Lake Surface Temperature Dataset in the North Slave Region Retrieved from Landsat Satellite Series - 1984 to 2021

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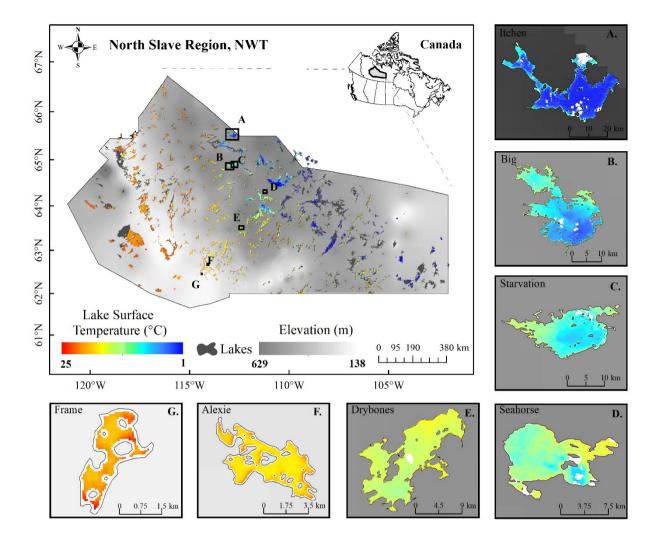
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Abstract. Lake surface temperature (LST) is an important attribute that highlights regional weather and climate variability and trends. The spatial resolution and thermal sensors on Landsat platforms provide the capability of monitoring the temporal and spatial distribution of lake surface temperature on small to medium size lakes. In this study, a retrieval algorithm was applied to the thermal bands of Landsat archives to generate an LST dataset (North Slave LST dataset) for 535 lakes in the North Slave Region (NSR) of the Northwest Territories (NWT), Canada, for the period of 1984 to 2021. North Slave LST was retrieved from Landsat-5 TM, Landsat-7 ETM+ and Landsat-8 OLI/TIRS; however, most of the dataset was created from the

- 15 thermal bands of Landsat-5 (43%) due to its longevity (1984-2013). Cloud masks were applied to Landsat images to eliminate cloud cover. In addition, a 100-meter inward buffer was applied to lakes to prevent pixel mixing with shorelines. To evaluate the algorithm applied, retrieved LST was compared with in-situ data and Moderate Resolution Imaging Spectroradiometer (MODIS) LST observations. A good agreement was observed between in-situ observations and North Slave LST with a mean bias of 0.12 °C and an RMSD of 1.7 °C. The North Slave LST dataset contains more available data for warmer months (May
- 20 to September) (57.3 %) compared to colder months (October to April). The average number of images per year for each lake across the NSR ranged from 20 to 45. The North Slave LST dataset available at https://doi.org/10.5683/SP3/J4GMC2 will provide communities, scientists, and stakeholders with spatial and temporal changing temperature trends on lakes for the past 38 years.



25 1 Introduction

Lake surface temperature (LST) is a significant indicator of climate change and is crucial to lake ecosystems (Livingstone et al., 2005; G. Zhang et al., 2019). Several ecological, biological, and hydrogeochemical processes are influenced by temperature in lakes (Schneider & Hook, 2010). Lake warming can result in a decrease in ice cover, changes in over-lake wind speeds, and changes in water column stratification (Austin & Colman, 2007; Desai et al., 2009; Kraemer et al., 2015; Magnuson et al.,

30 2000). Land-water-atmosphere system's energy and material exchange processes can also be reflected in lake surface temperature (Huang et al., 2017; Yang et al., 2020) and hence recognised as an essential climate variable. As a significant

variable in regional studies, the impact and relationship of LST to weather, climate and lake processes have been explored by other studies, including influences on the weather (Eerola et al., 2014; Kheyrollah Pour et al., 2017; Kheyrollah Pour, Duguay, et al., 2014; Kheyrollah Pour, Rontu, et al., 2014), climate (Moigne et al., 2016; Wang et al., 2021), precipitation (X. Zhang et

- 35 al., 2016), lake effect snow (Shi & Xie, 2019) and lake overturning (Fichot et al., 2019). Observations of lakes worldwide have reported increased lake temperatures associated with global warming resulting in changes to the underlying lake system (O'Reilly et al., 2015; Woolway et al., 2019). Long-term records of lake surface temperature are therefore necessary to understand the thermal mechanism underlying lake processes, including lake ice formation and decay, lake productivity, aquatic ecosystems and other limnological processes (Chen et al., 2019; Collingsworth et al., 2017; Woolway et al., 2020).
- 40 Even though in-situ records on lake surface temperature are a good source of temperature data for lake studies, their sparse distribution, especially in the north, presents a challenge, making satellite-derived data an essential resource in regional and global studies. Satellite sensors like MODIS (Moderate Resolution Imaging Spectroradiometer) and AVHRR (Advanced Very High-Resolution Radiometer) have been heavily relied upon to estimate and analyse LST in several studies (*e.g.*, Kheyrollah Pour et al., 2014b; Wloczyk et al., 2006; Sima et al., 2013; Wan et al., 2002; Zhao et al., 2020; Reinart and Reinhold, 2008);
- 45 however, their application to small and medium lakes is limited due to their relatively moderate spatial resolution (~250 m 1 km). In addition, satellite-retrieved LST datasets for global studies like the Global Lake Temperature Collaboration (GLTC) have a low sampling of high-latitude lakes, restricting their use for climate studies in these northern regions. Satellites like Landsat, however, provide an opportunity for regional studies of lake processes, including the spatial extraction of LST on Arctic and Subarctic lakes. The strength of Landsat includes its high spatial resolution (30 m -120 m), high radiometric
- 50 resolution (8-12 bits) and the presence of thermal infrared bands for the retrieval of LST. In addition, the longevity of data archives makes it one of the vast and extended observations of earth's surface water from space (Pekel et al., 2016). Currently, a regional spatial lake surface temperature dataset for small and medium size lakes on a large scale does not exist in the NWT, specifically for North Slave Region (NSR) lakes. This study aims to bridge this gap by utilising Landsat's capabilities. In this study, we generated LST data (North Slave LST) for over 535 predominantly small to medium lakes using data obtained
- 55 from Landsat archives (Landsat-5 TM, Landsat-7 ETM+ and Landsat-8 OLI/TIRS). An adapted temperature retrieval algorithm (Jimenez-Munoz et al., 2009, 2014) is applied to the thermal bands of Landsat to estimate LST. The dataset produced has a spatial resolution of 30 m and varying temporal resolution due to differences in satellite overpass and cloud interference. The generated North Slave LST dataset was evaluated with in-situ datasets and compared with the widely used LST satellite data (MODIS). The temporal and spatial distribution of the dataset is presented to report on data availability patterns.
- 60 Additionally, the North Slave LST dataset is used to briefly highlight the spatial inter-lake and intra-lake distribution of LST on NSR lakes.

This study aims to (i) capitalise on the thermal bands of Landsat to create an up-to-date lake surface temperature dataset for the NSR to record distribution from 1984 to 2021; (ii) highlight the temporal and spatial heterogeneity of LST between and within lakes on a 30 m grid; (iii) distribute and publish LST data for stakeholders, research communities to enable further

65 research, the public and the Government of the Northwest Territories to facilitate decision-making processes.

2 Study Lakes and Data Sources

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2.1 Selected Lakes in North Slave Region, NWT

The North Slave LST data is generated for 535 lakes between latitude 61° N and 67° N and longitude -120° W and -102W of the Northwest Territories (NWT) located in northern Canada, covering an area of about 316,000 km² (Figure 1 a). The region lies in the Slave province of the Canadian shield and is interspersed with numerous lakes (>10,000) of various sizes. The average elevation in the NSR is 301 m, with lake elevation ranging from 138 m to 624 m (Messager et al., 2016). This dataset contains LST on lakes with surface areas ranging from 0.05 km² to 1680 km², mean depths ranging from 1 m – 63 m and volumes ranging from 0.24 km³ to 27321 km³. Appendix A contains a table listing all study lakes and their geophysical properties. Air temperature in the NSR ranges from ~-45°C to +30°C. Most study lakes are between 1 and 5 km² (Figure 1b),

75 and the dominant mean depth range is from 5 to 10 m (Figure 1c).

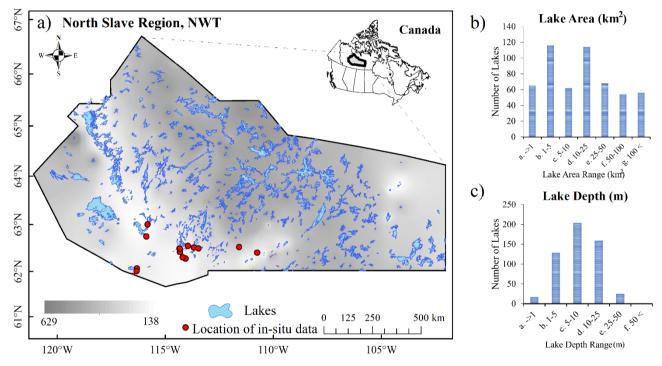


Figure 1: a) Geographic distribution of study lakes in the North Slave Region, Northwest Territories, Canada. The lake area and depth distribution are shown in b) and c), respectively.

2.2 Spatial Data for LST Retrieval

80 2.2.1 Landsat Archives

Landsat archives consist of optical data from a series of earth-observing satellite missions. For this study, Landsat tiles covering the NSR were obtained from the United States Geological Survey (USGS). Surface temperatures on lakes were estimated from the thermal infrared (TIR) bands of Landsat-5 TM (Thematic Mapper) (1984-2013), Landsat-7 ETM+ (Enhanced

Thematic Mapper Plus) (1999-present) and Landsat-8 OLI/TIRS (Operational Land Imager and the Thermal Infrared Sensor)

- 85 (2013-present) instruments. Landsat instruments orbit at an altitude of 705 km, are sun-synchronous and have a 16-day repeat cycle. The thermal band (band 6) of Landsat-5 and Landsat-7 record emitted radiation between the wavelengths of 10.40 μm to 12.50 μm while that of Landsat-8 (band 10) records between 10.6 μm to 11.19 μm. The spatial resolution of thermal bands Landsat-5 TM (120 m), Landsat-7 ETM+ (60 m) and Landsat-8 OLI/TIRS (100 m) are resampled with the cubic convolution method and distributed at a spatial resolution of 30 m to match optical bands (USGS, 2022). In addition, other bands, including
- 90 the quality band (BQA), near-infrared band, red band, and metadata, are also used in the retrieval of LST. About 34 Landsat tile scenes cover the NSR, with each tile containing 5000×5000 30 m pixels and overpass times ranging from 18:00 to 20:00 UTC.

2.2.2 ERA5 Reanalysis Data

Total column water vapour obtained from ERA5 reanalysis data (Copernicus Climate Change Service (C3S)) from 1984 to 2021 was used as input in the algorithm to correct for atmospheric effects on Landsat images. Values were derived from the hourly data with a ~30 km spatial resolution obtained from the European Centre for Medium-Range Weather Forecasts (ECMWF) (Hersbach et al., 2020). ERA5 reanalysis data is a dataset generated from a combination of in-situ observations and modelling to provide estimates of land, atmospheric and ocean changes on a global scale. Average ERA5 hourly total column water vapour on single levels was used as an input in the LST retrieval algorithm.

100 2.2.3 Lake Outline and Properties Data

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Each lake's name, location, depth, size, elevation, and outline were retrieved from a combination of the HydroLAKES database, CanVec series and the Water file-Lakes and Rivers database. HydroLAKES database is a digital map repository developed in the Global HydroLAB (http://wp.geog.mcgill.ca/hydrolab/) from a collection of several databases (*e.g.*, Global and regional databases like CanVec series and SRTM Water Body Data (Slater et al., 2006)). This database provides information on world lakes and their significant properties through high-resolution maps. Over 1,427,688 individual lake

- vector polygons greater than 10 ha are included in the repository (Messager et al., 2016). The mode of pixel-level lake elevation data obtained from the Earth-Env-DEM90 digital elevation model and the USGS-provided GTOPO30 DEM was used to calculate HydroLAKES elevation data. A geo-statistical model developed from surrounding land surface topography was derived to generate average lake depths and volumes (Messager et al., 2016). As part of the Government of Canada initiative
- (https://open.canada.ca), the CanVec series provides a geometric description and fundamental characteristics of hydrographic phenomena in the form of geospatial vector data. The Water file-Lakes and Rivers polygons data (https://www12.statcan.gc.ca) maps lakes and rivers under the 2006 census, created by statistics Canada under the Government of Canada on August 29, 2013. This data was the primary source of lake names attributed to lake outlines in our dataset.

2.2.4 Evaluation Dataset

- 115 Landsat-derived LST was generated during both open-water and ice-covered seasons. Retrieved data were evaluated against in-situ measurements collected over selected locations within the study area (Figure 1). In-situ measurements from Mackenzie DataStream were used for evaluating LST derived from Landsat. DataStream is an open-access freshwater data platform that provides water monitoring data collected by governments and communities across Canada. The database for the NWT region was the product of the NWT-wide community-based water quality monitoring (CBM) program, which is collected during open
- 120 water seasons. The CBM program was implemented in 2012 as a partnership between the Department of Environment and Natural Resources (ENR), the Government of the Northwest Territories (GNWT), communities and regional organisations in NWT to monitor water quality and changes. The surface temperatures on lakes were measured with YSI Sondes and EXO 2 Sondes and interpreted by ENR. Collated surface temperature data used for evaluation from this source was from the years 2014 to 2019. Another primary source was lake temperature data collected by Environment and Climate Change Canada
- (ECCC) from 1999 to 2003. Temperature loggers were used to measure hourly temperature on lakes during open water periods; however, only temperature collected at the skin surface (depth= 0 m) was used for LST evaluation in this study.
 MODIS (MYD11_L2) surface temperature dataset from 2003 to 2021 was used to evaluate Landsat-derived LST data generated during both open water and ice-covered seasons. The dataset was obtained from NASA's Earth Observing System Data and Information System (EOSDIS), mounted on terra and aqua satellites, MODIS records within the spectral ranges of
- 130 0.405 14.385 µm across 36 bands. The aqua product contains nighttime and daytime LST measurements on a spatial resolution of ~1 km derived from the thermal infrared bands. For this study, the daytime LST measurement covering lakes in the NSR was compared against the Landsat-derived LST.

3. Methods

3.1 Algorithm for Lake Surface Temperature

- 135 The thermal bands of Landsat were used in the retrieval algorithm to generate North Slave LST (band 6 for Landsat-5TM/Landsat-7ETM+ and band 10 for Landsat OLI/TIRS). Atmospheric and emissivity correction of thermal bands were conducted to account for the effect of absorption and emission of surface radiation. A single channel (SC) method was adapted and applied in this study to retrieve LST (Jimenez-Munoz et al., 2009, 2014; Jiménez-Muñoz & Sobrino, 2003). This method is based on approximating the radiative transfer equation without the dependence on in-situ radio-sounding data. Only a single
- 140 band is required in the SC method, making it feasible for use on single thermal band satellites like Landsat-5 TM, which was utilised in this study. SC method uses atmospheric water vapour (Sect. 2.2.2) as a variable in the correction for atmospheric effect.

LST retrieval using the SC method requires atmospheric water vapour, emissivity, brightness temperature and wavelength emitted radiance values, and thermal constants. LST estimation is based on the following Eq. (1) (Jiménez-Munoz & Sobrino,

145 2003):

$$LST = \gamma \left[\varepsilon^{-1} \left(\psi_1 L_{sensor,\lambda} + \psi_2 \right) + \psi_3 \right] + \delta , \qquad (1)$$

where:

$$\gamma = \left\{ \frac{c_2 L_{sensor,\lambda}}{T_{sensor}^2} \left[\frac{\lambda^4}{c_1} L_{sensor,\lambda} + \lambda^{-1} \right] \right\}^{-1},$$
(2)

and:

150
$$\delta = -\gamma L_{sensor,\lambda} + T_{sensor}, \qquad (3)$$

At-sensor radiance and brightness temperature are denoted by $L_{sensor,\lambda}$ (W m⁻² sr⁻¹ µm⁻¹) and T_{sensor} (K) respectively. $c_1(1.19104 \ 10^8 \text{ W } \mu\text{m}^4 \text{ m}^{-2} \text{ sr}^{-1})$ and $c_2(14387.7 \ \mu\text{m} \text{ K})$ are Plank's constants. Emitted radiance wavelength (λ) is 11.457 µm in Landsat-5 TM, 11.269 µm in Landsat-7 ETM+ and 10.904 µm in Landsat-8 OLI TIRS. ψ_1 , ψ_2 and ψ_3 are atmospheric functions obtained as a function of water vapour (w) and are specific to the three individual Landsat sensors.

155 At-sensor spectral radiance was calculated from raw digital numbers (DN) of thermal bands based on metadata information and constants. Equations used are specific to the type of sensor, as listed below.

At-sensor radiance values for Landsat-5 TM were derived using Eq. (4) (Chander & Markham, 2003):

$$L_{sensor,\lambda} = G_{rescale} DN + B_{rescale} , \tag{4}$$

where 0.0551584 Wm²sr¹ μ m¹/DN and 1.2378 Wm²sr¹ μ m¹/DN are constants for *G_{rescale}* and *B_{rescale}*, respectively.

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Landsat-7 ETM+'s at-sensor radiance values were derived using Eq. (5) (Ihlen & Zanter, 2019) :

$$L_{sensor,\lambda} = \left(\frac{L_{\lambda max} - L_{\lambda min}}{Q_{calmax} - Q_{calmin}}\right) (Q_{cal} - Q_{calmin}) + L_{\lambda min} , \qquad (5)$$

where the maximum and minimum spectral radiance is represented by $L_{\lambda max}$ and $L_{\lambda min}$, respectively, and the maximum and minimum quantised calibrate pixel is represented by Q_{calmax} and Q_{calmin} , respectively, obtained from the metafile. Q_{cal} denotes DN values of pixels in band 6.

Landsat-8 OLI TIRS's at-sensor radiance values were derived using Eq. (6) (U.S. Geological Survey, 2016):

$$L_{sensor,\lambda} = M_L Q_{cal} + A_L \,, \tag{6}$$

where DN values of pixels in band 10 are denoted by Q_{cal} . $M_L = 0.000342$ and $A_L = 0.1$ are fixed rescaling factors in the metadata provided by the USGS.

170 Brightness temperature T_{sensor} is estimated using calculated at-sensor radiance values and thermal constants derived from the metadata based on Eq. (7) below:

$$T_{sensor} = \frac{K_2}{ln\left(\frac{K_1}{L_{sensor,\lambda}} + 1\right)},\tag{7}$$

where thermal constants K_1 (W m⁻² sr⁻¹ μ m⁻¹) and K_2 (K) vary based on the type of Landsat sensor (Table 1).

Thermal	Landsat-5 TM	Landsat-7 ETM+	Landsat-8 OLI/TIRS		
Constant	Band 6	Band 6	Band 10		
K 1	607.76	666.09	774.8853		
K ₂	1260.56	1282.71	1321.0789		

175 Table 1: Thermal constants applied to Landsat thermal bands for brightness temperature estimation.

Atmospheric Functions (AFs) used for atmospheric correction were based on coefficients acquired using Global Atmospheric Profiles from Reanalysis Information (GAPRI) and Thermodynamic Initial Guess Retrieval (TIGR) databases (Jimenez-Munoz et al., 2009, 2014).

180 Atmospheric Functions Equations ψ_1, ψ_2 and ψ_3 particularised for Landsat-8 OLI/TIRS 8 are:

$$\psi_1 = 0.04019w^2 + 0.02916w + 1.01523 , \tag{8a}$$

$$\psi_2 = -0.38333w^2 - 0.50294w + 0.20324, \tag{8b}$$

$$\psi_1 = 0.00918w^2 + 1.36072w - 0.27514, \qquad (8c)$$

Landsat-7 ETM+'s AFs are:

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$$\psi_1 = 0.07593w^2 - 0.07132w + 1.08565$$
, (9a)

$$\psi_1 = -0.61438w^2 - 0.70916w - 0.19379, \tag{9b}$$

$$\psi_1 = -0.02892w^2 + 1.46051w - 0.43199, \qquad (9c)$$

and Landsat-5 TM's AFs are:

$$\psi_1 = 0.07518w^2 - 0.00492w + 1.03189, \tag{10a}$$

190
$$\psi_1 = -0.59600w^2 - 1.22554w + 0.08104$$
, (10b)

$$\psi_1 = -0.02767w^2 + 1.43740w - 0.25844, \tag{10c}$$

Normalised Difference Vegetation Index (NDVI) (Eq.8) values calculated were used to assign lake surface emissivity. Near Infrared (NIR) and red bands of Landsat were used to calculate NDVI values (Eq.11).

$$NDVI = \frac{NIR - Red}{NIR + Red},\tag{11}$$

195 The lake surface was assigned an emissivity of 0.985 if NDVI values were lower than 0.05; otherwise, a value of 0.97 was assigned (Prats et al., 2018).

3.2 Retrieval of Lake Surface Temperature

3.2.1 Lake LST Retrieval

LST retrieval algorithms were applied to the thermal bands in conjunction with other processed output (bands and metadata)

- 200 from Landsat data to generate the North Slave LST dataset. Quality Assurance (QA) band outlining surface, atmosphere, and sensor conditions included in the Landsat data were used to mask clouds and other obstructions. The QA band assesses cloud influence at different confidence levels [high (67-100 %), medium (34-66 %) and low (0-33 %)], making it possible for cloud removal. This study categorised high and medium confidence values as cloud pixels, while low confidence values were considered cloud-free. LST retrieval algorithms and equations (Eq. (1) Eq. (11)) were applied to the thermal bands of all
- 205 tiles from 1984 to 2021. Cloud masks were generated and applied to retrieved LST to eliminate cloud-distorted pixels. LST pixels were extracted using vector files of lake outlines from the HydroLAKES dataset. A 100 m negative buffer was applied to remove the effect of lake pixel mixing with land surface pixels. Possible erroneous pixels were flagged using z-scores which calculate how far a value is from the mean. This was used to access spatial differences and outliers in pixels. Pixels of lakes with z-score values above 3.5 and below -3.5 were flagged. In addition, LST output with equal pixels across the entire lake or
- 210 group of pixels having the same value to four decimal places were flagged. Further visual quality checks and analysis were applied to flagged LST to clean generated data and remove erroneous cloud cover that masks could not capture. The overall framework for retrieval and generation of the LST dataset for selected lakes in the NSR is highlighted in Figure 2.

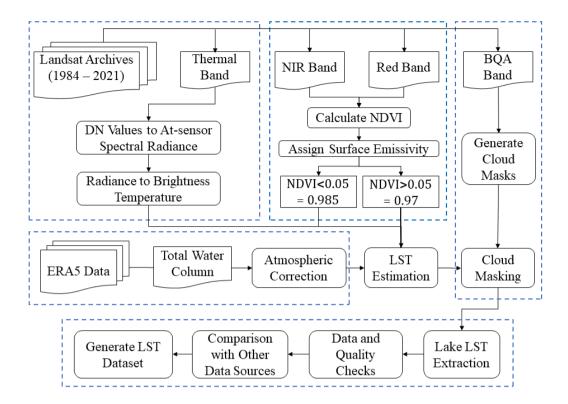


Figure 2: Workflow and methods for generating North Slave LST dataset from Landsat archives.

215 3.2.2 Data Quality Assessment Information

It is essential to highlight the limitations of data estimates from satellite-based records (Merchant et al., 2017). This provides awareness of the degree to which a sensor is stable, as well as observations obtained from them. In addition, these reports are necessary to inform the confidence of data extracted and the structures of their errors through time and space. One significant distortion of Landsat archives is the failure of the scan line corrector of Landsat-7 ETM+ on May 31, 2003. As a result, the measurement from scans could not be corrected, rendering all images sensed after that date losing about 22% of the data extracted. This limitation, named Landsat-7 ETM+ SLC-off issue, is more prominent on the edges of images than in the centre. Nevertheless, Landsat-7 ETM+ data was still used in the study because the radiometric and geometric corrections are unaffected by this scan line issue.

3.2.3 Evaluation Methods

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225 Indicators used to evaluate the performance of North Slave LST against in-situ and MODIS LST were the root mean squared deviation (RMSD), mean bias deviation (MBD) and R-squared. The MBD assesses systematic differences and evaluates the under-prediction and over-prediction between two datasets (Eq. (12)). An MBD value of 0 indicates an utterly random error.

$$MBD = \frac{\sum_{i=1}^{N} [P_i - O_i]}{N},$$
(12)

where Oi and Pi are the observed and generated values, respectively, while N is the number of points used for evaluation. The 230 index values ranged between 0 and 1, indicating the worst and best possible performance.

The root means squared deviation (RMSD) measures the total difference between two datasets without distinguishing between over or under-prediction of models/algorithms (Eq. (13)). No deviation in values results in an RMSD value of 0.

$$RMSD = \sqrt{\frac{\sum_{i=1}^{N} [P_i - O_i]^2}{N}} , \qquad (13)$$

4 Results and Discussion

235 4.1 Quality of North Slave LST

The primary sources of limitation for the North Slave LST data include (i) potential mixed pixels that might not be captured by the algorithm, (ii) the presence of *no data* pixels on lakes and (iii) inconsistency in the temporal resolution of dataset per lake. Lake boundaries extraction of LST was based on outlines from external boundary files (Sect. 2.2.4). As such, errors that may exist, including overestimating lake area and incapability to accurately demarcate lake islands, would affect LST values

- 240 retrieved. A 100-meter inward buffer was applied to address this; however, valuable lake shore LST information is lost, especially in small lakes. The number of pixels and the percentage of the lake it represents is reported in Appendix A. Depending on the lake shape, area and existence of islands, pixels represented 16.7% to 97.34% of the lake area. The spatial variation in LST is reduced for lakes with a smaller number of pixels.
- In addition to the overall representativeness of pixels on lakes, LST pixels retrieved for a given day may vary due to cloud cover and the Landsat-7 ETM+ SLC-off issue (Sect. 3.2.2), resulting in missing LST pixels for a given lake. The dataset represents these missing LST pixels with *no data* pixels (which do not contain LST values). Figure (3) highlights the fraction of LST pixels to *no data* pixels distributed over years and months. The percentage of *no data* pixels ranged from 30.6% (1996) to 45.4% (1993) across the years, with relatively lower *no data* pixels percentages recorded from 2014 to 2021 (less than 37.2%) (Figure 3a). Generally, earlier years recorded higher *no data* pixels percentages compared to later years. For example,
- 250 the monthly distribution (Figure 3b) showed the least percentage of *no data* pixels for February (26.8%) and the highest for October (51.2%).

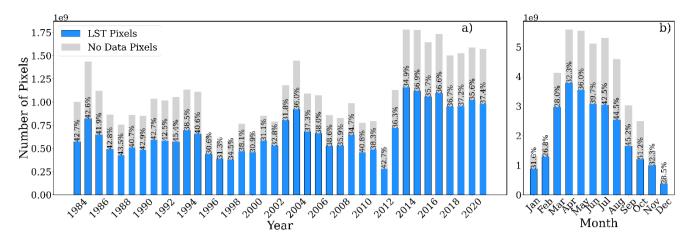


Figure 3: a) Yearly and b) monthly distribution of LST pixels vs *no data* pixels, highlighting the percentage of *no data* pixels for a given period.

- Due to the presence of *no data* pixels, it is necessary to inform on the percentage coverage of LST pixels. LST pixel coverage for each image is calculated as LST pixels retrieved divided by the total number of pixels for a given lake multiplied by 100 per cent. LST pixel coverage is reported for each lake on a given day as part of the naming and metadata of our dataset. Figure (4) shows the yearly distribution of LST pixel coverage for the entire dataset. Lakes with less than 10% of LST pixels on a given day were eliminated from the dataset. The percentage of lakes with LST pixel coverage greater than 90% was 47.2%
- 260 (Figure 4a). A greater percentage of lakes (77.4%) in the dataset had more than 50% LST pixels coverage. The percentage of lakes with LST pixels coverage greater than 90% is plotted in Figure 4b annually. Results show a general reduction in percentage with time, where earlier years had higher percentages of LST pixels coverage (> 90%) than in recent years. This downward trend can be attributed to the Landsat-7 ETM+ SLC-off issue, which increases the presence of *no data* pixels. Even though the typical overpass for Landsat is 16 days, the temporal resolution of the North Slave LST dataset varied due to
- 265 the overlap of satellite sensors for specific years and the inability to retrieve LST due to the cloud cover. The distribution and frequency of the data were based on the operational times of the three Landsat satellites used in this study. Most of the dataset was derived from Landsat-5 (43%). Landsat-7 and Landsat-8 contributed 34% and 22% of the dataset, respectively. LST images from 1999 were derived from two sets of Landsat (Landsat-5 and Landsat-7 from 1999 to 2011) and (Landsat-7 and Landsat-8 from 2013 to 2021). Years with overlapping sensors may have shorter temporal resolution than years with only one
- 270 sensor retrieval. As a result, there is an inconsistency with the temporal resolution of the LST product.

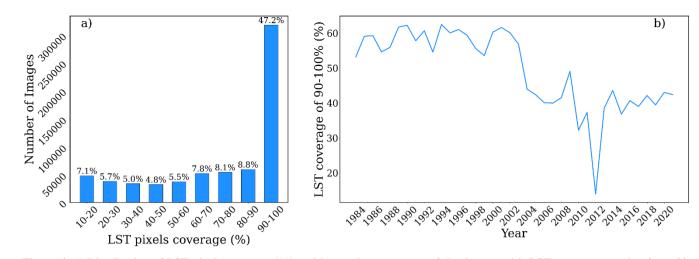


Figure 4: a) Distribution of LST pixels coverage (%) and b) yearly percentage of the dataset with LST coverage ranging from 90-100%.

275 4.2 North Slave LST Evaluation

4.2.1 Evaluation of LST Data

The accuracy of generated North Slave LST was examined by evaluating Landsat-derived LST to corresponding in-situ data (Fig 5). Dates from measured in-situ surface water temperature data (DataStream and ECCC) and derived North Slave LST data were matched. In addition, the widely used daily MODIS LST was compared with the generated dataset. Ground-based observations were compared against equivalent pixels within which measurements were taken, and the North Slave LST data were plotted against corresponding in-situ surface temperature measurements (Figure 5). A good correlation was observed between North Slave LST data and in-situ surface water temperature, with an R² value of 0.89 for the regression line. North Slave LST was slightly higher than in-situ records with an MBD of 0.12°C and RMSD of 1.71 °C.

- 285 Deviations between North Slave LST and measured surface water temperature could be due to differences between image acquisition times and the time of in-situ measurements. Landsat capture times of the NSR were between 18:00 and 20:00 UTC, corresponding to 12:00 and 14:00 local time. However, the time of in-situ observations was variable and did not necessarily correspond to the time of satellite image acquisition. Further variations in North Slave LST can also be attributed to the differences in sample collection and spatial resolution. North Slave LST is essentially the mean of ~60 to 120 m² area instead
- 290 of a single in-situ location. Possible errors reported by other studies for the differences in measured and Landsat values include georeferencing, radiometric and memory effects (Chander & Markham, 2003; Markham et al., 2014; Sentlinger et al., 2008; USGS, 2022; Young et al., 2017).

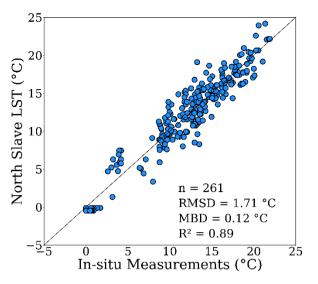


Figure 5: Comparison of North Slave LST with DataStream and ECCC in-situ measurements of water surface temperature during open water seasons.

Statistical parameters, including average yearly LST for open water season, total average LST and variance, were calculated for available ECCC and DataStream in-situ data and compared against North Slave LST, which is highlighted in Table 2. Absolute differences calculated for the parameters ranged from 0.1°C to 1°C. The highest absolute difference for the average LST for open water between the two datasets was 1°C calculated for the year 2000 of the ECCC data. The variance was 0.6°C and 0.3°C for the ECCC and Datastream, respectively. Differences between the total LST average were the lowest, with 0.3°C from 1999 to 2003 and 0.1°C from 2014 to 2019.

Statistical Parameters	Data	Period	In-Situ LST (°C)	North Slave LST (°C)	Absolute Difference (°C)
Average LST	ECCC	1999	11.9	12.2	0.3
for open water		2000	10.8	11.8	1
season (June -		2001	13.7	14.2	0.5
September)		2002	11.1	11.2	0.1
		2003	12.2	12.5	0.3
	DataStream	2014	13.7	14.2	0.5
		2015	15.1	14.5	0.6
		2016	16.1	16.4	0.3
		2017	15	15.5	0.5
		2019	14.2	13.3	0.9
Total LST	ECCC	1999-2003	12.3	12.6	0.3
Average for	DataStream	2014-2019	14.9	14.8	0.1
open water					
season					
Variance	ECCC	1999-2003	15.5	14.9	0.6
	DataStream	2014-2019	3.8	4.1	0.3

Table 2: Comparison of yearly average LST, average LST and variance between North Slave LST and In-Situ LST.

4.2.2 Yearly and Monthly Comparison of North Slave LST to MODIS LST

- 305 MODIS LST was first compared against available water surface temperature measurements from DataStream (Figure 6a) and North Slave LST for days when records were available for all three data sources. The aim was to compare the deviation of North Slave LST and water surface temperature to that of MODIS LST and water surface temperature. A relatively low coefficient of determination was observed for MODIS LST (R²= 0.5) compared to North Slave LST (R²= 0.94) when evaluated against measured water surface temperature. RMSD values were also higher for MODIS LST (4.63 °C) than North Slave LST (1.55°C), with MBD of 2.35°C and -0.12°C for MODIS LST and North Slave LST, respectively.
- 310 (1.55°C), with MBD of 2.35°C and -0.12°C for MODIS LST and North Slave LST, respectively. North Slave LST was further compared against MODIS LST from 2003 to 2021 (ice-covered and open-water separately) for larger study lakes (30 km²) to avoid pixel mixing with land (Figure 6b). Results showed an RMSD of 2.56°C and MBD of 1.45°C for ice-covered LST, suggesting an overestimation of North Slave LST during this period. On the other hand, an underestimation against MODIS LST was observed (MBD = -1.14°C) for open-water LST with a relatively higher RMSD of
- 315 3.39°C. This underestimation was expected as MODIS LST overestimates when compared against in-situ data (Figure 6a). Even though a prior comparison of MODIS LST to surface water temperature demonstrated a lower coefficient of determination, North Slave LST was still further compared against MODIS LST in this study. However, the decision to use MODIS for comparative analysis was due to the unavailability of continuous historical measurements of lake surface temperature. Additionally, MODIS LST provided an added outlook on the capability of North Slave LST to highlight historical 320 trends despite the low temporal resolution by demonstrating a good correlation between the LST values (R = 0.93).

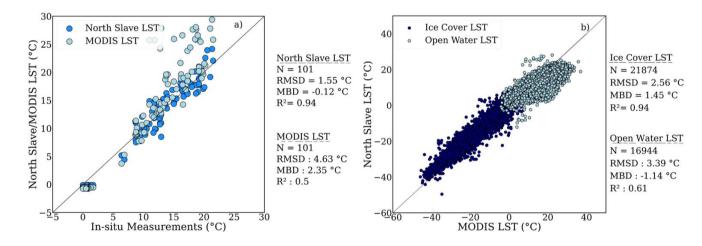


Figure 6: Comparison of North Slave LST and MODIS LST to a) DataStream and ECCC in-situ water surface temperature measurements during open water seasons b) MODIS LST during open water and ice-covered seasons.

Figures 7a and 7b demonstrate the yearly and monthly RMSD values derived from the comparison between North Slave LST and MODIS LST. Yearly RMSD shows a generally decreasing RMSD from earlier to later years, which may be attributed to Landsat's sensor change in recent years. LST values derived from 2013 onwards were extracted from Landsat-8 OLI/TIRS, which is known to have improved signal-to-noise ratio and calibration, higher 12-bit radiometric resolution and narrower spectral bands compared to previous sensors (Irons et al., 2012; Roy et al., 2014). Most importantly, Landsat-8 OLI/TIRS has a radiometric uncertainty of 3% compared to Landsat-7 ETM+ (5%), as well as reduced band saturation (Markham et al.,

330 2014). Monthly RMSD comparing MODIS LST to North Slave LST showed RMSDs were lowest in spring and highest in winter. LST in spring months (March-May) had the least deviation (RMSD = $1.9^{\circ}C - 2.9^{\circ}C$) when compared against MODIS data.

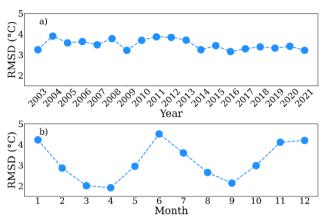


Figure 7: Yearly and monthly RMSD values from evaluating North Slave LST against MODIS LST from 2003 to 2021.

335 4.3 North Slave LST Dataset Distribution

4.3.1 Temporal Distribution of North Slave LST Dataset

LST was derived from the thermal radiation of the lakes' uppermost layer, hence the skin temperature. A total of 673,223 gridded data files and 536 tabular data were included in the generated North Slave LST dataset (https://doi.org/10.5683/SP3/J4GMC2) for the 535 lakes studied across the NSR (Attiah et al., 2022). The yearly and monthly distribution of the dataset within and between lakes varied temporally and is highlighted in Figure 8. Overall, the yearly distribution of the North Slave LST dataset was greater in recent years, with the period between 2014 and 2021 having the majority of the data and yearly percentages ranging from 4.15 to 5% of the total dataset. The larger number of data files in recent years was due to LST retrieval from a combination of Landsat-7 and Landsat-8 compared to the single sensor retrieval (Landsat-5) for earlier years. As a result, the highest yearly percentage of the North Slave LST dataset was for 2014 (5%), and

345 the least was for 1988 (1.2%). Unavailable data for the various years was predominantly due to insufficient usable Landsat data for winter months.

The monthly distribution of the North Slave LST dataset showed the month of May with the highest percentage (13.9%) and December (1.3%) with the lowest. Generally, colder months (October – April) had fewer data (42.7%) compared to relatively warmer months (May – September) (57.3%). Data is unevenly distributed across months and years due to differences in

350 overpass times and influences like cloud cover and other atmospheric impacts on data retrieval.

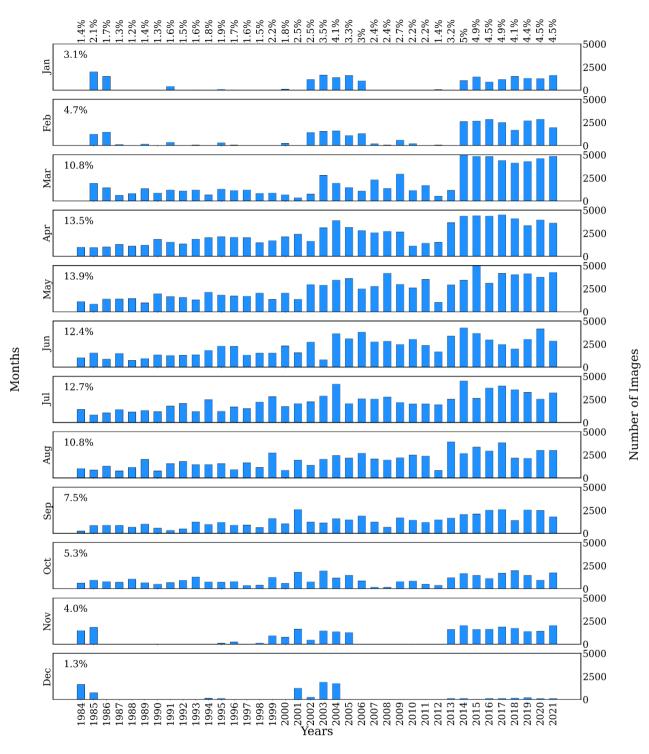
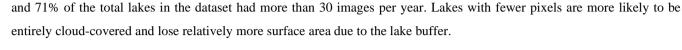


Figure 8: Yearly and monthly distribution of the North Slave LST dataset from 1984 to 2021. Percentages (%) represent the total percentage of the entire data for each month or year.

4.3.3 Spatial Dataset Distribution of LST dataset between lakes

- 355 While study lakes are widely distributed across the NSR, a large number (144 out of 535) were within 150 km distance of Yellowknife. The average yearly number of images for each lake in the study region is demonstrated in Figure 9. The average yearly minimum number of images was 20, reaching a maximum of 45. Lakes with a relatively smaller number of images were mainly distributed around Yellowknife. Smaller-size lakes generally had fewer images than relatively larger ones and can be primarily attributed to clouds covering the entirety of small lakes. Most lakes (152 out of 535) had between 40 and 45 images, 260 and 710% of the total block in the latent had mere the 20 immeres and Lakes.
- 360



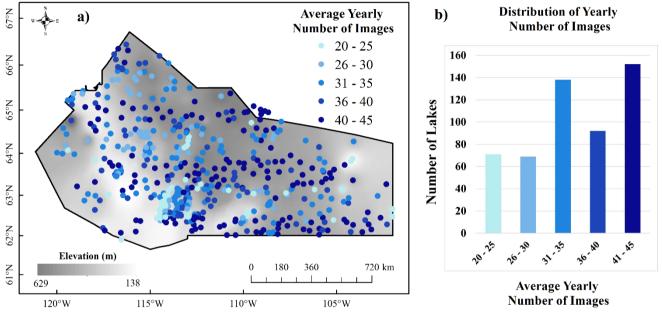


Figure 9: Distribution of the average yearly number of available images for lakes in the NSR.

4.4 North Slave LST Dataset

365 4.4.1 NetCDF Spatial Coverage of LST

The North Slave LST dataset includes LST for 500 lakes with known names and 35 without names. NetCDF (Network Common Data Form) and Tabular data are the data types in this dataset. NetCDF is a file format for storing multidimensional data, hence capturing the spatial coverage and dimension of LST for study lakes in this dataset. To facilitate easy data query, each NetCDF filename includes the name of the lake, date, longitude, latitude, minimum LST, maximum LST, mean LST,

370 number of pixels, and the percentage area of the LST pixels coverage of the lake for a given day. The naming convention for lakes and their explanation is summarised in Table 3. The dataset was grouped based on the first alphabet of the lake name, the name of the lake and further into yearly sub-groups. The NetCDF files in our dataset have a two-dimensional variable, "lst," which shows the spatial distribution of lake surface temperature. In addition, the one-dimensional x and y show the lake's extent and the number of pixels. The spatial reference

375 for the data is the World Geodetic System 1984, EPSG:4326, with a 30-meter resolution.

	Sample lake file name:					
AcastaLake_19840428115.564 _ 65.37835.907.106.50_17482_099.nc						
Section	Description of the section					
Lake name:	The lake's name predominantly derived from the Water file-Lakes and Rivers polygons					
AcastaLake	data from Statistics Canada. Lakes' unknown names were prefixed "NoNameLake" and					
	a number.					
Date:	The date of LST in the format "YYYYMMDD". It represents the date the Landsat scene					
19840428	was captured over the lake.					
Longitude (°):	The longitude represents a known longitude predominantly located at the lake's centre					
-115.564	when plotted against the latitude in decimal degrees.					
Latitude (°):	The latitude represents a known latitude predominantly located at the lake's centre when					
65.3783	plotted against the longitude in decimal degrees.					
Maximum temperature (°C):	The maximum LST value retrieved on the lake for the given date.					
-5.90						
Minimum temperature (°C):	The minimum LST value retrieved on the lake for the given date.					
-7.10						
Mean temperature (°C):	The mean LST value calculated from all LST pixels retrieved on the lake for the given					
-6.50	date.					
Number of LST Pixels:	The number of LST pixels retrieved on the lake for the given date.					
17482						
LST pixels coverage (%):	The number of LST pixels retrieved from the lake for the given date is divided by the					
099	total number of pixels representing the lake.					

4.4.2 Tabular Data of LST

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The second type of data included in the North Slave LST dataset is the tabular data containing LST statistics on individual study lakes for a given day. Derived attributes include the minimum, maximum, median, mean, number of ice cover pixels, number of open-water pixels, percentage of lake captured and other lake properties. Table 4 below highlights the column/field names from the tabular data and what they represent. This tabular data is generated for each lake and is included in the dataset.

Each filename consists of the lake name followed by longitude and latitude for easy query based on location (e.g., "AcastaLake_-115.564 _ 65.3783"). Additionally, monthly means were calculated for each lake and combined as one file in the dataset.

385 Table 4: Column names of the tabular dataset and the description.

Column	Description

Lake_Name	Name of the lake from which the lake surface temperature was retrieved. The name of lakes was predominantly derived from the Water file-Lakes and Rivers polygons data from Statistics Canada. Lakes' unknown names were prefixed "NoNameLake" and a number.
Date	The date which the lake surface temperature (LST) represents
Year	The year of the LST in the format "YYYY"
Month	The month of LST in the format "MM"
Day	Day of LST in the format "YY"
Maximum_Temperature	The maximum LST recorded on the lake in degrees Celsius (°C) at a given time
Minimum_Temperature	The maximum LST recorded on the lake in degrees Celsius (°C) at a given time
Median_Temperature	The median LST from all available pixels in degrees Celsius (°C)
Mean_Temperature	The mean LST from all available pixels in degrees Celsius (°C)
Total_Pixels	Total number of pixels representing the lake
LST_Pixels	Number of pixels with LST values retrieved from the lake
Percentage_LST_Pixels	Total percentage of pixels with LST values captured from the lake. Values are rounded to the nearest 1
Count_Water_Pixels	Number of LST pixel values greater than 0 retrieved from the lake at a given time
Count_Ice_Pixels	Number of LST pixel values less than 0 retrieved from the lake at a given time
Percentage_Ice_Pixels	Total percentage of ice pixels captured from the lake at a given time. Values are rounded to the nearest 1
Landsat_Row_Path	Tile name, row, and path of the Landsat from which LST was retrieved
Lake_Area	Surface area of the lake in square kilometres (km ²)
HyLak_ID	The ID is derived from the HydroLAKES dataset. Lakes with no ID are indicated with 0.
HyLak_Depth	The average depth of the lake derived from the HydroLAKES dataset in meters (m)
HyLak_Volume	The volume of the lake derived from the HydroLAKES dataset is million cubic meters (1 $mcm = 0.001 km^3$)
HyLak_Elevation	Elevation of the lake surface derived from HydroLAKES dataset in meters above sea level
Long(m)	Longitude point on the lake in meters
Lat(m)	Latitude point on the lake in meters
Long(DD)	Longitude point on the lake in decimal degrees
Lat(DD)	Latitude point on the lake in decimal degrees
Monthly_Mean_Temperature	The mean LST on the lake for a given month

4.5 Spatial Patterns of North Slave LST

4.5.1 Seasonal Lake Spatial Distribution of North Slave LST

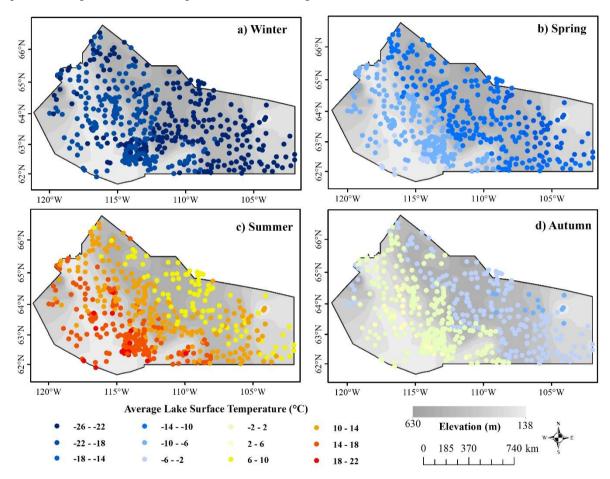
The seasonal spatial distribution of mean LST from 1984 to 2021 is shown in Figure 10 to highlight the spatial variation of LST for different seasons. The distribution of average LST was computed for winter (December - January), spring (March-May), summer (June – August) and autumn (September – November) for all study lakes. LST on lakes in the NSR is generally

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negative in winter $(-26^{\circ}C - -18^{\circ}C)$ and spring $(-17^{\circ}C - -3^{\circ}C)$. This is because lakes are ice-covered during these two seasons, constituting negative LST values. Autumn was characterised by both positive and negative LST values $(-8^{\circ}C - 3^{\circ}C)$. Lakes start to freeze in autumn, and the freezing rate is influenced by several factors resulting in differences in the open-water duration, which affect average temperature. The average LST for summer ranged from 6°C to 22°C. Winter had the lowest

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LST ranges with a variability of 8°C, while LST variability for summer was twice (16°C) that of winter. This is expected as temperatures on lakes during this season are influenced by several factors, including lake size, elevation, depth, latitude, longitude and volume (O'Reilly et al., 2015; Xie et al., 2022) in addition to air temperature. Seasonal LST spatial distribution provides insight into the climate patterns of the NSR region.



400 Figure 10: Spatial distribution of average LST of all years across the NSR for a) winter, b) spring, c) summer and d) autumn.

4.5.2 Spatial Distribution of LST for 2021

The spatial distribution of the mean annual LST across the NSR for 2021 is shown in Figure 11a, which highlights remarkable spatial differences between lakes at higher versus lower elevations, with lower-elevation lakes generally demonstrating higher LST. Based on the mean annual LST values in 2021, the LST category was divided into five different ranges, as shown in the

- 405 map [-12°C -9°C, -9°C -6°C, -6°C -3°C, -3°C 0°C, and 0°C 3°C]. Figure 11b shows most lakes (28%) with a mean of -3°C 0°C. Lake distribution of mean LST was 8%, 22%, 27%, 28% and 15% from colder to warmer LST categories, respectively. The percentage of the total area covered by lakes in relation to mean LST was 34%, 27%, 18%, 19% and 2%, respectively (Figure 11b). Although the number of lakes with LST ranging from -12°C to -9 °C was the least (8% of lakes), the percentage of the total area covered by lakes with this LST range was the largest (34% of lakes). The total area covered for
- 410 all lakes with mean LST from 0°C to 3°C was only 2%. This suggests that several of the lakes with warmer temperatures were smaller sized. Generally, relatively warmer lakes were also distributed around Yellowknife and the southwestern part of the region.

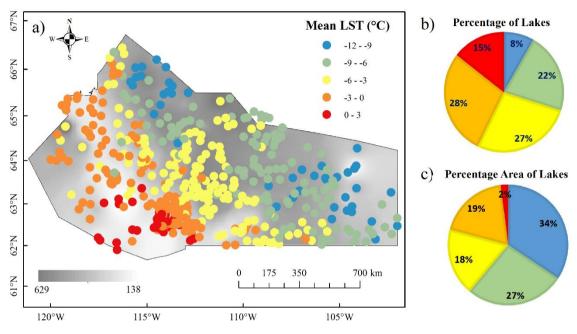


Figure 11: a) Spatial distribution of mean LST for the year 2021 across the NSR showing b) the percentage number of lakes and c) 415 the percentage area of lakes within specific LST ranges.

4.5.3 Intra-Lake Spatial Distribution of Generated LST

Lakes in several studies are treated as homogenous entities; however, there is spatial variability in the surface temperature of a given lake based on several factors, including the difference in morphometry or the biological, physical, and anthropogenic activities occurring on the lake at a given time (Crosman & Horel, 2009; Huang et al., 2017; Selman & Misra, 2014; Yang et

420 al., 2020). The North Slave LST dataset generated in this study can highlight the spatial variability within a given lake. As expected, the high spatial resolution and multidate LST generated show lakes' surface temperature heterogeneity. The phenomenon is demonstrated with LST distribution on July 9, 2021, for a few selected lakes within our study as examples (Figure 12).

Lakes may demonstrate significant surface temperature variations for various reasons, including wind redistribution, depth, and biological and anthropogenic activities. Warmer LSTs are generally at the shallower coastal regions of lakes; however, internal LST variations differ. An example is Lake Duncan (Figure 12), which demonstrated warmer temperatures in the north part of the lake than in the south. Maximum and minimum LST on lakes also differ, with some lakes having wider variations (*e.g.*, Duncan Lake ($23 - 14^{\circ}$ C) and others less variation (*e.g.*, Frame Lake ($28 - 24^{\circ}$ C)). Lakes' physical differences, location and elevation may contribute to the different ranges of surface temperature distribution on individual lakes.

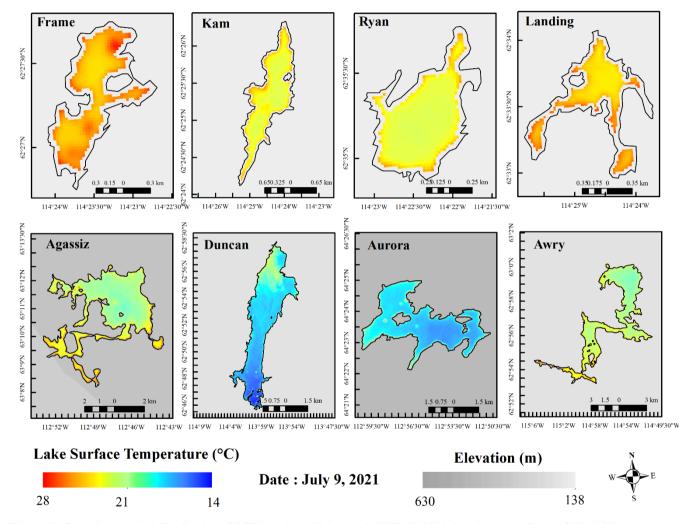


Figure 12: Intra-lake spatial distribution of LST on selected lakes in the NSR highlighting the North Slave LST's ability to capture small-scale details of LST.

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5 Data availability

The long-term (1984 -2021) continuous high-resolution (30 m spatial resolution) regional (North Slave region, NWT) gridded

- 435 LST dataset is available at <u>https://doi.org/10.5683/SP3/J4GMC2</u> (Attiah et al., 2022). The Landsat imagery used to generate this dataset can be downloaded from the USGS platform. Physical properties and names of lakes were derived from HydroLAKES (<u>https://www.hydrosheds.org/products/hydrolakes</u>), Water file-Lakes and Rivers polygons data (<u>https://www12.statcan.gc.ca/census-recensement/2011/geo/bound-limit/files-fichiers/ghy_000c06a_e.zip</u>) and CanVec series (<u>https://open.canada.ca/data/en/dataset/9d96e8c9-22fe-4ad2-b5e8-94a6991b744b</u>). Evaluation data was derived from
- 440 Mackenzie DataStream (<u>https://mackenziedatastream.ca/</u>). ERA5 reanalysis data was obtained from Copernicus Climate Change Service (<u>https://cds.climate.copernicus.eu/#!/search?text=ERA5&type=dataset</u>).

6 Conclusions

A new gridded dataset (North Slave LST) containing lake surface temperature across the NSR, generated by applying a retrieval algorithm to the thermal bands of Landsat archives, was presented in this study. LST data is available for 38 years

(from 1984 to 2021) on a 30 m spatial resolution and varying temporal resolution. North Slave LST dataset has proven that it is suitable for capturing small-scale details of LST on small lakes and is comparable with LST products like MODIS (1 km resolution) and other water surface temperature measurements.

The North Slave LST dataset includes 673,223 NetCDF gridded data files for all lakes, with a greater percentage (57.3%) highlighting LST in warmer months. Tabular LST data has also been generated to report the aggregated values of LST on

450 lakes. A high percentage (43%) of the dataset was derived from Landsat-5. Lakes had a 100-meter buffer applied, resulting in a pixel representation ranging from 16.7% to 97.34% of the lake area. Most of the dataset (77.4%) had LST pixel coverage greater than 50%, of which 42.2% had pixel coverage greater than 90%. Each lake's average yearly number of LST images was between 20 and 45.

The algorithm successfully retrieves LST from Landsat images across the NSR with an RMSD of 1.7°C and MBD of 0.12°C.

455 The dataset produced provides continuous data and highlights spatial and temporal LST of lakes in the NSR. Based on generated North Slave LST, warmer lakes are predominantly located around Yellowknife and on the southwestern part of the NSR. Seasonal average LST is highlighted using the North Slave LST dataset, with summer having the highest variation of LST (16°C) between lakes across the NSR. Intra-lake variability is also demonstrated in this dataset. The North Slave LST dataset will be continually updated with improved retrieval algorithms and up-to-date data as they become available.

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470 Author Contributions

Gifty Attiah – Methodology, Analysis, Writing and Visualisation – original draft. Homa Kheyrollah Pour – Supervision, Resources, Writing – review & editing Andrea Scott - Supervision, Resources, Writing – review & editing

Competing Interests

475 The authors declare no competing interest.

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Appendices

605 Appendix A

Lake name	Latitude (°)	Longitude (°)	Area(km ²)	Elevation (m)	Average Depth (m)	Number of Pixels	Percentage of lake
							represented
Acasta Lake	-115.564	65.3783	18.23	399	4.7	17645	87.11
Achilles Lake	-110.906	64.963	27.84	403	16.7	27536	89.01
Acres Lake	-108.688	62.7499	3.36	333	9.6	2438	65.18
Agassiz Lake	-112.788	63.1797	19.89	338	17.9	18113	81.95
Ajax Lake	-110.58	64.9737	24.32	446	8.2	23524	87.05
Alexander Lake	-108.117	62.2884	6.24	385	6.8	5427	78.21
Alexie Lake	-114.083	62.6779	4.24	218	6	3357	71.23
Allan Lake	-113.063	62.9208	4.35	273	8	3893	80.46
Ambush Lake	-113.824	65.7125	16.02	413	13.6	15379	86.39
Angelique Lake	-113.421	64.6265	17.84	403	10.2	16742	84.47
Angle Lake	-114.177	62.8313	4.11	195	21.1	3404	74.45
Anton Lake	-114.461	62.9713	3.34	253	8.8	2404	64.67
Ardent Lake	-115.736	65.6577	14.28	412	6.2	14331	90.34
Armi Lake	-114.124	63.7112	26.59	354	9.6	25165	85.18
Arno Lake	-113.533	63.0506	0.11	-	-	43	36.36
Artillery Lake	-107.871	63.1744	521.89	352	24.3	552430	95.27
Athenia Lake	-111.516	63.6452	42.29	416	7.2	38069	81.01
Augustus Lake	-116.686	66.3619	9.78	340	22.3	9027	83.03
Aurora Lake	-112.921	64.3918	15.25	377	5.3	14892	87.8
Awry Lake	-114.922	62.9506	26.89	201	19.7	25545	85.5
Axecut Lake	-104.138	63.8762	1.95	165	5.6	1789	82.56
Aylmer Lake	-108.53	64.1244	680.73	355	19.7	715690	94.62
Back Lake	-109.329	63.8188	86.59	384	12.9	87319	90.76
Back River	-108.275	64.609	62.66	333	15.6	61472	88.29
Baldhead Lake	-113.634	64.6092	20.02	409	11.2	19439	87.41

material114.2012.0012.0013.00 <th>Pontino Loko</th> <th>-114.285</th> <th>62.6292</th> <th>3.86</th> <th>171</th> <th>10.9</th> <th>2959</th> <th>68.91</th>	Pontino Loko	-114.285	62.6292	3.86	171	10.9	2959	68.91
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iestand0.00370.28300.284025100.5100.5300.29600.2860Defined Lat0.112310.20570.2500.5600.7100.7000.2861Bendi Lat0.112310.23270.2500.2600.2100.7000.260Bendi Lat0.112310.25270.2500.2600.2100.20100.2100.210Bendi Lat0.112310.21200.270	Beaverhill Lake	-104.373	62.8032	121.51	278	12.9	129356	95.81
Indentional and the stand an	Beaverlodge Lake	-118.194	64.6873	65.31	175	6.7	64188	88.46
Index14133462.82725.8225.967.110.449.16.1Benericlan14.16316.561255.601027.108.5.61Bessnetic Lank14.16316.56128.5726.6110.27.008.5.61Betry Lank10.16716.2.4948.553118.48.558.5Big Lock10.20146.2.598.5.614.78.68.59.008.5Big Box Lank10.20246.2.797.012.48.17.58.78.5Big Box Lank10.02446.2.797.012.48.17.58.78.7Big Box Lank10.02446.2.797.012.48.17.78.218.7Binder Lank10.02446.2.797.98.213.69.19.19.1Binder Lank10.0246.2.797.98.218.79.19.19.19.1Binder Lank10.0546.2.076.2.31.6.78.79.1	Beck Lake	-104.613	62.8365	4.82	282	1.8	4839	90.46
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Indextant9105791057910579105791057Big Redy Lace91236092630092630	Bessonette Lake	-114.741	63.6612	8.57	296	10.2	7970	83.66
IBIR <b< th=""><th>Betty Ray Lake</th><th>-116.574</th><th>63.5419</th><th>6.07</th><th>196</th><th>6.1</th><th>4935</th><th>73.15</th></b<>	Betty Ray Lake	-116.574	63.5419	6.07	196	6.1	4935	73.15
Figure9402.9494.278682.0182.4884.195.37987.19BigdiaLac94.08762.7644.80106.24.8285.7BirdeyLac94.08762.708.708.707.78.769.41BirdeyLac14.5656.5006.5011575.787.849.41BirdeyLac14.6376.5006.50117.78.728.718.718.71BirdeyLac14.6376.4178.822.976.78.218.918.91BirdeyLac14.6376.4175.852.946.78.918.91BirdeyLac14.5376.778.822.946.78.918.91BirdeyLac14.5376.971.843.145.61.958.91BirdeyLac14.5376.971.843.141.928.918.91BirdeyLac14.976.391.933.141.928.918.91BirdeyLac14.946.371.938.141.928.918.91BirdeyLac14.946.371.933.911.928.918.91BirdeyLac14.946.371.931.941.921.938.91BirdeyLac14.946.371.931.941.941.941.94BirdeyLac14.946.371.941.941.941.941.94BirdeyLac14.946.371.941.941.94	Bewick Lake	-105.718	62.4994	85.96	341	8.4	83936	87.88
Highil Lake14.0696.2.0704.5.81896.24.54.28.5.7Biolge Lake104.0876.2.0718.5.91575.78.78.49.4.1Biolge Lake116.556.0.078.5.301575.78.78.49.4.1Biolge Lake116.576.5.0056.4.43.71.8.28.74.39.74.39.74.3Biadel Lake116.236.5.0056.5.052.96.68.91.48.75.49.74.3Biadel Lake115.796.2.74.45.52.96.61.91.78.83.1Bide Lake106.436.2.17.21.76.48.94.45.61.45.78.84.1Bodie Lake105.836.2.97.48.93.13.14.18.93.18.93.18.93.18.93.1Bodie Lake115.096.5.361.6.913.14.11.2.01.69.18.93.18.93.1Bodie Lake115.096.5.361.6.913.14.11.2.01.69.18.93.18.31.1Bodie Lake115.096.5.361.6.913.14.11.2.01.69.18.93.18.31.1Bodie Lake115.696.5.378.31.13.93.12.1.2.11.6.91.18.93.18.31.1Bodie Lake115.696.5.378.31.11.2.11.5.2.18.95.18.31.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.1 <th>Big Lake</th> <th>-112.986</th> <th>64.857</th> <th>65.63</th> <th>407</th> <th>7.8</th> <th>66426</th> <th>91.09</th>	Big Lake	-112.986	64.857	65.63	407	7.8	66426	91.09
Highil Lake14.0696.2.0704.5.81896.24.54.28.5.7Biolge Lake104.0876.2.0718.5.91575.78.78.49.4.1Biolge Lake116.556.0.078.5.301575.78.78.49.4.1Biolge Lake116.576.5.0056.4.43.71.8.28.74.39.74.39.74.3Biadel Lake116.236.5.0056.5.052.96.68.91.48.75.49.74.3Biadel Lake115.796.2.74.45.52.96.61.91.78.83.1Bide Lake106.436.2.17.21.76.48.94.45.61.45.78.84.1Bodie Lake105.836.2.97.48.93.13.14.18.93.18.93.18.93.18.93.1Bodie Lake115.096.5.361.6.913.14.11.2.01.69.18.93.18.93.1Bodie Lake115.096.5.361.6.913.14.11.2.01.69.18.93.18.31.1Bodie Lake115.096.5.361.6.913.14.11.2.01.69.18.93.18.31.1Bodie Lake115.696.5.378.31.13.93.12.1.2.11.6.91.18.93.18.31.1Bodie Lake115.696.5.378.31.11.2.11.5.2.18.95.18.31.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.11.5.2.1 <th>-</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	-							
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Bladed Lake-13.57962.7845.952496.65.917.917.8.9Blake Lake-106.84362.11212.7634.945.310.0533.333.333.333.333.333.333.433.433.433.433.433.433.433.433.433.433.433.433.433.433.633.433.6 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>								
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Bonder Lake-113.07463.76616.9136.113.21660988.35Bor Lake-109.42363.919939.3738412.938.9587.78Bras do'r Lak-115.7362.392733.03343.0993.58Breatner Lake-115.7462.638227.3429.5519.7727.3390.31Breithaupt Lake-105.40762.638619.673352.91806382.66Bridge Lak-112.27663.2683.883956.930137.57Breck Lake-112.63762.41550.172753.181.0841.18Brok Lake-112.63762.4953.9136811.937185.68Brok Lake-112.64762.9743.9136811.937185.68Burting Lake-10.64762.9740.3030819.0735.735.787.7Burting Lake-10.86.62.42770.230.372.910.735.737.7Burting Lake-10.71263.51782.371707.9207.485.83Burting Lake-10.86.62.76270.38-10.77.9207.485.83Burting Lake-10.81.663.3217.1437.037.737.5Burting Lake-10.81.663.5352.314546.8140.2085.83Burting Lake-10.81.663.23111.937.185.8335.1<								
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Barke Lake1-16.71263.51782.371707.920747.89Bustard Lake-108.41564.3427.4137210.870678.583Calder Lake-115.23465.85815.314546.8146208.583Campbell Lake-106.89465.725612.9838012.41170181.12Campbell Lake-101.89463.6228158.164112.6615362287.33Campbell Lake-111.18563.6228158.1641112.615362287.42Carey-102.90962.2067255.3426521.1225906491.24Carter Lake-114.03362.9862.782454.9207767.27Carter Lake-114.9364.075522.4435.7428.63410185.87Casin Lake-115.97864.60735.7428428.63410185.87Chan Lake-116.5262.4080.412362.823.5453.653.7Chan Lake-116.53264.60735.7428428.63410185.87Chan Lake-116.53264.6070.4123623.670175Chan Lake-116.53264.6070.8423.923.665.770175Chan Lake-116.53264.6070.8423.936.616.71962684.94	Bunting Lake	-109.783	62.4827	0.23	235	2.9	167	65.22
Bustard Lake -108.415 64.3342 7.41 372 10.8 7067 85.83 Calder Lake -115.234 65.8658 15.31 454 6.8 14620 85.83 Calyso Lake -115.844 65.7256 12.98 380 12.4 11701 81.12 Campbell Lake -106.894 63.2391 110.9 373 7.8 105646 85.73 Carnsell Lake -111.185 63.6228 158.16 411 12.6 153622 87.42 Carey -102.909 62.2067 25.534 265 12.1 259064 91.24 Caribou Lake -114.033 62.986 2.78 245 4.9 2077 67.27 Carsino Lake -119.398 64.0755 22.44 325 4.4 23561 94.47 Casino Lake -119.398 64.4679 35.74 284 28.6 34101 88.87 Casino Lake -114.355 62.6408 0.41 236 2.8<	Burbanks Lake	-108.6	62.7652	0.08	-	-	37	37.5
Calder Lake -115.234 65.8658 15.31 454 6.8 1420 85.83 Calyso Lake -115.844 65.7256 12.98 380 12.4 1701 81.12 Campell Lake -106.894 63.2391 110.9 373 7.8 105646 85.73 Carey -11.185 63.628 158.16 411 12.6 15362 87.42 Carey -102.909 62.2067 255.34 265 12.1 25064 91.24 Carey -114.03 62.967 255.34 265 12.1 25064 91.24 Carey -14.023 62.967 255.34 265 12.1 25064 91.24 Carey -14.033 62.967 25.34 265 12.1 25064 91.24 Carey -14.030 62.967 27.8 24.5 92.07 67.27 Carey -14.930 62.954 29.59 27.4 81.6 81.6 83.91	Burke Lake	-116.712	63.5178	2.37	170	7.9	2074	78.9
Catypso Lake 115.844 65.7256 12.98 380 12.4 1701 81.12 Campbell Lake -106.894 63.2391 110.9 373 7.8 10564 85.73 Camsell Lake -111.185 63.628 158.16 411 12.6 15362 87.42 Carey -102.909 62.2067 255.34 265 12.1 25064 91.24 Caribou Lake -114.023 62.986 2.78 265 4.9 2077 67.27 Caribou Lake -114.023 62.986 2.78 245 4.9 2077 63.21 Caribou Lake -114.023 62.9554 2.9.59 274 8.1 27500 83.91 Caribou Lake -114.938 64.0757 2.44 28.50 34.10 35.74 Castor Lake -115.978 62.6408 0.41 236 2.8 238.10 35.22 Chan Lake -116.542 61.809 0.84 239 6.5 71.0	Bustard Lake	-108.415	64.3342	7.41	372	10.8	7067	85.83
Campbell Lake 106.894 63.2391 110.9 373 7.8 105646 85.73 Cambell Lake -111.185 63.6228 158.16 411 12.6 153622 87.42 Carey -102.909 62.2067 255.34 265 12.1 259064 9.124 Caribou Lake -114.023 62.986 2.78 245 4.9 2077 67.27 Carter Lake -104.303 62.954 29.59 274 8.1 27590 8.391 Cassino Lake -119.398 64.0755 22.44 325 4.4 23561 94.47 Cassino Lake -115.978 64.4679 35.74 284 28.6 34101 85.87 Chan Lake -114.355 62.6408 0.41 236 2.8 238 51.22 Chan Lake -116.542 61.809 0.84 239 6.5 701 75 Chan Lake -115.532 64.4607 20.79 336 16.7	Calder Lake	-115.234	65.8658	15.31	454	6.8	14620	85.83
Cansell Lake 111.185 63.6228 158.16 411 12.6 153622 87.42 Carey 102.099 62.2067 25.534 265 12.1 259064 91.24 Caribou Lake 114.023 62.986 2.78 245 4.9 2077 67.27 Carter Lake 104.303 62.954 29.59 274 8.1 27590 8.391 Cassino Lake 119.398 64.0755 22.44 325 4.4 23561 94.47 Cassino Lake 115.978 64.4679 35.74 284 28.6 34101 85.87 Chan Lake 114.355 62.6408 0.41 236 2.8 238 51.22 Chan Lake 116.542 61.809 0.84 239 6.5 701 75 Chartrand Lake 115.532 64.4607 20.79 336 16.7 19626 84.94	Calypso Lake	-115.844	65.7256	12.98	380	12.4	11701	81.12
Carey -102.909 62.2067 25.54 265 12.1 259064 91.24 Caribou Lake -114.023 62.986 2.78 245 4.9 2077 67.27 Carter Lake -104.303 62.9554 29.59 274 8.1 27500 83.91 Cassino Lake -119.398 64.0755 22.44 325 4.4 23561 94.47 Castor Lake -115.978 64.4679 35.74 284 28.6 34101 85.87 Chan 1 Lake -114.355 62.6408 0.41 236 2.8 238 51.22 Chan Lake -116.542 61.8909 0.84 239 6.5 701 75 Chartrand Lake -115.532 64.4607 20.79 336 16.7 19626 84.94	Campbell Lake	-106.894	63.2391	110.9	373	7.8	105646	85.73
Caribou Lake 114.023 62.986 2.78 245 4.9 2077 67.27 Cartle Lake 1.04.303 62.954 29.59 274 8.1 27590 8.391 Cassino Lake 1.19.398 64.0755 22.44 325 4.4 23561 94.47 Cassino Lake 1.15.978 64.4679 35.74 284 28.6 34101 85.87 Chan Lake 1.14.355 62.6408 0.41 236 2.8 238 51.22 Chan Lake 1.16.542 61.8909 0.84 239 6.5 701 75 Chartrand Lake 1.15.532 64.4607 20.79 336 16.7 19626 84.94	Camsell Lake	-111.185	63.6228	158.16	411	12.6	153622	87.42
Carter Lake 104.303 62.954 29.59 274 8.1 27590 8.391 Cassin Lake 119.398 64.0755 22.44 325 4.4 2361 94.47 Cassin Lake 115.978 64.479 35.74 284 28.6 34101 85.87 Chan I Lake 114.355 62.6408 0.41 236 2.8 238 51.22 Chan Lake 116.542 61.8909 0.84 239 6.5 701 75 Chartrand Lake 115.532 64.607 20.79 36 16.7 19626 84.94	Carey	-102.909	62.2067	255.34	265	12.1	259064	91.24
Cassino Lake 119.398 64.0755 22.44 325 4.4 23561 94.47 Castor Lake 115.978 64.679 35.74 284 28.6 34101 85.87 Chan 1 Lake 114.355 62.6408 0.41 236 2.8 238 51.22 Chan Lake 116.542 61.8909 0.84 239 6.5 701 75 Chartrand Lake 115.532 64.607 20.79 336 16.7 19626 84.94	Caribou Lake	-114.023	62.986	2.78	245	4.9	2077	67.27
Castor Lake -115.978 64.4679 35.74 284 28.6 34101 85.87 Chan Lake -114.355 62.6408 0.41 236 2.8 238 51.22 Chan Lake -116.542 61.8909 0.84 239 6.5 701 75 Chartrand Lake -115.532 64.4607 20.79 336 16.7 19626 84.94	Carter Lake	-104.303	62.9554	29.59	274	8.1	27590	83.91
Chan Lake 114.355 62.6408 0.41 236 2.8 238 51.22 Chan Lake -116.542 61.8909 0.84 239 6.5 701 75 Chartrand Lake -115.532 64.607 20.79 336 16.7 19626 84.94	Cassino Lake	-119.398	64.0755	22.44	325	4.4	23561	94.47
Chan Lake 114.355 62.6408 0.41 236 2.8 238 51.22 Chan Lake -116.542 61.8909 0.84 239 6.5 701 75 Chartrand Lake -115.532 64.607 20.79 336 16.7 19626 84.94	Castor Lake	-115.978	64.4679	35.74	284	28.6	34101	85.87
Chan Lake -116.542 61.8909 0.84 239 6.5 701 75 Chartrand Lake -115.532 64.4607 20.79 336 16.7 1926 84.94	Chan 1 Lake				236			
Chartrand Lake -115.532 64.4607 20.79 336 16.7 19626 84.94	Chan Lake			0.84	239	6.5	701	75
Chelay Lake -119.403 65.2223 1.72 199 5.6 1393 72.67								
Chipp Lake -112.626 62.4685 2.9 270 2.1 2056 63.79	-							
Chipp Lake -112.020 62.4685 2.9 270 2.1 2050 65.79 Chitty Lake -114.123 62.7149 2.38 221 6.2 1822 68.91								
Clive Lake -118.906 63.212 64.84 255 3.6 66713 92.47								
Coldblow Lake -104.107 63.361 12.1 320 3.8 11726 87.19								
Cole Lake -116.594 63.6731 9.24 194 11.9 8010 77.92								
Compton Lake -109.79 62.531 8.91 246 26.2 9010 91.02	Compton Lake	-109.79	62.5331	8.91	246	26.2	9010	91.02

Consolation Lake	-112.797	62.5081	20.01	238	14.8	15423	69.37
	-110.506	65.3085	163.62	435	22.2	166125	91.38
Contwoyto Lake							
Cook Lake	-108.849	63.1595	49.99	352	10.2	45458	81.84
Cooley Lake	-109.052	62.0574	9.33	336	10	8220	79.31
Cosmos Lake	-104.224	63.8148	2.14	150	8.9	2052	85.98
Cotterill Lake	-114.847	64.1539	17.93	334	10.9	16688	83.77
Courageous Lake	-111.188	64.1657	228.32	395	12.6	232082	91.48
Courier Lake	-111.946	63.5337	1.46	439	3.8	1092	67.12
Cowan Lake	-115.274	63.3612	4.44	218	9.7	3373	68.47
Crapaud Lake	-114.021	62.9358	5.87	225	5.3	4945	75.81
Credit Lake	-112.492	64.6574	17.7	429	3.2	16740	85.14
Creek Lake	-114.01	62.4733	0.88	-	•	774	79.55
Criss Lake	-113.514	63.0824	0.11	320	2.4	51	45.45
Croft Lake	-104.216	62.1037	15.74	337	6.4	14405	82.34
Crooked Foot Lake	-113.554	64.1502	9.02	374	8.2	8807	87.92
Cruikshank Lake	-105.357	63.5315	10.7	313	4.7	10138	85.23
Danes Lake	-111.706	63.2228	2.79	426	6.5	2398	77.42
DAoust Lake	-108.915	62.1353	11.25	333	10.9	11028	88
Daran Lake	-115.06	64.0299	20.75	257	37.7	19570	84.87
Darrell Lake	-105.65	63.7836	21.19	341	6.7	17950	76.26
Dauphinee Lake	-114.721	63.8824	9.95	288	13	9300	84.12
David lake	-114.378	62.5436	0.13	198	2.7	55	38.46
Davis Lake	-115.439	64.3984	1.33	335	10.8	1029	69.92
Day Lake	-113.504	62.6637	0.83	264	3.6	610	66.27
Day Lake	-113.643	62.3382	18.42	192		17144	83.77
Defeat Lake	-112.055	62.3382	8.65	406	6.8 8.1	7885	83.77 82.08
Denis Lake	-112.595	63.3542	7.34	387	9.2	6569	80.52
Desperation Lake	-112.401	62.5781	26.04	244	21.9	25205	87.1
Dessert Lake	-115.76	62.0993	7.68	202	4	7831	91.8
Devore Lake	-112.902	62.5951	0.94	270	4.5	738	70.21
Devreker Lake	-117.318	64.6627	13.12	235	24.8	12774	87.5
Dissension Lake	-113.499	63.983	4.97	336	5.3	4354	78.87
Dodds Lake	-113.424	63.1327	4.68	309	3.9	4020	77.35
Dome Lake	-113.255	62.7624	2.7	250	4.4	2166	72.22
Doodad Lake	-112.755	62.3539	0.27	257	2.1	133	44.44
Dorothy Lake	-112.534	62.4523	3.45	275	3	2744	71.59
Doyle Lake	-109.108	63.0974	13.79	352	13.4	12146	79.26
Drumlin Lake	-114.32	64.8287	36.46	437	5.4	34338	84.75
Drybones Lake	-112.405	63.5129	33.07	411	10.5	32593	88.69
Drygeese Lake	-114.166	62.734	3.74	217	7	3313	79.68
Drymeat Lake	-112.891	64.2536	7.92	379	6.7	7381	83.84
Duck Lake	-114.239	62.4336	5.38	155	6.6	4604	76.95
Duckfish Lake	-114.44	62.6736	5.79	228	5.3	4973	77.37
Dumas Lake	-116.301	66.4878	22.91	351	9.5	21601	84.85
Dumbell Lake	-111.083	64.0315	4.15	433	5.2	3571	77.35
Duncan Lake	-113.96	62.8705	68.2	214	21.4	70900	93.56
Egg Lake	115.50						
Eileen Lake	-114.029	62.4897	0.91	192	3.7	638	62.64
Elk River		62.4897 62.2437	0.91 135.71	192 369	3.7 9.6	638 128076	62.64 84.94
	-114.029						
Ellington Lake	-114.029 -107.639	62.2437	135.71	369	9.6	128076	84.94
Ellington Lake Ernie Lake	-114.029 -107.639 -105.359 -117.32	62.2437 62.2166 65.0299	135.71 59.41 26.54	369 337 248	9.6 4.4 16.7	128076 49250 25216	84.94 74.62 85.49
Ernie Lake	-114.029 -107.639 -105.359 -117.32 -102.352	62.2437 62.2166 65.0299 63.2671	135.71 59.41 26.54 20.99	369 337 248 252	9.6 4.4 16.7 12.2	128076 49250 25216 21080	84.94 74.62 85.49 90.38
Ernie Lake Etna Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484	62.2437 62.2166 65.0299 63.2671 64.4488	135.71 59.41 26.54 20.99 45.73	369 337 248 252 356	9.6 4.4 16.7 12.2 3.3	128076 49250 25216 21080 46177	84.94 74.62 85.49 90.38 90.88
Ernie Lake Etna Lake Eyeberry Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696	62.2437 62.2166 65.0299 63.2671 64.4488 63.1425	135.71 59.41 26.54 20.99 45.73 81.6	369 337 248 252 356 201	9.6 4.4 16.7 12.2 3.3 5.1	128076 49250 25216 21080 46177 82207	84.94 74.62 85.49 90.38 90.88 90.67
Ernie Lake Etna Lake Eyeberry Lake Eyston Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696 -116.417	62.2437 62.2166 65.0299 63.2671 64.4488 63.1425 65.1823	135.71 59.41 26.54 20.99 45.73 81.6 23.89	369 337 248 252 356 201 298	9.6 4.4 16.7 12.2 3.3 5.1 27	128076 49250 25216 21080 46177 82207 22348	84.94 74.62 85.49 90.38 90.88 90.67 84.18
Ernie Lake Etna Lake Eyeberry Lake Eyston Lake Faber Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696 -116.417 -117.297	62.2437 62.2166 65.0299 63.2671 64.4488 63.1425 65.1823 63.9325	135.71 59.41 26.54 20.99 45.73 81.6 23.89 383.34	369 337 248 252 356 201 298 203	9.6 4.4 16.7 12.2 3.3 5.1 27 22	128076 49250 25216 21080 46177 82207 22348 402498	84.94 74.62 85.49 90.38 90.88 90.67 84.18 94.5
Ernie Lake Etna Lake Eyeberry Lake Eyston Lake Faber Lake Face Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696 -116.417 -117.297 -110.126	62.2437 62.2166 65.0299 63.2671 64.4488 63.1425 65.1823 63.9325 62.3145	135.71 59.41 26.54 20.99 45.73 81.6 23.89 383.34 2.47	369 337 248 252 356 201 298 203 371	9.6 4.4 16.7 12.2 3.3 5.1 27 22 6.2	128076 49250 25216 21080 46177 82207 22348 402498 1750	84.94 74.62 85.49 90.38 90.67 84.18 94.5 63.56
Ernie Lake Etna Lake Eyeberry Lake Eyston Lake Faber Lake Face Lake Fairbairn Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696 -116.417 -117.297 -110.126 -111.006	62.2437 62.2166 65.0299 63.2671 64.4488 63.1425 65.1823 63.9325 62.3145 62.2618	135.71 59.41 26.54 20.99 45.73 81.6 23.89 383.34 2.47 14.6	369 337 248 252 356 201 298 203 371 169	9.6 4.4 16.7 12.2 3.3 5.1 27 22 6.2 12.8	128076 49250 25216 21080 46177 82207 22348 402498 1750 14698	84.94 74.62 85.49 90.38 90.67 84.18 94.5 63.56 90.62
Ernie Lake Etna Lake Eyeberry Lake Eyston Lake Faber Lake Face Lake Fairbairn Lake Fat Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696 -116.417 -117.297 -110.126 -111.006 -111.64	62.2437 62.2166 65.0299 63.2671 64.4488 63.1425 65.1823 63.9325 62.3145 62.2618 63.3964	135.71 59.41 26.54 20.99 45.73 81.6 23.89 383.34 2.47 14.6 12.85	369 337 248 252 356 201 298 203 371 169 412	9.6 4.4 16.7 12.2 3.3 5.1 27 22 6.2 12.8 7.5	128076 49250 25216 21080 46177 82207 22348 402498 1750 14698 11492	84.94 74.62 85.49 90.38 90.88 90.67 84.18 94.5 63.56 90.62 80.47
Ernie Lake Etna Lake Eyeberry Lake Eyston Lake Faber Lake Face Lake Fairbairn Lake Fat Lake Fat Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696 -116.417 -117.297 -110.126 -111.006 -111.64 -112.275	62.2437 62.2166 65.0299 63.3671 64.4488 63.1425 63.9325 62.3145 62.2618 63.3964 62.1985	135.71 59.41 26.54 20.99 45.73 81.6 23.89 383.34 2.47 14.6 12.85 2.37	369 337 248 252 336 201 298 203 371 169 412 204	9.6 4.4 16.7 12.2 3.3 5.1 27 6.2 12.8 7.5 9.6	128076 49250 25216 21080 46177 82207 22348 402498 1750 14698 11492 1906	84.94 74.62 85.49 90.38 90.88 90.67 84.18 94.5 63.56 90.62 80.47 72.57
Ernie Lake Etna Lake Eyeberry Lake Eyston Lake Faber Lake Faie Lake Fairbairn Lake Fat Lake Faulkner Lake Fawn Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696 -116.417 -117.297 -110.126 -111.006 -111.64 -112.275 -117.529	62.2437 62.2166 65.0299 63.2671 64.4488 63.1425 65.1823 63.9325 62.3145 62.2618 63.3964 62.1985 62.1864	135.71 59.41 26.54 20.99 45.73 81.6 23.89 383.34 2.47 14.6 12.85 2.37 24.82	369 337 248 252 356 201 298 203 371 169 412 204 179	9.6 4.4 16.7 12.2 3.3 5.1 27 22 6.2 12.8 7.5 9.6 3.3	128076 49250 25216 21080 46177 82207 22348 402498 1750 14698 11492 1906 25619	84.94 74.62 85.49 90.38 90.67 84.18 94.5 63.56 90.62 80.47 72.57 92.91
Ernie Lake Etna Lake Eyeberry Lake Eyston Lake Faber Lake Face Lake Fairbairn Lake Fat Lake Faulkner Lake Fawn Lake Fenton Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696 -116.417 -117.297 -110.126 -111.006 -111.64 -111.275 -117.529 -112.953	62.2437 62.2166 65.0299 63.2671 64.4488 63.1425 65.1823 63.9325 62.3145 62.2618 63.3964 62.1985 62.1864 63.0183	135.71 59.41 26.54 20.99 45.73 81.6 23.89 383.34 2.47 14.6 12.85 2.37 24.82 16.2	369 337 248 252 356 201 298 203 371 169 412 204 179 277	9.6 4.4 16.7 12.2 3.3 5.1 27 6.2 12.8 7.5 9.6 3.3 23.1	128076 49250 25216 21080 46177 82207 22348 402498 1750 14698 11492 1906 25619 15743	84.94 74.62 85.49 90.38 90.67 84.18 94.5 63.56 90.62 80.47 72.57 92.91 87.47
Ernie Lake Etna Lake Eyeberry Lake Eyston Lake Faber Lake Face Lake Fairbairn Lake Fat Lake Faulkner Lake Fawn Lake Fenton Lake Fenton Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696 -116.417 -117.297 -110.126 -111.006 -111.64 -112.275 -117.529	62.2437 62.2166 65.0299 63.2671 64.4488 63.1425 65.1823 63.9325 62.3145 62.2618 63.3964 62.1985 62.1864	135.71 59.41 26.54 20.99 45.73 81.6 23.89 383.34 2.47 14.6 12.85 2.37 24.82 16.2 3.14	369 337 248 252 356 201 298 203 371 169 412 204 179	9.6 4.4 16.7 12.2 3.3 5.1 27 22 6.2 12.8 7.5 9.6 3.3 23.1 11.1	128076 49250 25216 21080 46177 82207 22348 402498 1750 14698 11492 1906 25619	84.94 74.62 85.49 90.38 90.88 90.67 84.18 94.5 63.56 90.62 80.47 72.57 92.91
Ernie Lake Etna Lake Eyeberry Lake Eyston Lake Faber Lake Face Lake Fairbairn Lake Fat Lake Faulkner Lake Faulkner Lake Fenton Lake	-114.029 -107.639 -105.359 -117.32 -102.352 -119.484 -104.696 -116.417 -117.297 -110.126 -111.006 -111.64 -111.275 -117.529 -112.953	62.2437 62.2166 65.0299 63.2671 64.4488 63.1425 65.1823 63.9325 62.3145 62.2618 63.3964 62.1985 62.1864 63.0183	135.71 59.41 26.54 20.99 45.73 81.6 23.89 383.34 2.47 14.6 12.85 2.37 24.82 16.2	369 337 248 252 356 201 298 203 371 169 412 204 179 277	9.6 4.4 16.7 12.2 3.3 5.1 27 6.2 12.8 7.5 9.6 3.3 23.1	128076 49250 25216 21080 46177 82207 22348 402498 1750 14698 11492 1906 25619 15743	84.94 74.62 85.49 90.38 90.67 84.18 94.5 63.56 90.62 80.47 72.57 92.91 87.47

Fishhook Lake	-115.236	64.0626	8.4	262	19.2	7584	81.31
Fletcher Lake	-108.763	63.5923	164.24	388	11.6	164217	89.99
Forcier Lake	-116.351	66.0568	104.24	371	9.5	9373	83.56
Ford Lake	-107.409	63.1433	35.02	389	4	33188	85.29
Ford Lake	-115.183	64.4511	0.36	353	4.4	232	58.33
For Lake	-113.185	62.483	0.52	199	2.7	359	61.54
						523	
Frame Lake Francois Lake	-114.391 -112.373	62.4542 62.461	0.85	186	3.4	24259	55.29
Francois Lake	-112.575	63.6462	24.16 23.34	269	6.1	23316	90.36
				336	11.8		89.8
Gagnon Lake	-110.45	62.0308	22.99	317	19.8	19590	76.69
Gale Lake	-115.268	63.9338	1.1	277	7.6	863	70.91
Gamey Lake	-115.204	64.1352	0.54	328	5.5	370	61.11
Gar Lake	-114.373	62.5212	0.28	182	2.9	188	60.71
Garde Lake	-106.268	62.832	104.05	-	-	99319	85.91
Gardenia Lake	-105.893	62.0199	40.35	361	5	36955	82.43
Georic Lake	-112.984	63.1825	0.6	324	6.2	398	60
Germaine Lake	-114.609	63.2969	22.84	265	16.2	20542	80.95
Ghost Lake	-115.147	63.8504	62.93	275	34.9	59083	84.49
Giauque Lake	-113.831	63.1809	16.46	252	22.8	15472	84.57
Glowworm Lake	-109.24	64.6365	102.5	412	20.4	102052	89.61
Gold Lake	-107.949	64.7369	2.87	325	14.4	2113	66.2
Goodspeed Lake	-109.465	63.098	57.92	319	24.2	53085	82.49
Goodwin Lake	-114.088	63.0453	2.82	248	7.4	2484	79.43
Gordon Lake	-113.201	63.0668	167.16	284	11.5	157999	85.07
Grace 2 Lake	-112.564	62.1628	3.7	218	5.7	3093	75.14
Grace Lake	-114.448	62.4188	0.64	172	3.4	378	53.12
Graham Lake	-113.807	62.9008	16.37	216	17.8	16453	90.47
Gras Lake	-110.448	64.523	705.63	404	9.6	724732	92.44
Great Slave Lake	-113.243	62.2183	9553.89	148	59.1	8607738	53.14
Greenrock Lake	-116.512	65.9309	2.8	394	7.8	2399	77.14
Greyling Lake	-114.289	62.6827	0.5	198	5.9	274	50
Grizzle Bear Lake	-112.982	64.1998	21.13	376	5.6	20776	88.36
Grizzly Lake	-115.574	64.5081	4.6	327	11.9	4108	80.43
Grodsky Lake	-108.391	62.082	5.87	372	3.7	5652	86.54
Hair Lake	-110.048	62.4313	5.24	185	16.8	4952	85.11
Hanbury Lake	-105.698	63.5646	7.57	328	8	7295	86.79
Handle lake	-114.397	62.4914	0.21	196	2.3	116	47.62
Handley Page Lake	-116.777	65.9876	29.03	315	17.3	28307	87.77
Hansen Lake	-116.748	65.6957	16.33	323	17.6	15363	84.69
Harald Lake	-113.535	62.685	4.12	260	3.3	3060	66.75
Hardisty Lake							
	-117.676	64.5506	302.59	186	26.9	298804	88.86
Harrison Lake	-107.659	63.0102	4.71	186 402	26.9 3.9	3464	88.86 66.24
Havant Lake	-107.659 -115.555	63.0102 65.8333	4.71 9.79	402 401	3.9 7.8	3464 9524	88.86 66.24 87.33
Havant Lake Haywood Lake	-107.659 -115.555 -110.504	63.0102 65.8333 63.4599	4.71 9.79 32.79	402 401 395	3.9 7.8 8.2	3464 9524 32691	88.86 66.24 87.33 89.72
Havant Lake Haywood Lake Healey Lake	-107.659 -115.555 -110.504 -106.663	63.0102 65.8333 63.4599 64.2964	4.71 9.79 32.79 153.4	402 401 395 352	3.9 7.8 8.2 8.2	3464 9524 32691 141117	88.86 66.24 87.33 89.72 82.67
Havant Lake Haywood Lake Healey Lake Heuss Lake	-107.659 -115.555 -110.504 -106.663 -107.081	63.0102 65.8333 63.4599 64.2964 63.3052	4.71 9.79 32.79 153.4 9.63	402 401 395 352 360	3.9 7.8 8.2 8.2 6.1	3464 9524 32691 141117 7831	88.86 66.24 87.33 89.72 82.67 73.21
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107	4.71 9.79 32.79 153.4 9.63 0.2	402 401 395 352 360 193	3.9 7.8 8.2 8.2 6.1 5	3464 9524 32691 141117 7831 104	88.86 66.24 87.33 89.72 82.67 73.21 45
Havant Lake Haywood Lake Healey Lake Heuss Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556	63.0102 65.8333 63.4599 64.2964 63.3052	4.71 9.79 32.79 153.4 9.63 0.2 12.45	402 401 395 352 360 193 205	3.9 7.8 8.2 6.1 5 14.7	3464 9524 32691 141117 7831 104 12189	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hildop Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91	402 401 395 352 360 193 205 407	3.9 7.8 8.2 6.1 5 14.7 5.7	3464 9524 32691 141117 7831 104 12189 23714	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hiltop Lake Hislop Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.3671 63.5189	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04	402 401 395 352 360 193 205 407 172	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6	3464 9524 32691 141117 7831 104 12189 23714 33779	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hiltop Lake Hislop Lake Hoare Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927 -105.131	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.35189 63.6208	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66	402 401 395 352 360 193 205 407 172 305	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5	3464 9524 32691 141117 7831 104 12189 23714 33779 7769	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hiltop Lake Hislop Lake Hoare Lake Holmason Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -1116.927 -105.131 -115.024	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.3671 63.5189 63.6208 63.9889	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27	402 401 395 352 360 193 205 407 172	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6	3464 9524 32691 141117 7831 104 2289 23714 33779 7769 1065	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hidden Lake Hidtop Lake Hosop Lake Hooare Lake Hoomer Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927 -105.131 -115.024 -114.286	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.5189 63.6208 63.9889 62.6641	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59	402 401 395 352 360 193 205 407 172 305 269 -	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 -	3464 9524 32691 141117 7831 104 23714 33779 7769 1065 358	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hidden Lake Hidtop Lake Hislop Lake Hoare Lake Hoarse Lake Homer Lake Homer Lake Hottah Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927 -105.131 -115.024 -114.286 -118.484	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.5189 63.6208 63.6208 63.9889 62.6641 65.0678	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59 842.81	402 401 395 352 360 193 205 407 172 305 269 - 175	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 - 6.7	3464 9524 32691 141117 7831 104 12189 23714 33779 7769 1065 358 875662	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24 93.45
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hilden Lake Hilden Lake Hilden Lake Hilden Lake Holmason Lake Homare Lake Homare Lake Hottah Lake Howard Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927 -105.131 -115.024 -114.286 -118.484 -105.97	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.3671 63.5189 63.6208 63.6208 63.9889 62.6641 65.0678 62.213	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59 842.81 186.86	402 401 395 352 360 193 205 407 172 305 269 - 175 345	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 - 6.7 4	3464 9524 32691 141117 7831 104 12189 23714 33779 7769 1065 358 875662 172970	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24 93.45 83.31
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hidden Lake Hidtop Lake Hislop Lake Hoare Lake Hoarse Lake Homer Lake Homer Lake Hottah Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927 -105.131 -115.024 -114.286 -1118.484 -105.97 -107.163	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.5189 63.6208 63.6208 63.9889 62.6641 65.0678 62.213 62.213 62.2876	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59 842.81	402 401 395 352 360 193 205 407 172 305 269 - 175 345 387	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 - 6.7	3464 9524 32691 141117 7831 104 12189 23714 33779 7769 1065 358 875662	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24 93.45
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hilden Lake Hilden Lake Hilden Lake Hilden Lake Holmason Lake Homare Lake Homare Lake Hottah Lake Howard Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927 -105.131 -115.024 -114.286 -118.484 -105.97	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.3671 63.5189 63.6208 63.6208 63.9889 62.6641 65.0678 62.213	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59 842.81 186.86	402 401 395 352 360 193 205 407 172 305 269 - 175 345	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 - 6.7 4	3464 9524 32691 141117 7831 104 12189 23714 33779 7769 1065 358 875662 172970	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24 93.45 83.31
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hiltop Lake Homare Lake Homer Lake Hottah Lake Howard Lake Hump Lake Hump Lake Hump Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927 -105.131 -115.024 -114.286 -1118.484 -105.97 -107.163	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.3671 63.6208 63.9889 62.6641 65.0678 62.213 62.2876 63.586 64.6678	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59 842.81 186.86 7.96	402 401 395 352 360 193 205 407 172 305 269 - 175 345 387 191 402	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 - 6.7 4 4.9	3464 9524 32691 141117 7831 104 12189 23714 33779 7769 1065 358 875662 172970 6599 2111 23502	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24 93.45 83.31 74.62 69.85 88.98
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hilden Lake Hiltop Lake Holmason Lake Holmason Lake Hottah Lake Hottah Lake Howard Lake Hump Lake Hump Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927 -105.131 -115.024 -1114.286 -1118.484 -105.97 -107.163 -116.552	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.5189 63.6208 63.6208 62.6641 65.0678 62.213 62.2876 63.586	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59 842.81 186.86 7.96 2.72	402 401 395 352 360 193 205 407 172 305 269 - 175 345 387 191	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 - 6.7 4 4.9 8.2	3464 9524 32691 141117 7831 104 12189 23714 33779 7769 1065 338 875662 172970 6599 2111	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24 93.45 83.31 74.62 69.85
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hiltop Lake Homare Lake Homer Lake Hottah Lake Howard Lake Hump Lake Hump Lake Hump Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927 -105.131 -115.024 -114.286 -1118.484 -105.97 -107.163 -116.552 -113.435	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.3671 63.6208 63.9889 62.6641 65.0678 62.213 62.2876 63.586 64.6678	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59 842.81 186.86 7.96 2.72 23.77	402 401 395 352 360 193 205 407 172 305 269 - 175 345 387 191 402	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 - 6.7 4 4.9 8.2 8.2	3464 9524 32691 141117 7831 104 12189 23714 33779 7769 1065 358 875662 172970 6599 2111 23502	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24 93.45 83.31 74.62 69.85 88.98
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hiltop Lake Homare Lake Homare Lake Homare Lake Hotha Lake Hotha Lake Hump Lake Hump Lake Humpy Lake Humpy Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -116.927 -105.131 -115.024 -114.286 -118.484 -105.97 -107.163 -116.552 -113.435 -113.371	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.3671 63.6208 63.6208 63.9889 62.6641 65.0678 62.213 62.2876 63.586 64.6678 64.1024	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59 842.81 186.86 7.96 2.72 23.77 9.9	402 401 395 352 360 193 205 407 172 305 269 - 175 345 387 191 402 362	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 - 6.7 4 4.9 8.2 8.2 8.2 8.2 8.2 8.9	3464 9524 32691 141117 7831 104 12189 23714 33779 7769 1065 358 875662 172970 6599 2111 23502 9181	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24 93.45 83.31 74.62 69.85 88.98 83.43
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hiltop Lake Hislop Lake Homason Lake Homer Lake Hottah Lake Hottah Lake Hump Lake Hump Lake Hump Lake Hunny Lake Hunter Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.682 -113.556 -111.041 -116.927 -105.131 -115.024 -114.286 -114.286 -114.286 -114.286 -115.97 -107.163 -116.52 -113.435 -113.371 -110.736	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.3671 63.6208 63.9889 62.6641 65.0678 62.213 62.2876 63.586 64.6678 64.1024 63.222	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59 842.81 186.86 7.96 2.72 2.72 2.3.77 9.9 90.09	402 401 395 352 360 193 205 407 172 305 269 - 175 345 387 191 402 362 380	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 - 6.7 4 4.9 8.2 8.2 8.9 4.1	3464 9524 32691 141117 7831 104 12189 23714 33779 7769 1065 338 875662 172970 6599 2111 23502 9181 82097	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24 93.45 83.31 74.62 69.85 88.98 83.43 82.02
Havant Lake Haywood Lake Healey Lake Heuss Lake Hidden 1 Lake Hidden Lake Hidden Lake Hiltop Lake Hoare Lake Homaron Lake Hottah Lake Hottah Lake Hump Lake Hump Lake Hunny Lake Hunter Lake Indian Hill Lake	-107.659 -115.555 -110.504 -106.663 -107.081 -113.682 -113.556 -111.041 -111.6927 -105.131 -116.927 -105.131 -115.024 -114.286 -118.484 -105.97 -107.163 -116.552 -113.435 -113.435 -113.71 -110.736 -111.004	63.0102 65.8333 63.4599 64.2964 63.3052 62.5107 62.5531 63.3671 63.5189 63.6208 63.9889 62.6641 65.0678 62.213 62.2876 63.586 64.6678 64.1024 63.222 63.1267	4.71 9.79 32.79 153.4 9.63 0.2 12.45 25.91 34.04 8.66 1.27 0.59 842.81 186.86 7.96 2.72 23.77 9.9 90.09 23.55	402 401 395 352 360 193 205 407 172 305 269 - 175 345 387 191 402 362 380 387	3.9 7.8 8.2 6.1 5 14.7 5.7 14.6 5 13.9 - 6.7 4 8.2 8.2 8.2 8.2 8.2 8.9 4.1 15.6	3464 9524 32691 141117 7831 104 12189 23714 33779 7769 1065 358 875662 172970 6599 2111 23502 9181 82097 21855	88.86 66.24 87.33 89.72 82.67 73.21 45 88.11 82.36 89.28 80.72 75.59 54.24 93.45 83.31 74.62 69.85 88.98 83.43 82.02 83.52

Irritation Lake	-115.264	65.0587	4.3	382	7.1	4019	84.19
Isabella Lake	-117.697	64.8136	59.6	186	26.9	60442	91.19
Island Lake	-117.097	62.4914	0.9	205	3.3	563	56.67
Itchen Lake	-112.827	65.5184	137.71	400	23.1	144870	94.68
Jackfish Lake	-114.392	62.4666	0.47	182	5	376	72.34
Jackson Lake	-114.305	62.5872	0.92	182	5.2	654	64.13
James Lake	-116.439	63.0095	19.34	147	15.8	17730	82.52
Jennejohn Lake	-113.747	62.4206	16.98	196	4.6	15192	80.51
Jim Lake	-104.579	62.4087	20.33	282	5.7	20581	91.1
Joe Lake	-114.387	62.483	0.1	-	-	45	40
Johnston Lake	-114.2	62.9965	5.34	213	10.6	4969	83.71
Jolly Lake	-111.94	64.1417	73.43	403	9.8	75697	92.78
Jones Lake	-108.377	62.3131	4.53	367	7.7	3984	79.25
Kam Lake	-114.406	62.4205	2.12	163	4.7	1770	75
Kamilukuak Lake	-102.005	62.4711	0.34	247	21.1	235	61.76
Keskarrah Lake	-115.25	66.0464	18.73	399	8.3	17792	85.37
King Lake	-110.762	63.7752	13.04	402	5.7	12294	84.82
Kirk Lake	-109.066	63.7188	64.1	389	5.7	64275	90.25
Kog lake	-114.396	62.4048	0.63	170	3.3	349	49.21
Koropchuk Lake	-116.767	64.1512	27.7	241	9.4	23818	77.4
Kway Cha Lake	-118.552	65.4413	23.96	166	2.8	23902	89.69
La Loche Lakes	-110.877	62.006	2.65	301	6.3	2423	82.26
Lac Avril	-115.292	63.9542	1.35	253	9.9	1123	74.81
Lac Avrii Lac de Charloit	-115.292	63.8105	1.35	375	13.5	104407	91.85
Lac du Bois	-105.76	63.6146	13.71	343	3.8	12312	80.82
Lac Grandin	-119.064	63.9802	244.36	319	6.1	263747	97.14
Lac la Martre	-117.961	63.3195	1676.65	249	10	1815957	97.34
Lac la Prise	-108.722	63.062	30.61	375	9.9	29779	87.55
Lac Levis	-117.951	62.6347	53.25	265	3.7	56088	94.8
Lac Malfait	-117.988	64.6284	38.05	174	4.8	38337	90.67
Lac Nez Croche	-111.403	63.2502	28.59	396	9.7	27563	86.78
Lac Tachs	-119.987	64.0127	124.55	308	13.5	126349	91.3
Lac Tate dOurs	-110.572	63.3577	62.23	385	10	63718	92.16
Lake of the Enemy	-110.238	63.7792	135.33	396	12.2	134187	89.06
Lake Providence	-112.065	64.7582	102.58	358	28	103207	90.55
Lamoureux Lake	-113.682	62.9108	4.11	270	6.1	3551	77.86
Landing Lake	-114.408	62.56	1.28	202	2.6	861	60.16
Languish Lake	-112.904	62.7684	11.24	307	4.4	10597	84.88
Larocque Lake	-107.707	63.0496	1.5	396	2.5	1108	66.67
Lastfire Lake	-113.029	64.5342	6.13	357	6.4	5919	86.95
Laurie Lake	-115.208	64.4817	0.47	358	5	330	63.83
Lausen Lake	-109.744	62.5875	7.24	186	15.3	6648	82.6
Leonforte Lake	-119.654	64.5848	10.65	392	6.1	10916	92.21
Likely Lake	-114.311	62.6466	0.39	204	4.9	130	30.77
Little Crapeau Lake	-116.518	64.8211	123.5	275	21.4	118280	85.98
Little Forehead Lake	-113.281	64.7824	123.3	401	20	16804	83.08
Little Lake	-113.201	62.5467	0.14	217	2.7	92	57.14
Logie Lake	-115.96	62.1353	4.23	357	2.8	3454	73.52
Logie Lake	-105.759	62.4773	4.23	196	2.8	788	61.21
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Long Legs Lake	-113.773	64.7613	16.7	417	5.6	14850	80.06
Longtom Lake	-117.834	65.1715	43.93	189	19.3	43869	89.87
Lou Lake	-116.782	63.5682	1.82	193	13.8	1468	72.53
Love Lake	-114.759	62.995	4.43	246	5.9	3172	64.33
Lynx Lake	-106.285	62.4099	295.27	344	10.1	282676	86.16
Mac Lake	-113.468	63.0753	5.09	312	5.3	3993	70.53
MacKay Lake	-111.012	63.9233	972.33	390	20.7	1002573	92.8
MacLellan Lake	-110.037	63.2324	23.2	383	13.9	20923	81.16
MacNaughton Lake	-115.314	63.7135	0.37	296	3.7	201	48.65
Mad Lake	-112.749	62.1169	1.16	222	4.1	958	74.14
Madeline Lake	-114.081	62.5468	0.93	170	8.8	733	70.97
Magpie Lake	-108.877	62.4488	4.13	355	8.8	3700	80.63
Magrum Lake	-108.635	62.0674	4.97	373	7.1	4492	81.29
Malley Lake	-108.087	63.5601	30.34	395	7.5	25931	76.93
Mann Lake	-112.797	62.3496	1.26	244	2.2	958	68.25
	1	1	1	1		L	1

Mantie Lake -104.457 Margaret Lake -117.128 Marian Lake -116.200 Martin Lake -114.433 Mary Frances Lake -106.245 Mary Lake -103.54 Mattherry Lake -115.891 Matthews Lake -111.245	64.507 62.9243	59.48 102.43 236.84	293 203 147	5.4 32.2	58030 101844	87.81 89.47
Marian Lake -116.20 Martin Lake -114.433 Mary Frances Lake -106.243 Mary Lake -103.54 Mattherry Lake -115.891	62.9243					89.47
Martin Lake -114.433 Mary Frances Lake -106.245 Mary Lake -103.54 Mattherry Lake -115.891		230.84			251024	95.22
Mary Frances Lake -106.243 Mary Lake -103.54 Mattberry Lake -115.891	62.5313	3.00		15.8	251024	
Mary Lake -103.54 Mattberry Lake -115.891		3.09	197	3.2	2163 143654	63.11
Mattberry Lake -115.891			363	8		86.51
	62.3855	164.8	294	20.6	170394	92.96
		82.24	235	38.6	80356	87.94
		10.35	422	6.3	9582	83.29
Max Ward Lake -113.708		11.65	367	8.5	11912	92.02
Maze Lake -105.944		16.16	350	2.9	12516	69.68
Mazenod Lake -117.014		36.3	199	14	34834	86.36
McCrea Lake -112.572		16.07	404	12	15065	84.38
McIntosh Lake -114.901	65.7574	3.71	436	5	3398	82.48
McKee Lake -110.043		2.97	353	6.1	2387	72.39
McKinlay Lake -111.541	62.8749	26.65	365	8.1	25518	86.19
McKinnon Lake -108.497	62.0601	10.03	370	5.6	9324	83.65
McLellan Lake -117.958	63.8428	9.55	-	•	9510	89.63
McPhee Lake -113.052	63.0264	1.91	312	7.2	1323	62.3
McTavish Arm -117.83	65.4491	189.7	175	29.6	188745	89.55
Meander Lake -112.149	62.5774	10.48	311	10.7	9539	81.97
Meg Lake -114.383	62.416	0.09	-	-	45	44.44
Meridian Lake -109.43	62.6042	37.1	201	26.3	38923	94.42
Merl Lake -112.655	62.4007	0.7	260	3.5	550	70
Mesa Lake -115.147	64.8268	36.55	365	12.4	34701	85.44
Messina Lake -119.526	64.1837	18.27	371	7	18633	91.79
Methane Lake -114.174	62.4838	0.98	180	3.8	684	63.27
Michel Lake -114.141	62.881	3.17	229	6.1	2633	74.76
Milner lake -114.341	62.5923	0.41	212	2.3	182	39.02
Misty Lake -109.785	63.067	9.86	321	12.9	9180	83.77
Moberly Lake -114.315	63.0166	12.75	225	20.8	10564	74.59
Mohawk Lake -112.115	64.0222	20.01	438	4.6	18774	84.46
Moise Lake -114.136		0.78	166	3.7	596	69.23
Moose Lake -114.089	62.9803	1.24	253	5.7	978	70.97
Moraine Lake -106.01	64.1074	80.99	352	5.3	75416	83.8
Morel Lake -113.677		20.28	380	8	19808	87.92
Morose Lake -112.915		12.01	311	6	11015	82.51
Mosquito Lake -103.341		311.21	292	12.7	323804	93.54
Mud Lake -117.197		11.2		-	9829	79.02
Munn Lake -109.974		70.94	391	15.9	71057	90.01
Murdock Lake -109.431		51.1	423	4	44286	78
Murphy Lake -109.801		8.86	299	9.4	8198	83.3
Murray Lake -113.441		2.56	292	3.7	2187	76.95
Murray Lake -106.953		4.97	375	3.2	4259	77.06
Muskeg Lake -103.64	62.0805	8.47	322	5.4	6939	73.67
Naga Lake -119.21	65.2199	5.31	175	5.7	5261	89.08
Nardin Lake -113.839		18.14	341	11.9	15645	77.62
Nelligan Lake -105.784		8.66	360	4.1	7482	77.71
Nelson Lake -103.76		7.77	409	3.5	5840	67.7
		15.36	409	3.5	15039	88.15
Newbigging Lake -112.220 Nieznany Lake -105.175		3.56	323	3.9	2966	75
Nonacho Lake -109.317		104.88	312	15.3	104841	89.86
NoName Lake 01 -114.39 NoName Lake 02 108.000	62.5522	0.06	- 270	-	14	16.67
NoName Lake 02 -108.095		50.13	379	14.1	48651	87.35
NoName Lake 03 -109.052		28.16	403	4.6	28308	90.48
NoName Lake 04 -109.297		64.28	393	6.3	65424	91.6
NoName Lake 05 -108.275		20.95	389	6.2	20814	89.4
NoName Lake 06 -112.075		70.68	413	7.3	68296	86.97
NoName Lake 07 -110.554		64.99	409	8.4	59077	81.81
NoName Lake 08 -114.046		17.4	290	28.3	16528	85.52
NoName Lake 09 -107.275		77.05	362	6.1	74521	87.05
NoName Lake 10 -106.178		47.57	349	5.9	47674	90.2
NoName Lake 11 -117.93	62.9845	45.5	267	3.1	46436	91.85
	63.0017	88.98	263	4.3	86218	87.21
NoName Lake 12 -102.796		40.08	390	13.8	39749	89.25

NoName Lake 14	-102.003	62.6587	34.76	246	8.7	31634	81.9
NoName Lake 15	-114.246	62.7732	24.89	195	21.1	20640	74.65
NoName Lake 16	-113.936	62.5755	38.89	166	20.8	36375	84.19
NoName Lake 17	-114.194	62.5985	36.73	152	24.4	36116	88.48
NoName Lake 18	-107.594	62.4351	48.91	362	8.7	46675	85.89
NoName Lake 19	-103.28	62.2774	62.81	285	8.5	60275	86.29
NoName Lake 20	-114.47	62.6374	1.1	215	4	661	53.64
NoName Lake 21	-114.421	62.5109	1.33	201	1.6	919	62.41
NoName Lake 22	-114.231	62.4853	3.21	169	5.3	2700	75.7
NoName Lake 23	-114.177	62.4598	1.39	164	2.9	1069	69.06
NoName Lake 24	-114.628	62.428	1.26	171	2.6	891	63.49
NoName Lake 25	-114.472	62.5003	0.21	204	1.9	131	57.14
NoName Lake 26	-109.632	65.0632	208.76	427	15.1	208919	89.95
NoName Lake 27	-110.876	64.792	109.48	430	8.2	108844	89.48
NoName Lake 28	-115.883	63.7155	139.74	208	2	129795	83.48
NoName Lake 29	-112.318	63.4001	106.08	397	14.5	100296	85.1
NoName Lake 30	-102.65	62.5706	194.39	255	11.7	192351	89.06
NoName Lake 31	-114.871	65.2597	25.88	449	5.6	25720	89.45
NoName Lake 32	-115.923	65.0306	54.52	348	18.5	52898	87.33
NoName Lake 33	-109.082	65.024	68.24	399	10.9	71432	94.21
NoName Lake 34	-108.844	64.9761	36.5	380	7.7	38642	95.29
NoName Lake 35	-109.044	64.9043	19.27	417	12.8	19406	90.66
NoName Lake 36	-108.66	64.9469	44.71	382	6.7	45389	91.37
NoName Lake 37	-109	64.7693	65.26	397	9.9	64212	88.55
Noyes Lake	-105.901	62.5395	24.79	346	4.3	24435	88.71
Octopus Lake	-114.449	62.3737	0.77	158	1.8	453	53.25
Odjick Lake	-113.917	65.516	31.55	358	28	32155	91.73
Old Canoe Lake	-111.453	63.443	61.76	421	12.5	57663	84.03
Olson Lake	-105.277	62.9121	7.97	337	4	7755	87.58
One Arm Lake	-114.342	62.5458	0.12	183	3	37	25
Orkney Lake	-113.182	64.1307	5.96	385	5	5583	84.23
Oro Lake	-114.333	62.6283	0.46	219	3.5	231	45.65
Ortona Lake	-119.222	64.7705	14.3	634	6.2	14279	89.86
Outram Lakes	-109.433	64.0362	48.87	367	9.2	49430	91.04
Papanakies Lake	-110.338	63.2306	23.3	406	5.7	22211	85.79
Parent Lake	-114.381	65.2658	50.14	376	14.6	49992	89.73
Pate Lake	-114.206	64.4237	12.02	382	7.4	11154	83.53
Payne Lake	-112.068	62.8293	9.74	362	12.1	8904	82.24
Peaceful Lake	-113.505	62.9932	2.46	283	4.2	2119	77.64
Pellatt Lake	-109.777	64.9606	40.31	427	15.1	38887	86.83
Pelonquin Lake	-111.225	65.3221	21.08	493	7	21342	91.13
Peninsula Lake	-113.364	62.5234	0.84	230	4.2	501	53.57
Perlson Lake	-111.92	63.1328	24.87	394	9.1	24483	88.58
Phoenix Lake	-113.339	63.7636	27.15	344	13.9	24178	80.15
Pickerel Lake	-113.488	62.4943	1.57	209	6.8	1100	63.06
Pink Lake	-113.018	62.6731	3.44	263	7.4	2883	75.29
Plant Lake	-113.557	62.5236	5.31	212	7.9	5901	84.16
Plex Lake	-110.785	63.1137	2.21	389	5.8	2036	82.81
Point Lake	-113.091	65.2602	626.84	358	28	644500	92.47
Pollock Lake	-115.808	63.3195	4.06	198	9.3	3165	70.2
Pontoon Lake	-114.003	62.5418	3.36	195	7.2	3064	82.14
Porphyry Lake	-113.403	64.0488	3.53	345	6.9	3156	80.45
Prang Lake	-112.501	63.8773	14.34	425	7.9	13060	81.94
Preg Lake	-114.081	62.4527	0.17	173	3.3	76	41.18
Prestige Lake	-113.645	62.9615	8.25	270	6.8	7802	85.09
Price Lake	-108.158	62.0349	8.59	375	7	8341	87.43
Ptarmigan Lake	-107.429	63.5903	82.73	352	12.7	82480	89.71
		62.4316	0.17	181	2.7	96	52.94
Pud lake	-114.383		1				
Pud lake Rabbit Lake	-114.383		11.96	172	12.4	12441	93.65
Rabbit Lake	-116.849	63.4668	11.96	172	12.4	12441	93.65
Rabbit Lake Raccoon Lake	-116.849 -117.692	63.4668 62.87	43.93	287	1	45951	94.15
Rabbit Lake Raccoon Lake Radford Lake	-116.849 -117.692 -105.576	63.4668 62.87 63.3944	43.93 41.05	287 341	1 4.5	45951 39226	94.15 85.99
Rabbit Lake Raccoon Lake Radford Lake Rae Lake	-116.849 -117.692 -105.576 -117.321	63.4668 62.87 63.3944 64.1656	43.93 41.05 201.35	287 341 200	1 4.5 28.3	45951 39226 198474	94.15 85.99 88.72
Rabbit Lake Raccoon Lake Radford Lake	-116.849 -117.692 -105.576	63.4668 62.87 63.3944	43.93 41.05	287 341	1 4.5	45951 39226	94.15 85.99

Rater Lake	-114.368	62.5537	0.2	182	3.8	51	25
Rawalpindi Lake	-114.623	65.0285	88.37	415	6.7	87345	88.96
Rebesca Lake	-114.025	64.5352	65.24	252	36.5	66388	91.46
Recluse Lake	-114.015	66.0421 62.7403	0.71 8.38	376	13.5	522 7423	66.2 79.71
Redout Lake Redrock Lake	-113.016						
	-114.165	65.4776	83.25	358	28	82622	89.32
Reid Lake	-109.959	63.7626	40.8	401	8.9	39960	88.14
Reindeer Lake	-113.583	63.8865	50.25	338	10.5	49658	88.94
Rib Lake	-114.177	62.3445	0.58	166	4	430	67.24
River Lake	-114.091	62.5945	4.96	166	20.8	4495	81.65
Robb Lake	-116.021	65.3709	16.95	356	15.4	17118	90.91
Robert Lake	-109.357	62.3803	3.52	331	11.8	2948	75.28
Rodrigues Lake	-115.633	64.7871	5.55	296	11.5	5399	87.57
Rolfe Lake	-111.725	63.0835	55.57	402	8.2	54011	87.48
Rome Lake	-118.342	64.3155	22.23	402	3.3	21396	86.64
Ross Lake	-113.26	62.6815	15.7	254	7	14207	81.46
Roulante Lake	-113.748	64.5571	20.52	420	11.4	18449	80.9
Roundrock Lake	-113.404	64.3891	29.74	342	23.9	29970	90.69
Rupp Lake	-112.264	63.8287	6.37	442	4.8	5234	73.94
Russell Lake	-115.75	63.0373	177.03	147	15.8	171240	86.93
Ryan Lake	-114.372	62.5871	1.06	220	2.6	879	74.53
Samandr Lake	-115.384	65.9782	59.36	422	10.8	59573	90.11
Sandy Lake	-113.077	64.1536	4.18	382	6.6	3763	80.86
Sarah Lake	-117.147	63.7832	66.45	187	17.3	66049	89.45
Savannah Lake	-108.911	64.4309	29.02	393	6.6	27969	86.73
Savoy Lake	-115.436	64.4286	1	330	7.7	773	70
Schist Lakes	-109.913	62.3707	0.95	353	5.2	422	40
Scott Lake	-113.572	62.652	2.62	246	5.6	1883	64.5
Scotty Lake	-112.989	63.4673	1.67	408	8.6	1359	73.05
Seahorse Lake	-111.229	64.3086	20.41	420	5.4	20629	90.98
Seal Lake	-108.95	64.6326	83.6	403	13.1	79887	86
Second Lake	-117.426	62.1259	3.27	179	5.4	3122	85.93
Self Lake	-117.274	65.2949	21.46	292	14.3	20770	87.09
Shadow Lake	-114.35	62.5662	0.06	-	-	13	16.67
Shamrock Lake	-115.012	64.7763	17.82	367	8.9	17503	88.38
Shaw Lake	-112.765	64.6106	4.99	392	6.2	4290	77.35
Short Point Lake	-114.224	62.7569	5.69	195	21.1	5339	84.53
Sid Lake	-103.986	62.2425	289.48	296	12	304865	94.78
Sifton Lake	-106.36	63.7027	90.93	355	6.6	75978	75.2
Simon Lake	-117.318	65.5421	6.98	270	11.8	6211	80.09
Singing Lake	-112.925	64.3162	13.32	370	9	12863	86.79
Sled Lake	-106.821	62.1265	23.5	380	6.4	21841	83.66
Sleepy Dragon Lake	-112.909	62.9194	5.21	331	5.7	4748	81.96
Slemon Lake	-116.033	63.2081	44.91	138	14.7	44378	88.82
Small Lake	-113.826	62.5185	0.74	193	5.1	547	66.22
Smart Lake	-106.822	63.4912	112.35	356	11.3	103542	82.88
Smoky Lake	-116.495	65.9003	2.45	369	9.8	2178	80
Snelgrove Lake	-105.615	62.3356	7.59	348	4.4	6599	78.26
Sophia Lake	-114.121	62.9357	3.64	248	7.2	2327	57.42
Sosan Lake	-111.95	63.2369	5.26	432	4.6	4140	70.91
Sparrow Lake	-113.648	62.6144	12.58	237	6.4	12077	86.41
Spencer Lake	-112.462	63.1573	13.2	375	11.8	13060	88.86
Sphinx Lake	-115.366	64.4645	1.56	345	5.7	1351	78.21
Spider Lake	-115.145	64.5067	16.58	341	11.5	13690	74.31
Sproule Lake	-113.478	62.7444	1.6	274	2.4	1022	57.5
Spruce Island Lake	-110.427	62.4009	1.66	171	10.3	1419	77.11
Staple Lake	-114.033	62.729	1.27	247	3.1	822	58.27
Starfish Lake	-111.61	64.3321	21.29	403	6.3	21575	91.22
Starvation Lake	-112.731	64.8988	37.76	400	9.1	38344	91.39
Steel Lake	-104.593	63.7203	8.98	159	8.6	8562	85.86
Sterlet Lake	-109.496	64.7214	44.66	426	15.1	41175	82.89
Street Lake	-105.317	63.4127	15.43	326	2.8	13352	77.9
Sunken Lake	-110.233	62.9846	1.7	259	19.1	1460	77.06
Suse Lake	-112.966	63.1386	2.36	341	4.8	1975	75.42
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Sussex Lake	-108.328	64.4388	14.31	379	22	13522	85.05
Tanco Lake	-112.223	62.4201	4.27	272	5.7	2945	62.06
Tanco Lake	-112.225	64.521	39.79	373	7.7	38615	87.33
Taylor Lake	-108.664	63.7853	33.13	389	10.2	32402	88.02
Tayonton Lake	-116.544	63.2112	23.03	150	3.6	12081	47.2
Tent Lake	-107.957	62.4281	72.1	346	12.7	67843	84.69
Terry Lake	-113.31	62.511	4.28	226	3.5	2570	53.97
The Nine Lakes	-114.043	63.4579	1.59	324	5.8	1194	67.3
Thetis Lake	-113.275	63.7214	29.11	351	9.9	28312	87.36
Thistlethwaite Lake	-113.627	63.1591	44.27	252	22.8	42541	86.49
Thomas Lake	-119.187	65.1207	3.81	241	3.8	3568	83.99
Thompson Lake	-113.5	62.6137	2.81	252	2.9	2381	76.16
Thonokied Lake	-109.628	64.3849	129.5	394	18.3	127553	88.55
Timberhill Lake	-106.655	62.37	16.55	363	6.3	14940	81.27
Toad Lake	-111.746	62.7272	5.91	362	4.8	4883	74.28
Tonggot Lake	-119.697	63.9928	18.55	312	4.3	15529	75.36
Toopon Lake	-110.439	62.3529	1.51	176	9.1	1372	81.46
Torrie Lake	-116.926	66.2355	0.52	310	7.7	430	75
Toura Lake	-108.568	62.8338	0.79	374	5	507	58.23
Trapper lake	-114.363	62.5266	0.31	182	3.1	137	38.71
Trout Lake	-114.364	62.7997	2.82	204	10.3	2400	76.6
Truce Lake	-114.886	64.5323	28.65	343	8.4	27814	87.36
Trumper Lake	-117.582	63.5949	4.96	-	-	4201	76.21
Tsan Lake	-112.937	64.0169	12.79	374	5.6	11773	82.88
Tuchay Lake	-119.163	65.2513	31.72	172	11.1	31222	88.56
Tuche Lake	-117.317	64.3356	14.78	200	15.8	14489	88.23
Tumi Lake	-116.794	63.4535	6.07	165	7.7	5620	83.36
Tyrrell Lake	-105.498	63.1246	227.09	318	9.8	220532	87.4
Uhlman Lake	-116.799	66.1321	9.3	314	12	8538	82.58
Upper Pensive Lake	-113.393	62.7247	3.28	246	5	2718	74.7
Upper Ross Lake	-113.153	62.7296	9.22	251	1 -	0.451	82.54
OPPCI ROSS Lanc	-115.155	02.7290	9.22	254	7	8451	82.34
Ursula Lake	-110.459	64.8159	22.95	453	6.7	22803	89.41
Ursula Lake	-110.459	64.8159	22.95	453	6.7	22803	89.41
Ursula Lake Vaillant Lake	-110.459 -114.51	64.8159 66.2053	22.95 2.46	453 329	6.7 11.2	22803 2230	89.41 81.71
Ursula Lake Vaillant Lake Van Lake	-110.459 -114.51 -113.077	64.8159 66.2053 63.3649	22.95 2.46 4.48	453 329 340	6.7 11.2 11.5	22803 2230 3780	89.41 81.71 75.89
Ursula Lake Vaillant Lake Van Lake Vee Lake	-110.459 -114.51 -113.077 -114.35	64.8159 66.2053 63.3649 62.5555	22.95 2.46 4.48 0.7	453 329 340 178	6.7 11.2 11.5 4.4	22803 2230 3780 393	89.41 81.71 75.89 50
Ursula Lake Vaillant Lake Van Lake Vee Lake Victory Lake	-110.459 -114.51 -113.077 -114.35 -113.077	64.8159 66.2053 63.3649 62.5555 62.6708	22.95 2.46 4.48 0.7 10.37	453 329 340 178 252	6.7 11.2 11.5 4.4 4.2	22803 2230 3780 393 9373	89.41 81.71 75.89 50 81.39
Ursula Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438	64.8159 66.2053 63.3649 62.5555 62.6708 62.601	22.95 2.46 4.48 0.7 10.37 1.49	453 329 340 178 252 194	6.7 11.2 11.5 4.4 4.2 5.3	22803 2230 3780 393 9373 1092	89.41 81.71 75.89 50 81.39 65.77
Ursula Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Waite Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438 -113.322	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 62.8342	22.95 2.46 4.48 0.7 10.37 1.49 7.62	453 329 340 178 252 194 290	6.7 11.2 11.5 4.4 4.2 5.3 3.7	22803 2230 3780 393 9373 1092 5495	89.41 81.71 75.89 50 81.39 65.77 64.96
Ursula Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Waite Lake Wallie Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438 -113.322 -113.951	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2	453 329 340 178 252 194 290 285	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4	22803 2230 3780 393 9373 1092 5495 98	89.41 81.71 75.89 50 81.39 65.77 64.96 45
Ursula Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Waite Lake Wallie Lake Wallie Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438 -113.322 -113.951 -108.493	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36	453 329 340 178 252 194 290 285 378	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8	22803 2230 3780 393 9373 1092 5495 98 233258	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74
Ursula Lake Vaillant Lake Van Lake Vet Lake Victory Lake Vital Lake Waite Lake Wallie Lake Wallse Lake Wallse Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438 -113.322 -113.951 -108.493 -114.281	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.5829	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17	453 329 340 178 252 194 290 285 378 174	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6	22803 2230 3780 393 9373 1092 5495 98 233258 8030	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84
Ursula Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Walte Lake Wallie Lake Wallie Lake Wallsh Lake Walsh Lake Webb Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438 -113.322 -113.322 -113.951 -108.493 -114.281 -113.125	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.5829 62.8492	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62	453 329 340 178 252 194 290 285 378 174 314	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75
Ursula Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Waite Lake Waite Lake Walmsley Lake Walmsley Lake Walsh Lake Webb Lake Wecho Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438 -113.322 -113.951 -108.493 -114.281 -113.125 -113.812	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1437 63.4197 62.5829 62.8492 63.9602	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43	453 329 340 178 252 194 290 285 378 174 314 351	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99
Ursula Lake Vaillant Lake Van Lake Ve Lake Victory Lake Vital Lake Waite Lake Walite Lake Wallise Lake Walsh Lake Walsh Lake Webb Lake Wecho Lake Wedge Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.38 -113.322 -113.951 -108.493 -114.281 -113.125 -113.812 -113.69	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.8829 62.8492 63.9602 62.8632	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87	453 329 340 178 252 194 290 285 378 174 314 351 260	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Victory Lake Vittory Lake Vital Lake Waite Lake Walite Lake Walmsley Lake Webb Lake Webb Lake Wecho Lake Wecho Lake Wedge Lake White Quartz Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438 -113.222 -113.951 -108.493 -114.281 -113.125 -113.609 -108.383	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.497 62.5829 62.8492 63.9602 62.8632 62.6897	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6	453 329 340 178 252 194 290 285 378 174 314 351 260 380	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Waite Lake Walite Lake Walmsley Lake Walsh Lake Webb Lake Wecho Lake Wecho Lake Wedge Lake White Quartz Lake White Guartz Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438 -113.222 -113.951 -108.493 -114.281 -113.125 -113.812 -113.609 -108.383 -106.802	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.829 63.8492 63.9602 62.8632 62.6897 62.6983	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46	453 329 340 178 252 194 290 285 378 174 351 260 380 350	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vec Lake Victory Lake Vital Lake Waite Lake Walite Lake Walmsley Lake Walsh Lake Webb Lake Wecho Lake Wedge Lake White Quartz Lake WhiteWolf Lake WhiteWolf Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438 -113.022 -113.951 -108.493 -114.281 -113.125 -113.812 -113.69 -108.383 -106.802 -113.919	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.8529 62.8492 63.9602 62.8632 62.6983 64.9647	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93	453 329 340 178 252 194 290 285 378 174 351 260 380 350 419	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 10.1	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vec Lake Victory Lake Vital Lake Waite Lake Walite Lake Wallie Lake Walsh Lake Webb Lake Wecho Lake Wedge Lake White Quartz Lake White Marte Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.438 -113.027 -114.438 -113.951 -108.493 -113.125 -113.69 -113.69 -106.802 -113.919 -114.215	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.5829 63.9602 62.8632 62.6983 64.9647 62.3617	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 10.1 5.5	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vec Lake Victory Lake Vital Lake Walte Lake Walte Lake Walsh Lake Walsh Lake Webb Lake Wecho Lake Wecho Lake Witefish Lake Whitefish Lake Whitefish Lake Withfish Uake Withfish Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.921 -113.951 -108.493 -114.281 -113.812 -113.69 -106.802 -113.919 -114.215 -118.517	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.1343 63.4197 62.5829 62.8492 63.9602 62.6897 62.6983 64.9647 62.3617 62.8633	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162 256	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 16.2 7.9 6.1 11.6 10.1 5.5 3.7	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202	89.41 81.71 75.89 50 81.39 65.77 64.96 445 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56 93.81
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Walite Lake Walite Lake Walish Lake Walsh Lake Webb Lake Webb Lake Wecho Lake Wecho Lake White Quartz Lake White Quartz Lake Wihite Quartz Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.322 -113.321 -113.951 -108.493 -114.281 -113.125 -113.812 -113.69 -108.383 -106.802 -114.215 -114.215 -114.215 -114.215 -118.517 -109.928	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.5829 62.8492 63.9602 62.8632 64.9647 62.3617 62.8653 64.9443	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65 8.61	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162 256 440	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 10.1 5.5 3.7 7.4	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000	89.41 81.71 75.89 50 81.39 65.77 64.96 445 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56 93.81 83.62
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Walite Lake Walite Lake Walite Lake Walite Lake Walite Lake Webb Lake Webb Lake Webb Lake Webb Lake White Quartz Lake White Guartz Lake Whitefish Lake Whitefish Lake Wildwuf Lake Windglower Lake Windg Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.322 -113.321 -113.951 -108.493 -114.281 -113.125 -113.812 -113.69 -108.383 -106.802 -113.919 -114.215 -114.215 -113.919 -114.215 -112.943	64.8159 66.2053 63.3649 62.5555 62.6708 62.632 63.1343 63.1497 62.5829 62.8492 63.9602 62.6693 64.9647 62.8653 64.9443 64.4877	22.95 2.46 4.48 0.7 10.37 1.49 7.62 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65 8.61 45.27	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162 256 440 346	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 5.5 3.7 7.4 11.6	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000 46846	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56 93.81 83.62 93.09
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Waltie Lake Waltie Lake Waltie Lake Waltie Lake Wecho Lake Wecho Lake Wecho Lake White Quartz Lake WhiteWf Lake Willow Lake Willow Lake Willow Lake Winter Lake Winter Lake Winter Lake Wolverine Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.322 -113.951 -108.493 -114.281 -113.125 -113.812 -113.69 -106.802 -113.919 -114.215 -113.917 -109.928 -111.38	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.5829 62.8492 63.9602 62.6983 64.9647 62.8653 64.9443 64.4877 63.2084	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 3.665 8.61 45.27 23.42	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162 256 440 346 396	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 10.1 5.5 3.7 7.4 11.6 9.7	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000 46846 23074	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56 93.81 83.62 93.09 88.68
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Waltie Lake Waltie Lake Waltie Lake Waltish Lake Webb Lake Wecho Lake Wecho Lake White Quartz Lake Whitewoff Lake Whitewoff Lake Willow Lake Willow Lake Willow Lake Winter Lake Winter Lake Wolverine Lake Wonnacott Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.951 -108.493 -114.281 -113.125 -113.812 -113.69 -106.802 -113.919 -114.215 -113.917 -109.928 -111.38 -111.38 -116.686	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.8829 62.8829 62.8632 62.6983 64.9647 62.8653 64.9443 64.4877 63.2084 63.7158	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65 8.61 45.27 23.42 1.62	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162 256 440 346 396 -	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 10.1 5.5 3.7 7.4 11.6 9.7 -	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000 46846 23074 1028	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56 93.81 83.62 93.09 88.68 57.41
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vitory Lake Vital Lake Waltie Lake Waltie Lake Waltie Lake Webb Lake Wecho Lake Wedge Lake White Quartz Lake Whiteflsh Lake Whiteflsh Lake Willow Lake Willow Lake Windy Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.322 -113.951 -108.493 -114.281 -113.125 -113.812 -113.69 -108.383 -106.802 -113.919 -114.215 -118.517 -109.928 -111.38 -111.38 -111.38 -111.38 -111.38 -112.943	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.5829 62.8829 62.8632 62.6983 64.9647 62.8653 64.4877 63.2084 63.7158 62.4704	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65 8.61 45.27 23.42 1.62 2.52	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162 256 440 346 396 - 241	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 10.1 5.5 3.7 7.4 11.6 9.7 - 6	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000 46846 23074 1028 2226	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56 93.81 83.62 93.09 88.68 57.41 79.37
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vitory Lake Vital Lake Walite Lake Waline Lake Webb Lake Webb Lake Webb Lake Webb Lake Webge Lake White Quartz Lake Whitefish Lake Whitefish Lake Whitefish Uake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.951 -108.493 -113.812 -113.812 -113.69 -106.802 -113.919 -114.215 -113.919 -114.215 -118.517 -109.928 -112.943 -111.38 -111.38 -111.38 -111.38 -111.38 -111.38	64.8159 66.2053 63.3649 62.5555 62.6708 62.601 62.8342 63.1343 63.4197 62.5829 62.8492 63.9602 62.6897 62.6983 64.9647 62.3617 62.8653 64.9443 64.4877 63.2084 63.7158 62.4704 65.6689	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65 8.61 45.27 23.42 1.62 2.52 15.66	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162 256 340 340 346 396 - 241 322	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 10.1 5.5 3.7 7.4 11.6 9.7 - 6 9.4	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000 46846 23074 1028 2226 14391	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56 93.81 83.62 93.09 88.68 57.41 79.37 82.69
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vec Lake Victory Lake Vital Lake Waite Lake Walib Lake Walsh Lake Walsh Lake Webb Lake Webb Lake Webb Lake Webb Lake Witeffsh Lake Whiteffsh Lake Whiteffsh Lake Willow Lake Willow Lake Windy Lake Windy Lake Windy Lake Windy Lake Winter Lake Wona Lake Wona Lake Wona Lake Wyile Lake Yamba Lake Yamba Lake Yamba Lake Yamba Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.022 -113.951 -108.493 -114.281 -113.125 -113.812 -113.69 -108.383 -106.802 -113.919 -114.215 -118.517 -109.928 -112.943 -111.38 -116.686 -112.985 -117.011 -111.376 -118.631	64.8159 66.2053 63.3649 62.555 62.6708 62.601 62.8342 63.1343 63.4197 62.5829 62.8492 63.9602 62.6983 64.9647 62.3617 62.8638 64.9443 63.7158 62.4704 65.6689 64.9531	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65 8.61 45.27 23.42 1.62 2.52 15.66 305.28	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162 256 440 396 - 241 322 403	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 10.1 5.5 3.7 7.4 11.6 9.7 - 6 9.4 16.7	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000 46846 23074 1028 2226 14391 310925	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56 93.81 83.62 93.09 88.68 57.41 79.37 82.69 91.66
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vitory Lake Vital Lake Waite Lake Waline Lake Webb Lake Webb Lake Webb Lake Webb Lake Webg Lake White Quartz Lake White Quartz Lake Whitefish Lake Willow Lake Windflower Lake Windflower Lake Windg Lake Winder Lake Windg Lake Windg Lake Windg Lake Windg Lake Wolverine Lake Wonacott Lake Woyna Lake Wylie Lake Yamba Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.22 -113.951 -108.493 -114.281 -113.125 -113.812 -113.69 -106.802 -113.919 -114.215 -118.517 -109.928 -112.943 -111.38 -114.295 -111.38 -111.38 -111.38 -111.38 -111.38 -111.38	64.8159 66.2053 63.3649 62.555 62.6708 62.6708 62.6708 62.6708 62.6708 62.6708 62.6708 62.6708 62.6708 63.1343 63.142 63.342 63.342 63.4197 62.5829 62.8829 62.8829 62.8632 62.6897 62.6897 62.6687 62.6683 64.9647 62.8653 64.9443 64.4877 63.2084 63.7158 62.4704 65.6689 64.9531 65.3664	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65 8.61 45.27 23.42 1.66 305.28 8.1	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162 256 440 346 396 - 241 322 403 230	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 10.1 5.5 3.7 7.4 11.6 9.7 - 6 9.4 16.7 5.2	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000 46846 23074 1028 2226 14391 310925 8157	89.41 81.71 75.89 50 81.39 65.77 64.96 445 90.74 78.84 65.75 85.99 79.03 72.31 88.68 93.81 83.62 93.09 88.68 57.41 79.37 82.69 91.66 90.37
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Vital Lake Walite Lake Walite Lake Walite Lake Walsh Lake Webb Lake Webb Lake Webb Lake Webb Lake White Quartz Lake White Lake White Lake Yana Lake Yanik Lake Zebulon Lake Zigzag Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.322 -113.951 -108.493 -114.281 -113.812 -113.812 -113.812 -113.812 -113.812 -113.812 -113.812 -113.812 -113.812 -113.812 -114.215 -114.215 -114.215 -114.215 -112.943 -111.38 -112.943 -111.38 -112.943 -111.376 -111.376 -111.376 -111.376 -111.3035	64.8159 66.2053 63.3649 62.5555 62.6708 62.6708 62.6708 62.601 62.8342 63.1343 63.4197 62.5829 62.8692 62.6693 64.9647 62.3617 62.8653 64.4877 63.2084 63.7158 62.4704 65.3664 64.9531 65.3664 65.0521 62.3407	22.95 2.46 4.48 0.7 10.37 1.49 7.62 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65 8.61 45.27 23.42 1.62 2.52 15.66 305.28 8.1 56.04 5.11	453 329 340 178 252 194 290 285 378 174 314 351 260 380 351 260 380 351 260 380 350 419 162 256 440 346 396 - 241 322 403 230 184 200	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 10.1 5.5 3.7 7.4 11.6 9.7 - 6 9.4 16.7 5.2 15.4 10.9	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000 46846 23074 1028 2226 14391 310925 8157 56562 4239	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56 93.81 83.62 93.09 88.68 57.41 79.37 82.69 91.66 90.37 90.85 74.76
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vet Lake Victory Lake Vitory Lake Vital Lake Waltie Lake Waltie Lake Waltie Lake Webb Lake Webb Lake Webb Lake Webb Lake White Quartz Lake White Quartz Lake White Guartz Lake White M Lake White Jake Windg Walke Windg Lake Vindg Lake Zigzag Lake Zigzag Lake Zinto Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.322 -113.321 -113.951 -108.493 -113.125 -113.812 -113.69 -106.802 -113.919 -114.215 -113.919 -114.215 -114.517 -109.928 -112.943 -111.38 -112.943 -111.38 -111.376 -111.376 -111.376 -111.376	64.8159 66.2053 63.3649 62.5555 62.6708 62.6708 62.601 62.8342 63.1343 63.4197 62.5829 62.8692 62.6983 64.9647 62.3653 64.9443 64.4877 63.2084 63.7158 62.4704 65.3664 65.0521 62.3407 64.1152	22.95 2.46 4.48 0.7 10.37 1.49 7.62 0.2 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65 8.61 45.27 23.42 1.62 2.52 15.66 305.28 8.1 56.04 5.11 52.42	453 329 340 178 252 194 290 285 378 174 314 351 260 380 350 419 162 256 440 346 396 - 241 322 403 230 184 200 242	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 11.6 10.1 5.5 3.7 7.4 11.6 9.7 - 6 9.4 16.7 5.2 15.4 10.9 27.9	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000 46846 23074 1028 2226 14391 310925 8157 56562 4239 48637	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 79.03 72.31 88.68 81.33 65.56 93.81 83.62 93.09 88.68 57.41 79.37 82.69 91.66 90.37 90.85 74.76 83.5
Ursula Lake Vaillant Lake Vaillant Lake Van Lake Vee Lake Victory Lake Vital Lake Vital Lake Walite Lake Walite Lake Walite Lake Walsh Lake Webb Lake Webb Lake Webb Lake Webb Lake White Quartz Lake White Lake White Lake Yana Lake Yanik Lake Zebulon Lake Zigzag Lake	-110.459 -114.51 -113.077 -114.35 -113.077 -114.35 -113.077 -114.35 -113.077 -114.438 -113.322 -113.951 -108.493 -114.281 -113.812 -113.812 -113.812 -113.812 -113.812 -113.812 -113.812 -113.812 -113.812 -113.812 -114.215 -114.215 -114.215 -114.215 -112.943 -111.38 -112.943 -111.38 -112.943 -111.376 -111.376 -111.376 -111.376 -111.3035	64.8159 66.2053 63.3649 62.5555 62.6708 62.6708 62.6708 62.601 62.8342 63.1343 63.4197 62.5829 62.8692 63.9602 62.6689 64.9647 62.3617 62.8653 64.9647 63.2084 63.7158 62.4704 65.3664 64.9531 65.3664 65.0521 62.3407	22.95 2.46 4.48 0.7 10.37 1.49 7.62 231.36 9.17 3.62 102.43 9.87 2.6 331.46 52.93 0.9 36.65 8.61 45.27 23.42 1.62 2.52 15.66 305.28 8.1 56.04 5.11	453 329 340 178 252 194 290 285 378 174 314 351 260 380 351 260 380 351 260 380 350 419 162 256 440 346 396 - 241 322 403 230 184 200	6.7 11.2 11.5 4.4 4.2 5.3 3.7 3.4 25.8 9.6 4.6 16.2 7.9 6.1 10.1 5.5 3.7 7.4 11.6 9.7 - 6 9.4 16.7 5.2 15.4 10.9	22803 2230 3780 393 9373 1092 5495 98 233258 8030 2650 97862 8665 2089 326891 47837 658 38202 8000 46846 23074 1028 2226 14391 310925 8157 56562 4239	89.41 81.71 75.89 50 81.39 65.77 64.96 45 90.74 78.84 65.75 85.99 70.03 72.31 88.68 81.33 65.56 93.81 83.62 93.09 88.68 57.41 79.37 82.69 91.66 90.37 90.85 74.76