

An Approach to Sharing World Environmental Data & Information

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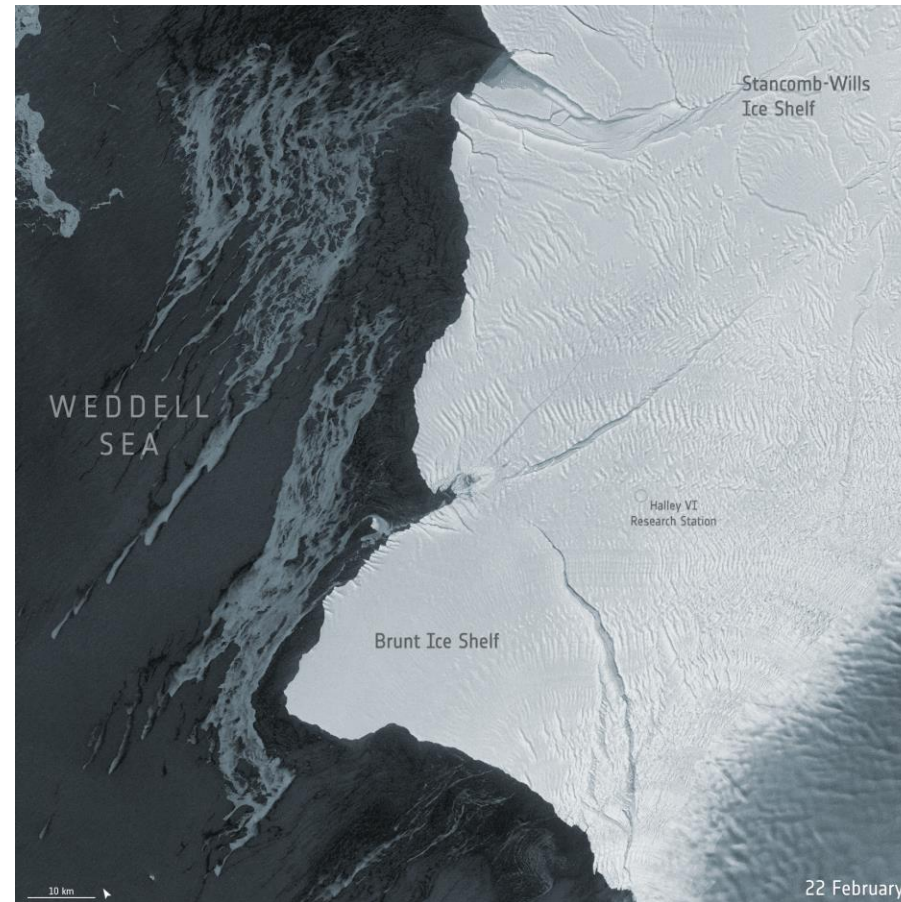
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Environmental Impact

Melting Ice

- Antarctic, Greenland, Arctic
- Pictures and data from credible authorities
 - federal government, UN, International NGOs, news
- Feel bad, but everything local looks normal
- No apparent local effect



Should we be concerned?

- Some of us are concerned
- What about the general population?
- How do we communicate concern for the common good?

We are local

Impact

- Most affected by what happens to house/property neighbourhood, district, town/city
- Further from home less impact
- Impact of local actions on local environment
- Cumulative local effects have global impact



Local Knowledge

- People locally focused
- Comfortable about knowledge of our locale
- Yet little knowledge
 - Observation
- A need for local data & knowledge

Need to acquire local data/knowledge

Local data

- Is there local data?
 - Government, NGOs, citizen science, businesses
- Unusable, even though open
 - Shelves, reports, PCs
 - Retirement, re-assigned
 - Data “disappears”
- Need - a local data “grocery store”
 - One-start shopping
 - Combine items to create value



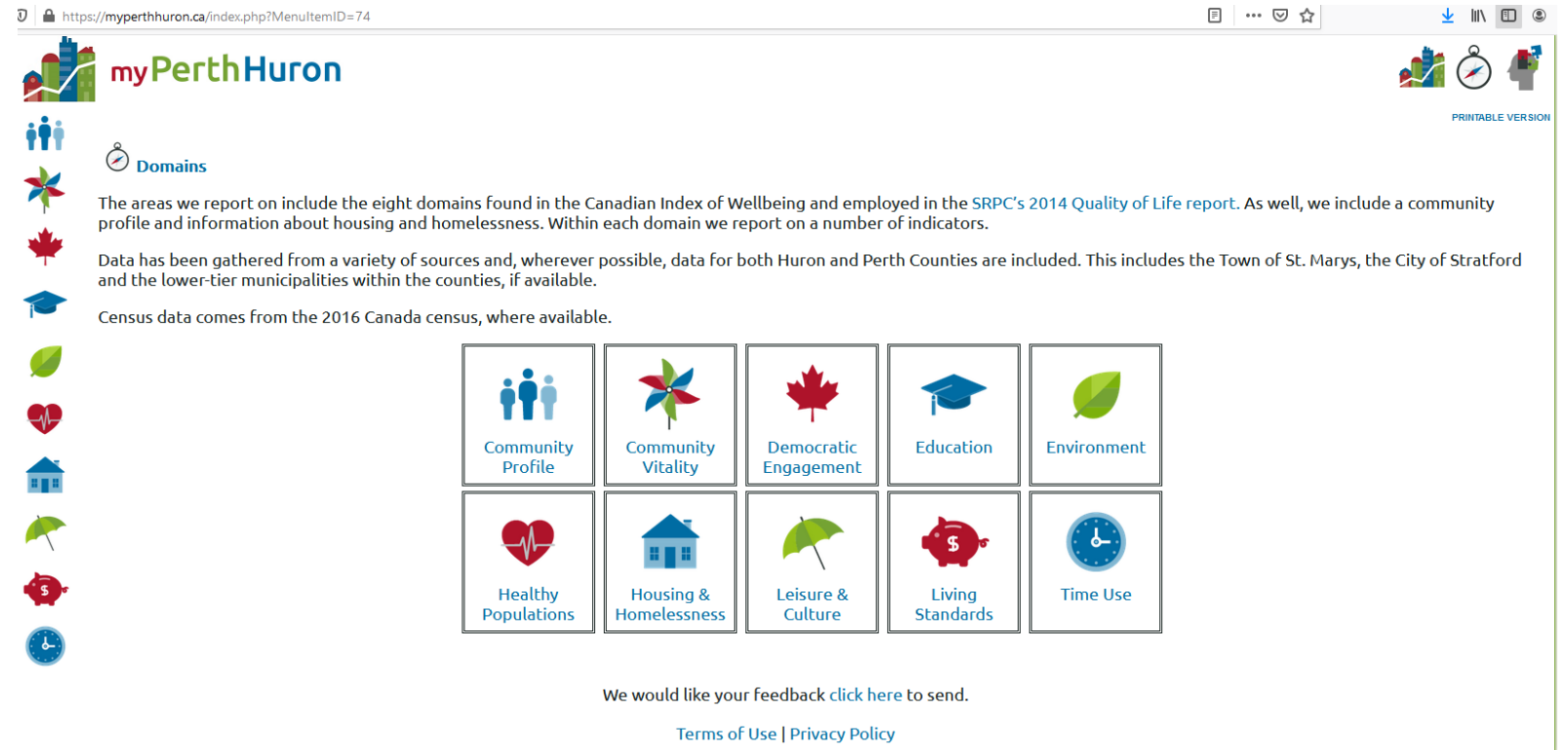
Operating on data

- Have spent about 30 years
 - Locating/aggregating data
 - Combining data
 - Extracting value from data combinations
- Three examples
 - myPerthHuron.ca
 - FWIS (comap.ca/fwis/)
 - Dreamcatcher
- Data sharing agreements

myPerthHuron.ca (2013)

Community Data

- Southwestern Ontario
- Community functioning
- Education, housing, environment
- Environment
 - Consumption
 - Recreation
- Multiple data partners
 - They get IT!!!
- Community voice
 - Power



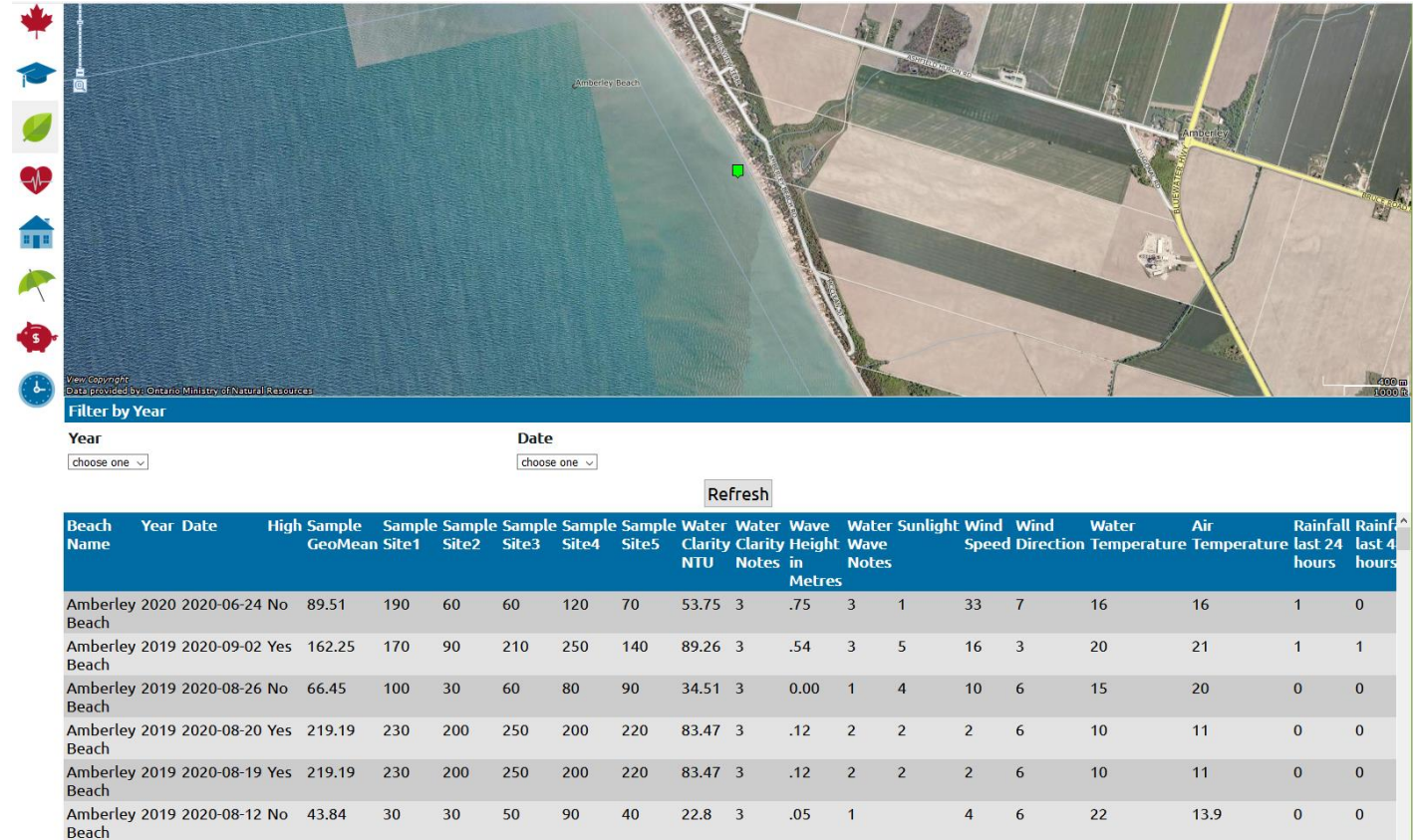
The screenshot shows the website's interface with the following elements:

- Header:** "myPerthHuron" logo and a "PRINTABLE VERSION" link.
- Domains Section:**
 - Domains:** A heading with a compass icon.
 - Description:** "The areas we report on include the eight domains found in the Canadian Index of Wellbeing and employed in the SRPC's 2014 Quality of Life report. As well, we include a community profile and information about housing and homelessness. Within each domain we report on a number of indicators."
 - Data Sources:** "Data has been gathered from a variety of sources and, wherever possible, data for both Huron and Perth Counties are included. This includes the Town of St. Marys, the City of Stratford and the lower-tier municipalities within the counties, if available."
 - Census Data:** "Census data comes from the 2016 Canada census, where available."
- Domain Grid:** A 2x5 grid of icons representing the domains:
 - Community Profile (people icon)
 - Community Vitality (flower icon)
 - Democratic Engagement (maple leaf icon)
 - Education (graduation cap icon)
 - Environment (leaf icon)
 - Healthy Populations (heart with pulse icon)
 - Housing & Homelessness (house icon)
 - Leisure & Culture (umbrella icon)
 - Living Standards (piggy bank icon)
 - Time Use (clock icon)
- Footer:** "We would like your feedback [click here](#) to send." and "Terms of Use | Privacy Policy".

myPerthHuron.ca

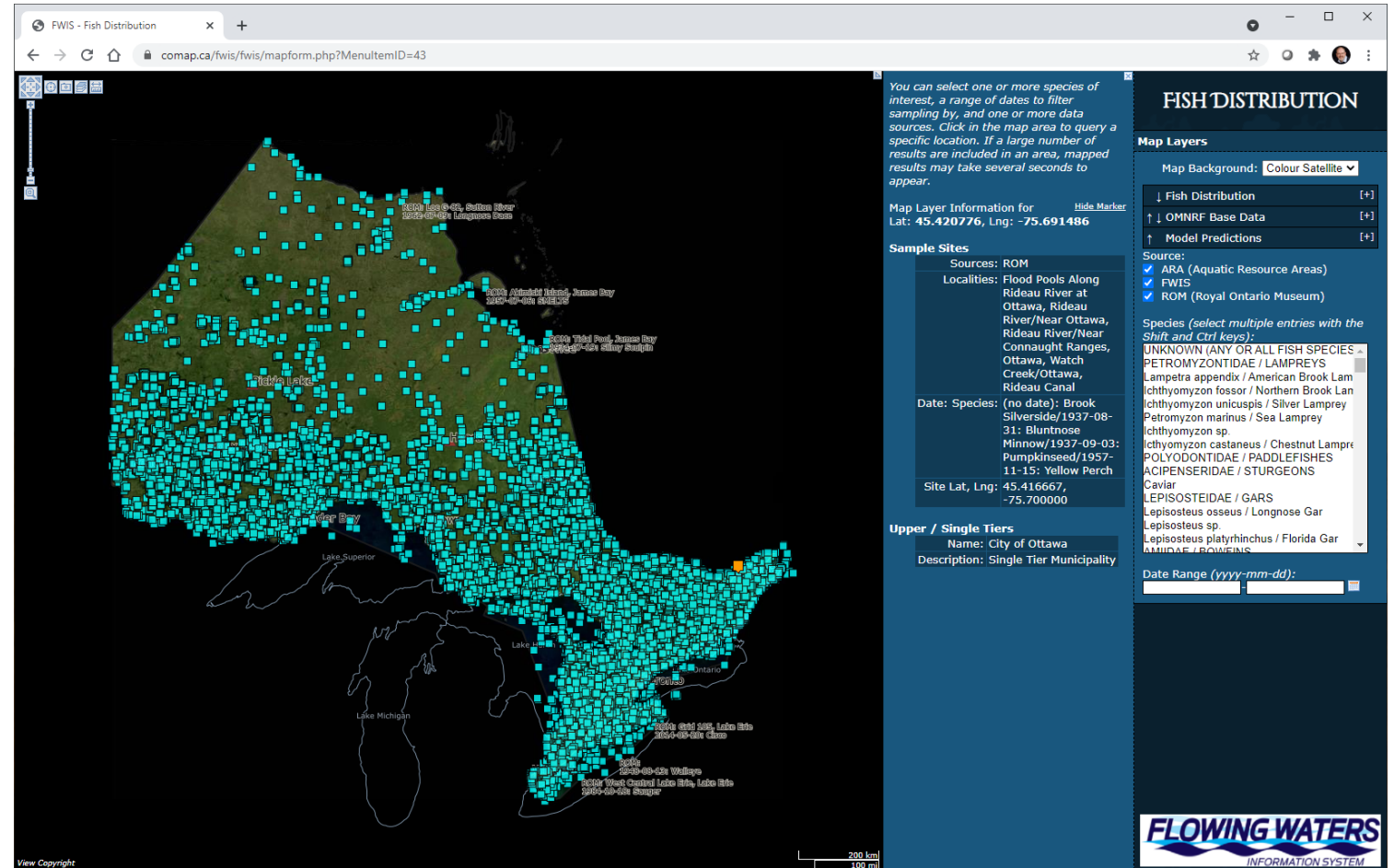
Environment – recreation

- E-coli measurements
 - Suitable for swimming
- Obtained from public health
- Funded by Ontario Poverty Reduction Fund, United Way



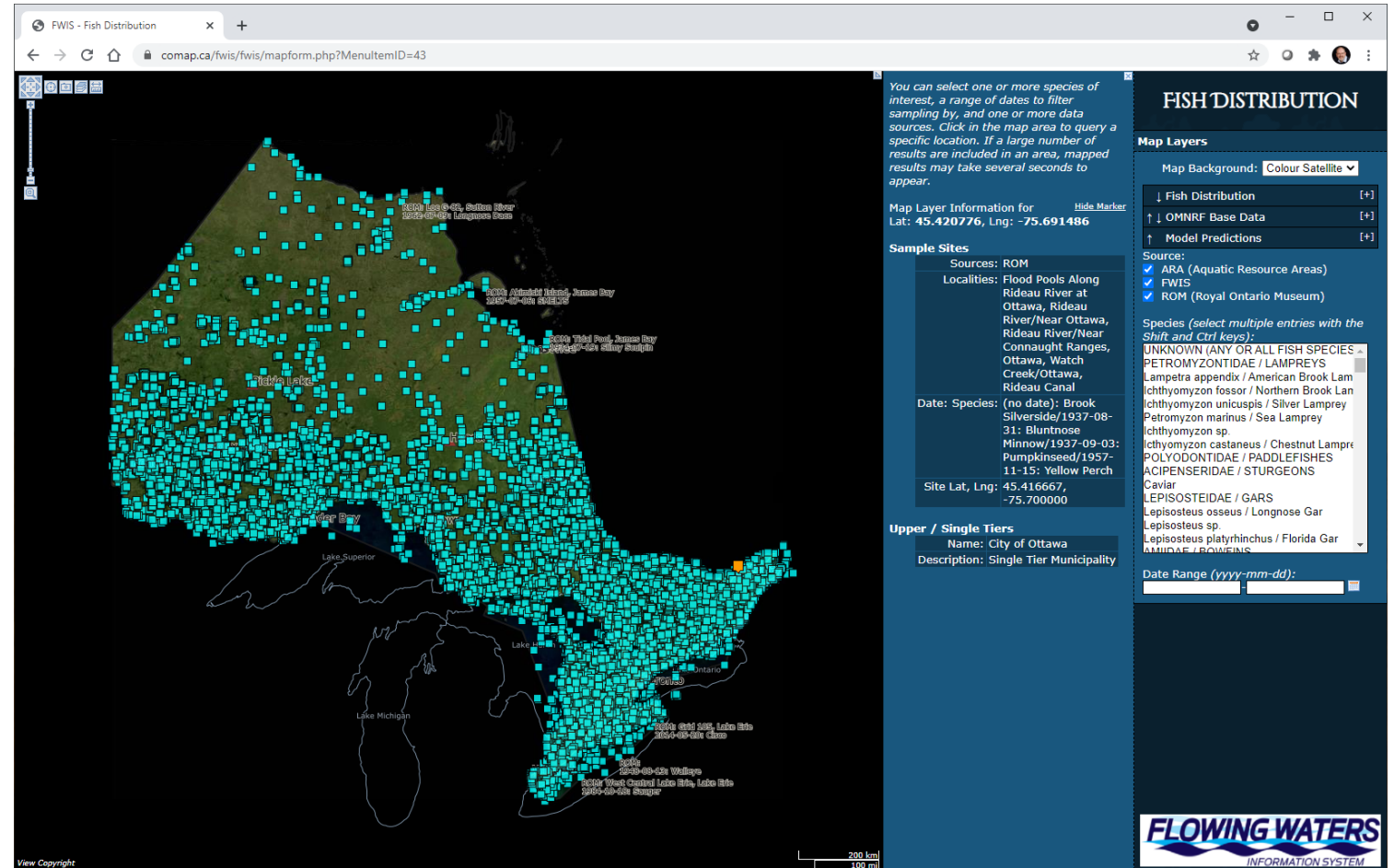
Flowing Waters Information System (2008)

- Ontario Biological & Geomorphology data
- Multiple sources
- 50 to 100 years of data
 - > 60,000 sites
 - > 300,000 fish catches
 - 1882 onward
- Multiple sources/partners
 - MNRF, ROM, DFO most Ontario CAs
 - Canadian Universities
- Constantly expanding sources & data types



Flowing Waters Information System (FWIS)

- Collected using OSAP
 - Defines importance of data
- Extensive diagnostics
 - Geography
 - Units
- Multiple indicators
 - Stability
 - Temperature
 - Benthic goo (proxies)
- Extensive metadata
 - Who, when, why
- Funded by CANARIE, MNRF



Indigenous Knowledge – Dreamcatcher (2004)

Secure Database of Indigenous Knowledge

- Traditional lands, History, Culture
- Areas of sustenance, Archeology
- Land use, Ecological knowledge
- Spiritual use, Important plants

Record of

- Indigenous “documents”
- Highly geographic
- Peter Jones Diary

Mississaugas of the New Credit FN

Northern Ontario First Nations

Funded by SSHRC, MNCFN

The screenshot shows the Dreamcatcher Geomatics MNCFN web application. The interface includes a navigation menu with options like Home, Community Mapsets, Project Mapsets, My Network, Forums, Groups, Search Network, and Collaboration. The main content area features a list of entries with columns for Title, Description, View, Group, Added By, and Added. A detailed view of 'The Death of Peter Jones' is shown, including a short narrative, a photo of Peter Jones, and a map of the location. The map is overlaid on a satellite image and includes a geocode address field and a zoom to coordinates button.

Title	Description	View	Group	Added By	Added
The Death of Peter Jones	Narrative of the death of Peter Jones	[Icon]	MNCFN Schools	beatlemac	March 5, 2011
Echo Villa Plaque	Rev. Peter Jones 1802-1836	[Icon]	MNCFN Schools	beatlemac	March 5, 2011
Image of Peter Jones	Peter Jones	[Icon]	MNCFN Schools	beatlemac	February 28, 2011
Image of Echo villa	Echo Villa	[Icon]	MNCFN Schools	beatlemac	February 28, 2011
William Sutton	Image of William Sutton	[Icon]	MNCFN Schools	beatlemac	February 28, 2011
Provincial Plaque Commemorates Peter Jones	A plaque commemorating the Reverend Peter Jones was erected September 30, 1961	[Icon]	MNCFN Schools	beatlemac	February 28, 2011
Letter from Eliza Jones to Catherine Sutton2	Letter concerning Peter Jones	[Icon]	MNCFN Schools	beatlemac	February 28, 2011
Letter from Eliza Jones to Catherine Sutton	Letter concerning Peter Jones	[Icon]	MNCFN Schools	beatlemac	February 28, 2011
Eliza Jones' Echo Villa2	Echo Villa was 101 years old when Sam and Mabel Wyatt and their young children moved into it in 1932.	[Icon]	MNCFN Schools	beatlemac	February 28, 2011
Eliza Jones' Echo Villa2	Echo Villa was 101 years old when Sam and Mabel Wyatt and their young	[Icon]	MNCFN Schools	beatlemac	February 28, 2011

Data is necessary but boring

Understanding

- Data needed for understanding, but dull
- Just watch the COVID press conferences
- Data tells us
 - Where have we been?
 - What are the trends?
 - What is the likely future (models)



Living Data

- Bring data to life
- Use stories - advertising
- Bringing history, cultural and environmental stories to life
- First Nations use stories
- myPerthHuron.ca
- Created story-telling tools, Building Stories, First Story, Driftscape

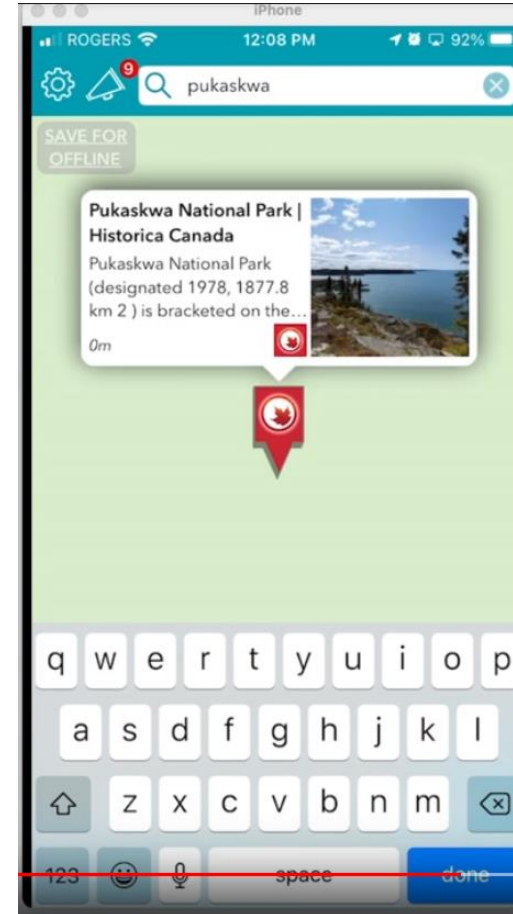
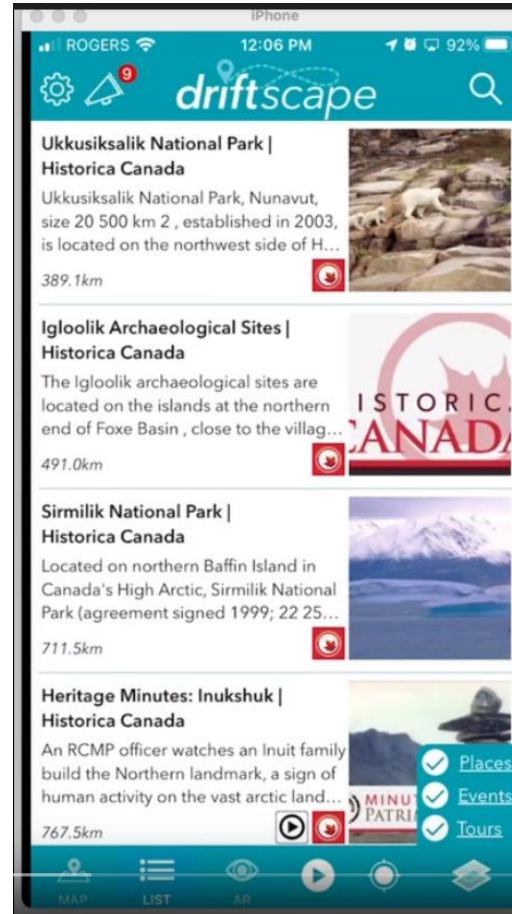
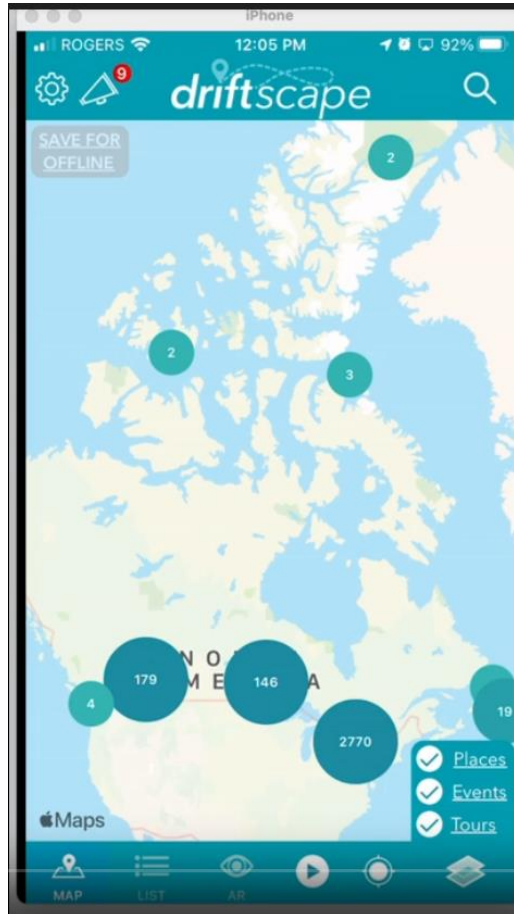
Driftscape – Stories in Your Pocket

- Mobile phones common (85%)
- Driftscape Mobile App for telling local stories about
 - Culture, history, environment
- On the move
 - Foot, bicycle, canoe, car
 - Notification (proximity)
- On the couch



- Single sites or tours
 - Multimedia
 - Text, graphics, audio, video
- Currently focused on
 - Community stories
- Content easily added or changed by supplier
- [Demonstration](#)

A Brief Tour (1)



Map View

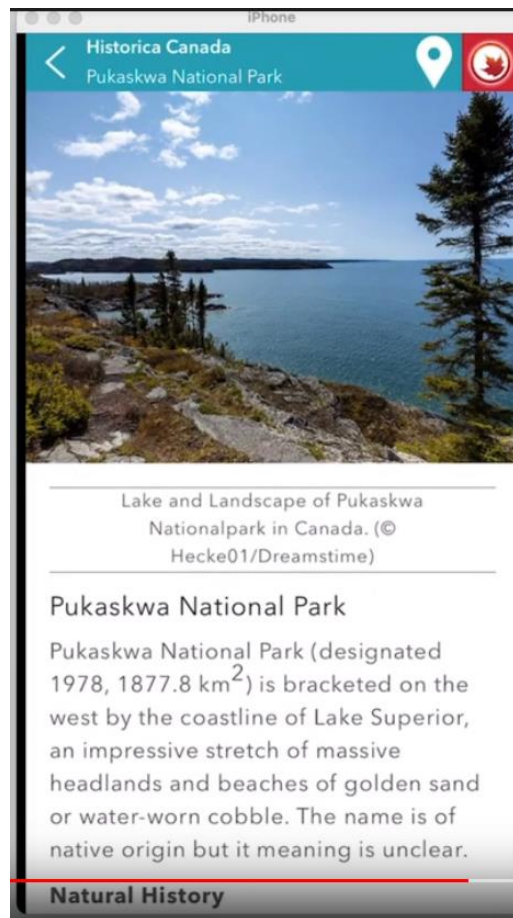
- 5,000 sites
- Across Canada

List View

- Proximity order

Vignette of selected site

A Brief Tour (2)



Expanded View

- Location/site
- Natural history
- Human history
- Facilities

Tour

- Indigenous
 - Mississauga – lower Don
 - Audio, Video
- Location aware
- Scavenger hunt

Environmental Stories

Environmental Stewardship

- Local stories about
 - Appreciation
 - Protection
 - Rehabilitation
 - Change over time
- Engage the community
 - Eco-tourism
 - Indigenous
- Socialize the environment



Focus on

- Local natural sites
- Wildlife
- Trails & tours
 - Bruce
 - National Trail System
 - Community-based
- Offline – out of cell range

What's Next?

- Create more in-depth local societal/environmental stories
 - Engage story tellers (advertising)
- Data grocery store
 - Combine ingredients (data, language) for new dishes (information)
- Artificial Intelligence (AI)
 - Process data and documents
 - Detect patterns, relationships
- Extract value from data



Thank you

Questions????

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Software and Data Availability

- Access free to most
- Perth Huron data
 - <https://myperthhuron.ca/>
- Flowing Waters Information Systems (FWIS)
 - <http://www.comap.ca/fwis/> Click on Sign up now – tracking use for errors
- Dreamcatcher (iAtlas) – secure
- Driftscape (ad-free)
 - Apple iPhone – App Store, Android Phone – Play Store
 - Just type Driftscape

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