

Taking Waste Payments without Cash or Internet Connection - A Case Study

SWANA Canadian Waste Symposium - April 6, 2022

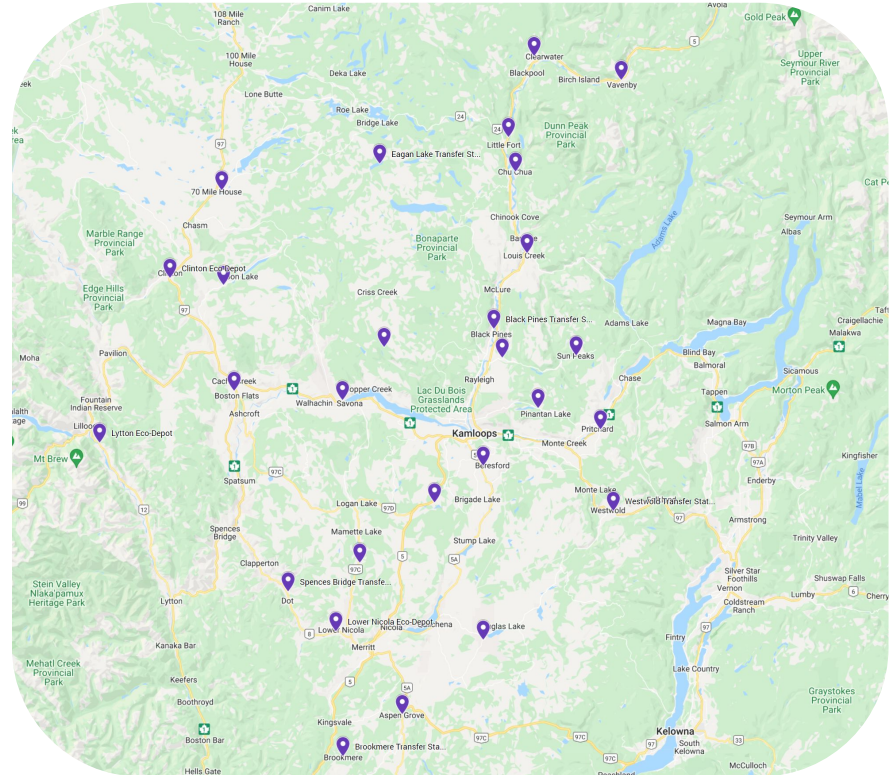


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STRONG
DATA AUTOMATION

About the TNRD

- 11 Municipalities
- 10 Electoral areas
- 27 waste facilities
 - 9 Scaled Sites
 - 18 Unscaled
- Connected and Unconnected



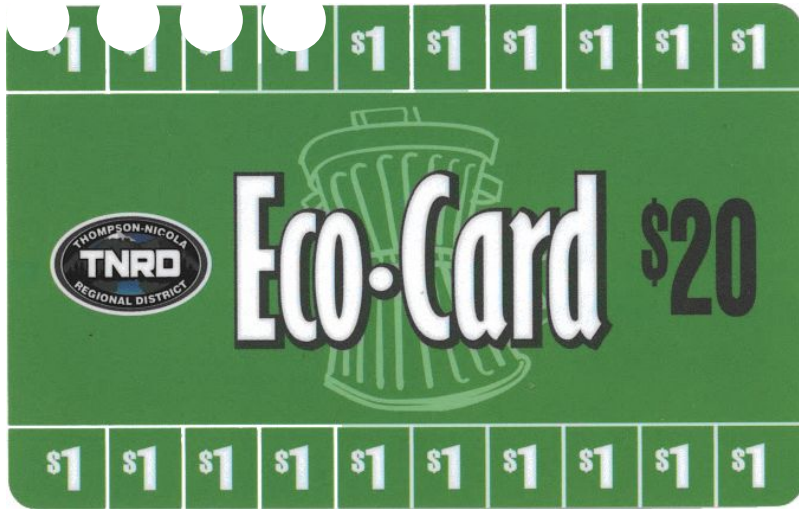
Previous Methods

Recording Loads and Taking Payments

- Scaled Sites (Eco-Depot)
 - No Cash
 - Self Haulers:
 - Credit / Debit Cards
 - Pre-Paid Punch Eco-Cards
 - Charge accounts
- Un-Scaled Sites (Transfer Stations)
 - No Cash
 - Self Haulers
 - Paper receipts
 - Pre-Paid Punch Eco-Card
 - Charge accounts
 - Paper slips courier to the office monthly

Punch Eco-Cards

Pre-purchased Cards for Payment On-site

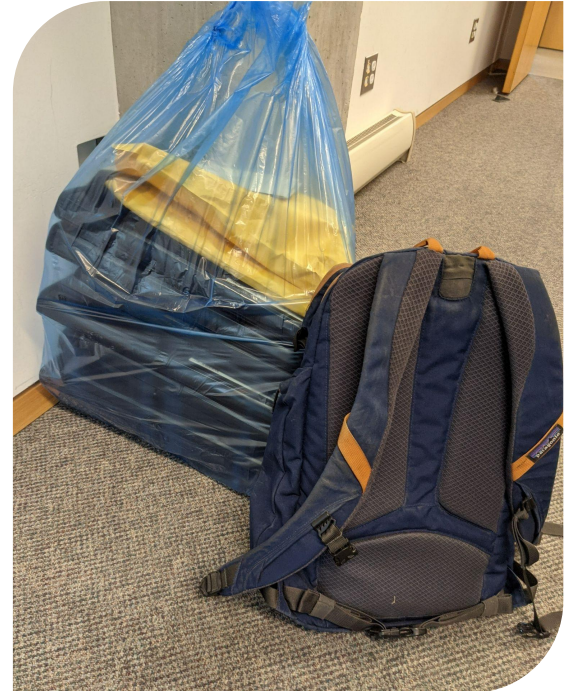


- Simple and robust solution
- Distribution of the cards
 - Reconciling the stock
 - Dealing with 3rd party distributors
 - Loss of revenue to run the system

Paper Based Process

Disadvantages Transfer Station Load Recording

- Double entry of data
- Delayed data due to transportation of documentation
- Sometimes the data is unreliable
- Difficult to audit



New Method

Reloadable Eco-Card

- To add money to your Eco-Card or check your account status visit app.tnrd.ca and log into your portal
- If you have not received an invitation link contact TNRD at (250) 377-2596
- For lost or missing Eco-Cards call TNRD at (250) 377-2596



THOMPSON-NICOLA
REGIONAL DISTRICT

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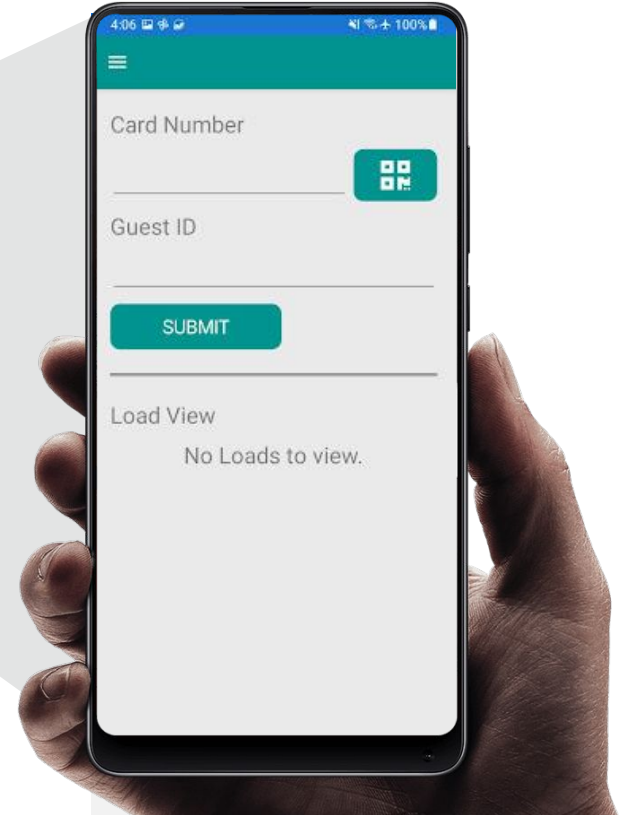
- Reloadable Eco Cards
 - Printed unique QR codes
 - No value is on the card itself
 - Lost cards can be deactivated and replaced by TNRD
- Addings Funds
 - At any Eco-Depot
 - Main office (in person or via mail)
 - Personal Portal



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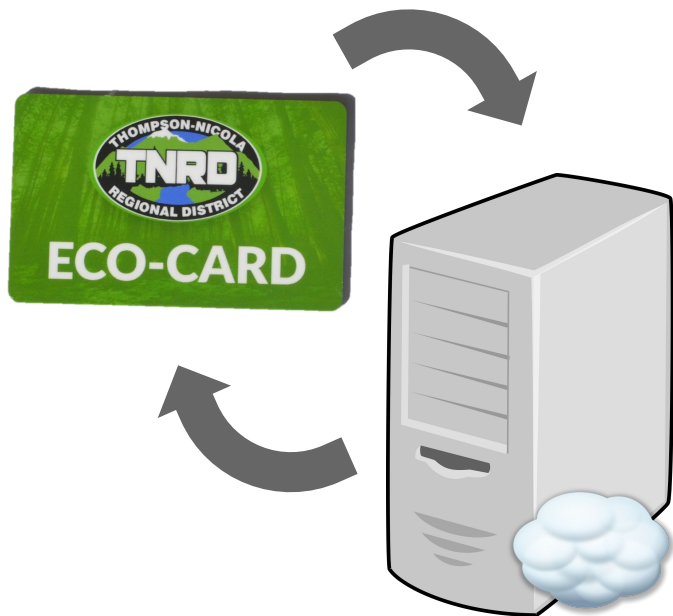
New Method

Web and Mobile Software



New Method

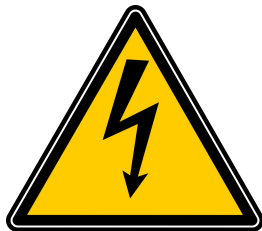
Keeping Everything in Sync



No Wifi



No Cellular Signal



No electricity for a
desktop PC or
charging a laptop

New Method

The Attendants Workflow



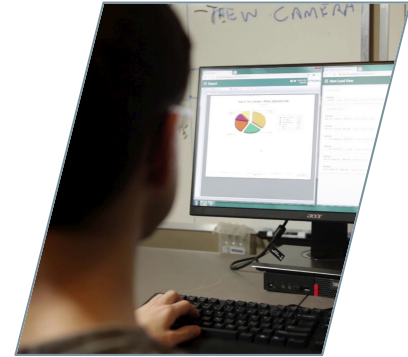
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The attendant records each load on site. The data is stored on the device.



2

The device is periodically brought within WiFi or cellular service for syncing. (Not necessarily every day)



3

All loads are immediately combined with data from other sites. This can be accessed from any connected device

New Method

Rollout to Customers

- Slow rollout - talking with customers at eco-depots and transfer stations.
- Will do a region update later this year.
- Customers like the online portal.

RE-LOADABLE ECO-CARD



**THOMPSON-NICOLA
TNRD
REGIONAL DISTRICT**

**A MORE FLEXIBLE
WAY TO PAY
DISPOSAL FEES**

The TNRD is replacing the punch-style Eco-Cards with a Re-Loadable Eco-Card. Eco-Cards can be loaded with funds at home or on the go using our new customer portal website.

- Flexible top-up options;
 - Do it yourself via website
 - OR we can do it for you, no need for a computer
- Multiple users can share the same account
- New Eco-Cards save program costs and eliminate waste from punched cards being landfilled

**Eco-Card not required for payment at Eco-Depots with Credit/Debit machines*



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Mid Rollout Remarks



- Customers like being able to load their card themselves.
- Some challenges with reluctant demographics
- Attendants are finding the app easy to use.
- Already benefiting from reduced administration and cost savings.
- TNRD serves many electoral areas resulting in a diverse set of requirements.
- Tight communication and a slow rollout has been critical
- Continuing Development

Thank you



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