

# An Estimate of Ice Wedge Volume for a High Arctic Polar Desert Environment, Fosheim Peninsula, Ellesmere Island

Claire Bernard-Grand'Maison<sup>1</sup> and Wayne Pollard<sup>2</sup>

<sup>1</sup>Department of Geography, Environment and Geomatics, University of Ottawa, Ottawa, K1N 6N5, Canada

<sup>2</sup>Department of Geography, McGill University, Montreal, H3A 0G4, Canada

## Supplementary Material

**Table S1.** Mean perimeter and area of polygons at each site for each delineation method

| Delineation method     | Mean perimeter (m) |        |       |        | Mean area (m <sup>2</sup> ) |        |        |         |
|------------------------|--------------------|--------|-------|--------|-----------------------------|--------|--------|---------|
|                        | EL1                | EL2    | EL3   | AH1    | EL1                         | EL2    | EL3    | AH1     |
| Manual                 | 62.11              | 100.67 | 47.82 | 243.48 | 255.53                      | 624.60 | 149.04 | 2709.50 |
| Thiessen Polygons      | 62.45              | 103.77 | 48.39 | 214.95 | 260.82                      | 697.06 | 155.67 | 3130.34 |
| Watershed Segmentation | 61.28              | 101.58 | 48.24 | 211.27 | 256.26                      | 627.63 | 149.49 | 2692.54 |

**Table S2.** Comparison of mean distance between centre points for all delineation methods at each site

| Delineation method               | Mean Distance (m) |      |      |      |
|----------------------------------|-------------------|------|------|------|
|                                  | EL1               | EL2  | EL3  | AH1  |
| Manual / Thiessen approximated   | 0.85              | 1.73 | 0.79 | 1.74 |
| Manual / Thiessen                | 1.52              | 2.65 | 1.34 | 3.88 |
| Thiessen / Thiessen approximated | 1.64              | 2.63 | 1.32 | 3.95 |
| Manual / Watershed Segmentation  | 0.74              | 1.71 | 2.15 | 2.25 |