7	14	2.9	94
2012	12	23	20	11.8	100	3.2	14	2.8	95
2012	12	23	21	11.7	102	3.2	14	2.3	93
2012	12	23	22	11.7	106	3.1	15	1.4	84
2012	12	23	23	11.7	106	2.8	23	1.5	71

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	24	0	11.0	107	3.2	20	0.8	56
2012	12	24	1	10.5	105	3.1	13	0.7	43
2012	12	24	2	9.6	105	3.4	16	1.7	20
2012	12	24	3	10.3	104	3.5	18	1.9	12
2012	12	24	4	10.7	104	3.4	16	1.8	21
2012	12	24	5	10.8	105	2.5	21	2.2	24
2012	12	24	6	10.6	106	2.5	31	1.9	16
2012	12	24	7	11.6	104	2.3	37	2.1	28
2012	12	24	8	13.0	103	2.8	15	1.7	14
2012	12	24	9	13.5	104	3.0	18	2.0	31
2012	12	24	10	13.9	104	3.1	6	1.9	19
2012	12	24	11	14.3	104	3.3	17	1.5	13
2012	12	24	12	14.3	99	3.4	10	0.8	22
2012	12	24	13	14.2	98	3.6	7	0.7	43
2012	12	24	14	14.8	100	3.0	16	1.2	13
2012	12	24	15	15.0	98	2.6	16	0.7	43
2012	12	24	16	14.7	95	2.2	23	1.3	25
2012	12	24	17	15.3	93	2.5	15	1.2	22
2012	12	24	18	15.4	93	3.1	9	0.9	17
2012	12	24	19	15.3	99	2.6	4	1.0	13
2012	12	24	20	14.2	104	1.9	19	0.5	7
2012	12	24	21	14.0	106	1.6	15	0.5	96
2012	12	24	22	14.0	97	0.9	9	0.5	51
2012	12	24	23	14.0	100	1.0	15	0.8	93
2012	12	25	0	14.0	99	1.4	9	0.9	76
2012	12	25	1	13.1	105	1.8	24	0.4	348
2012	12	25	2	13.0	109	1.4	30	0.6	58
2012	12	25	3	12.1	108	1.7	17	0.7	40
2012	12	25	4	11.6	106	1.9	23	1.2	353
2012	12	25	5	12.5	105	1.4	18	0.8	16
2012	12	25	6	13.3	107	1.4	26	0.8	4
2012	12	25	7	13.9	106	1.0	4	0.4	86
2012	12	25	8	14.2	103	0.8	5	0.1	74
2012	12	25	9	14.7	100	0.5	176	0.4	98
2012	12	25	10	14.1	104	0.5	45	0.6	55
2012	12	25	11	13.5	99	0.6	34	0.9	88
2012	12	25	12	13.9	103	1.1	25	0.4	149
2012	12	25	13	12.4	96	0.6	55	0.2	185
2012	12	25	14	12.1	99	1.1	19	0.4	258
2012	12	25	15	11.7	105	1.4	19	0.5	5
2012	12	25	16	11.0	96	1.3	19	0.6	19
2012	12	25	17	12.6	96	1.8	28	0.9	355
2012	12	25	18	13.8	97	1.6	17	0.6	87
2012	12	25	19	12.9	98	1.7	24	0.4	22
2012	12	25	20	13.3	102	1.5	19	0.6	345
2012	12	25	21	13.3	94	1.6	17	0.6	335
2012	12	25	22	14.8	86	2.6	9	1.0	336
2012	12	25	23	13.8	91	2.3	20	1.2	8

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	26	0	13.1	95	1.5	354	1.8	15
2012	12	26	1	13.8	92	1.4	354	1.8	11
2012	12	26	2	13.5	91	1.8	8	1.7	18
2012	12	26	3	13.7	89	1.1	348	1.8	10
2012	12	26	4	12.0	93	1.0	231	2.0	8
2012	12	26	5	10.8	101	1.0	249	2.1	359
2012	12	26	6	9.1	100	0.7	5	0.9	260
2012	12	26	7	8.1	102	1.7	350	0.6	103
2012	12	26	8	8.1	103	0.7	341	0.9	18
2012	12	26	9	8.2	106	0.8	349	0.5	288
2012	12	26	10	8.4	105	0.9	355	0.3	3
2012	12	26	11	8.4	100	0.9	24	0.5	184
2012	12	26	12	8.2	101	0.8	33	0.5	141
2012	12	26	13	8.8	100	0.6	144	0.4	325
2012	12	26	14	6.1	100	1.1	332	0.4	272
2012	12	26	15	6.8	101	1.4	342	0.6	270
2012	12	26	16	6.1	104	0.8	214	0.4	233
2012	12	26	17	5.7	103	1.0	342	0.7	336
2012	12	26	18	6.6	105	1.0	345	0.5	343
2012	12	26	19	7.0	103	0.4	10	0.6	288
2012	12	26	20	7.2	106	0.4	235	0.9	24
2012	12	26	21	7.3	105	0.9	352	0.5	299
2012	12	26	22	7.5	105	0.9	311	0.6	354
2012	12	26	23	6.8	103	0.4	196	0.5	313
2012	12	27	0	5.0	97	0.4	197	0.2	165
2012	12	27	1	5.5	105	1.2	353	0.4	283
2012	12	27	2	6.4	110	0.9	349	0.4	17
2012	12	27	3	7.2	107	0.7	227	0.1	16
2012	12	27	4	8.3	104	0.2	28	0.3	241
2012	12	27	5	9.1	103	0.5	218	0.4	260
2012	12	27	6	9.4	97	0.9	214	0.3	119
2012	12	27	7	9.0	96	1.0	217	0.4	72
2012	12	27	8	12.6	104	0.6	189	0.2	22
2012	12	27	9	9.7	97	1.2	204	0.4	123
2012	12	27	10	11.7	102	0.7	168	0.4	83
2012	12	27	11	11.0	101	1.0	203	0.4	120
2012	12	27	12	11.0	106	0.7	181	0.6	107
2012	12	27	13	13.6	105	0.6	216	0.5	85
2012	12	27	14	13.8	103	1.1	220	0.5	92
2012	12	27	15	12.5	105	0.9	196	0.7	116
2012	12	27	16	12.5	108	1.2	246	0.7	96
2012	12	27	17	11.9	110	1.3	219	0.6	92
2012	12	27	18	12.1	107	1.0	222	0.2	16
2012	12	27	19	11.9	107	1.1	209	0.7	58
2012	12	27	20	10.9	110	0.8	211	0.3	249
2012	12	27	21	10.1	113	0.7	252	0.4	258
2012	12	27	22	10.8	113	0.8	252	0.3	93
2012	12	27	23	10.2	112	0.7	233	0.3	257

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	28	0	9.7	114	0.5	167	0.3	281
2012	12	28	1	9.9	112	0.4	182	0.2	298
2012	12	28	2	8.5	106	0.6	300	0.1	347
2012	12	28	3	8.8	105	1.2	352	0.3	329
2012	12	28	4	8.3	104	0.4	351	0.3	295
2012	12	28	5	8.3	109	0.3	321	0.3	307
2012	12	28	6	8.3	110	0.3	203	0.2	16
2012	12	28	7	7.3	109	0.5	211	0.2	23
2012	12	28	8	7.8	112	0.6	243	0.3	267
2012	12	28	9	8.3	110	0.4	306	0.5	334
2012	12	28	10	7.8	107	0.4	326	0.2	357
2012	12	28	11	7.1	109	0.3	281	0.2	164
2012	12	28	12	5.6	104	0.2	239	0.3	105
2012	12	28	13	4.4	88	0.6	236	0.2	279
2012	12	28	14	3.1	92	0.3	107	0.2	139
2012	12	28	15	1.9	253	0.4	213	0.4	288
2012	12	28	16	2.2	233	0.4	217	0.2	116
2012	12	28	17	2.3	236	0.5	211	0.4	103
2012	12	28	18	2.1	232	0.8	204	0.4	56
2012	12	28	19	1.4	265	0.5	96	0.4	102
2012	12	28	20	1.9	258	0.6	229	0.5	345
2012	12	28	21	2.3	248	0.5	189	0.1	110
2012	12	28	22	1.7	246	0.5	269	0.6	24
2012	12	28	23	1.6	157	0.8	259	0.4	343
2012	12	29	0	1.8	126	1.0	334	0.5	319
2012	12	29	1	1.4	243	1.5	4	0.6	351
2012	12	29	2	1.6	261	0.8	352	1.2	354
2012	12	29	3	1.3	253	1.2	213	0.3	256
2012	12	29	4	1.6	256	0.7	233	0.3	341
2012	12	29	5	0.9	247	0.9	351	0.4	1
2012	12	29	6	0.7	297	0.7	308	0.4	24
2012	12	29	7	1.7	273	0.7	266	0.5	44
2012	12	29	8	2.1	237	0.6	322	0.4	289
2012	12	29	9	1.9	233	0.6	334	0.6	4
2012	12	29	10	1.7	245	0.5	223	0.5	45
2012	12	29	11	1.8	241	0.9	220	0.5	73
2012	12	29	12	0.8	146	0.5	179	0.3	116
2012	12	29	13	1.0	167	0.4	216	0.4	113
2012	12	29	14	0.9	281	0.3	229	0.3	166
2012	12	29	15	1.8	99	0.5	266	0.5	115
2012	12	29	16	2.1	95	0.6	348	0.3	309
2012	12	29	17	3.3	92	0.8	330	0.4	345
2012	12	29	18	3.6	92	0.7	247	0.5	358
2012	12	29	19	4.1	97	0.5	219	0.4	267
2012	12	29	20	4.6	101	0.4	227	0.4	95
2012	12	29	21	5.6	109	0.6	292	0.6	76
2012	12	29	22	6.9	105	0.4	312	0.4	88
2012	12	29	23	7.8	106	0.6	278	0.2	274

Appendix C. Hourly Wind Speed and Direction from Brucejack Meteorological Stations

Year	Month	Day	Hour	Brucejack Lake		Scott Creek		Wildfire Creek	
				WS (m/s)	WD (degree)	WS (m/s)	WD (degree)	WS (m/s)	WD (degree)
2012	12	30	0	8.3	107	0.5	229	0.2	60
2012	12	30	1	8.6	106	0.5	7	0.3	357
2012	12	30	2	10.0	105	0.4	258	0.4	86
2012	12	30	3	10.5	105	1.2	222	0.5	83
2012	12	30	4	11.1	103	0.5	220	0.2	108
2012	12	30	5	10.4	104	0.4	186	0.2	91
2012	12	30	6	9.1	105	0.7	205	0.5	105
2012	12	30	7	9.6	102	0.7	194	0.1	224
2012	12	30	8	10.7	98	0.4	162	0.6	110
2012	12	30	9	7.9	101	1.2	200	1.0	111
2012	12	30	10	9.4	104	1.0	179	1.0	107
2012	12	30	11	9.2	104	1.4	223	0.6	114
2012	12	30	12	9.6	103	0.6	204	0.2	129
2012	12	30	13	8.7	101	0.6	213	0.5	88
2012	12	30	14	8.5	104	0.5	235	0.8	180
2012	12	30	15	9.3	100	0.6	307	0.6	30
2012	12	30	16	10.9	99	0.9	7	0.3	34
2012	12	30	17	12.1	97	0.3	347	0.4	39
2012	12	30	18	12.3	98	0.6	329	0.4	93
2012	12	30	19	13.0	95	0.7	210	0.2	114
2012	12	30	20	13.1	95	0.7	196	0.6	137
2012	12	30	21	12.6	103	0.8	184	0.4	119
2012	12	30	22	11.5	98	0.7	228	1.1	113
2012	12	30	23	11.3	100	0.6	205	0.9	130
2012	12	31	0	10.6	102	0.9	226	0.9	115
2012	12	31	1	12.1	103	0.9	142	0.6	161
2012	12	31	2	13.3	96	1.1	125	1.6	125
2012	12	31	3	11.3	102	0.7	163	2.6	106
2012	12	31	4	11.3	108	0.9	168	2.6	103
2012	12	31	5	11.4	105	0.8	144	2.9	113
2012	12	31	6	10.8	98	0.9	211	2.3	124
2012	12	31	7	8.9	96	0.9	217	3.0	110
2012	12	31	8	5.3	115	1.0	235	3.6	119
2012	12	31	9	3.0	109	0.8	230	3.1	122
2012	12	31	10	3.9	275	0.8	316	1.3	121
2012	12	31	11	5.6	274	1.2	337	1.0	57
2012	12	31	12	4.8	291	1.6	7	0.7	97
2012	12	31	13	3.5	283	0.9	335	0.4	260
2012	12	31	14	4.1	286	1.0	211	0.5	4
2012	12	31	15	2.7	257	0.9	61	0.8	7
2012	12	31	16	2.5	252	1.2	348	1.1	359
2012	12	31	17	2.0	249	0.9	262	0.6	9
2012	12	31	18	2.9	295	1.8	212	0.7	336
2012	12	31	19	3.1	292	1.1	11	0.6	37
2012	12	31	20	1.7	249	0.9	351	0.7	347
2012	12	31	21	2.2	217	1.3	315	0.4	90
2012	12	31	22	2.7	110	1.4	8	0.5	58
2012	12	31	23	4.5	103	1.4	205	0.4	27