**Daily EALCO Land Water Content Change Data (2002-2016)**

The data is integrated daily total water content Change (TWCAd), obtained from the EALCO model outputs (5-km resolution Canada LCC grid):

1. SWE: snow water equivalent (mm H2O)
2. SWC1: layer 0 – 10 cm soil water content (mm H2O)
3. SWC2: layer 10 – 20 cm soil water content (mm H2O)
4. SWC3: layer 20 – 40 cm soil water content (mm H2O)
5. SWC4: layer 40 – 80 cm soil water content (mm H2O)
6. SWC5: layer 80 – 140 cm soil water content (mm H2O)
7. SWC6: layer 140 – 240 cm soil water content (mm H2O)
8. SWC7: layer 240 – 400 cm soil water content (mm H2O)

The TWCd is calculated by using the following equation:

Where *SWCi* and *Depthi* are the *ith* layer soil water content and soil depth separately

Baseline: mean of Apr. 2002 to Dec. 2016.

Unit (Equivalent Water Thickness): mm.

Map projection: CanLCC

Grid size: 5-km

Image size: 1140 (columns) by 960 (rows)

Data Type: signed Int16

Nodata: -32760

*The parameters of the Lambert Conformal Conic (LCC) projection and Earth ellipsoid model used for output imagery over Canada*

|  |  |
| --- | --- |
| **Parameter** | **Value** |
| *Earth ellipsoid* | GRS 1980 |
| Major semi-axis, a | 6378137 [m] |
| First eccentricity | 0.00669438002290 |
| Ellipsoid flattening, f | 0.00335281068118 |
| *Projection* | LCC E008 |
| 1st parallel | 49.00 [degree] |
| 2nd parallel | 77.00 [degree] |
| Central meridian | –95.00 [degree] |
| Upper left corner | (–2600000.0 E [m]; 10500000.0 N [m]) |
| Lower right corner | (3100000.0 E [m]; 5700000.0 N [m]) |
| Easting | 0 |
| Northing | 0 |
| Gridbox size, x | 5000 [m] |
| Gridbox size, y | 5000 [m] |
| Number of pixels along x | 1140 |
| Number of pixel, y | 960 |