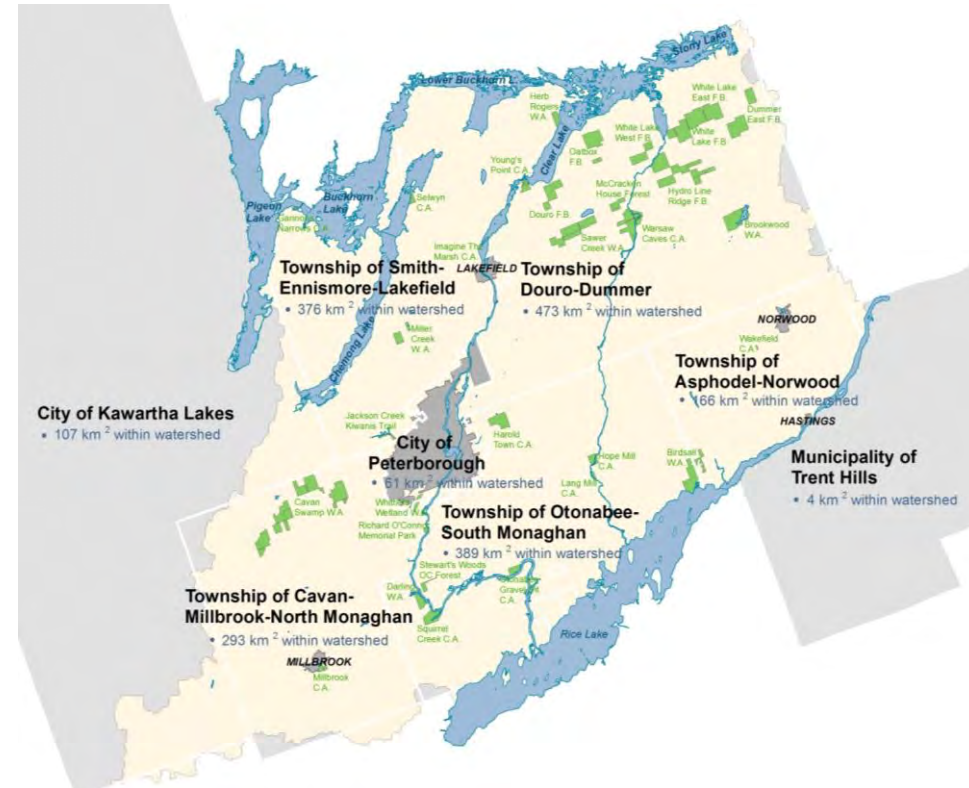


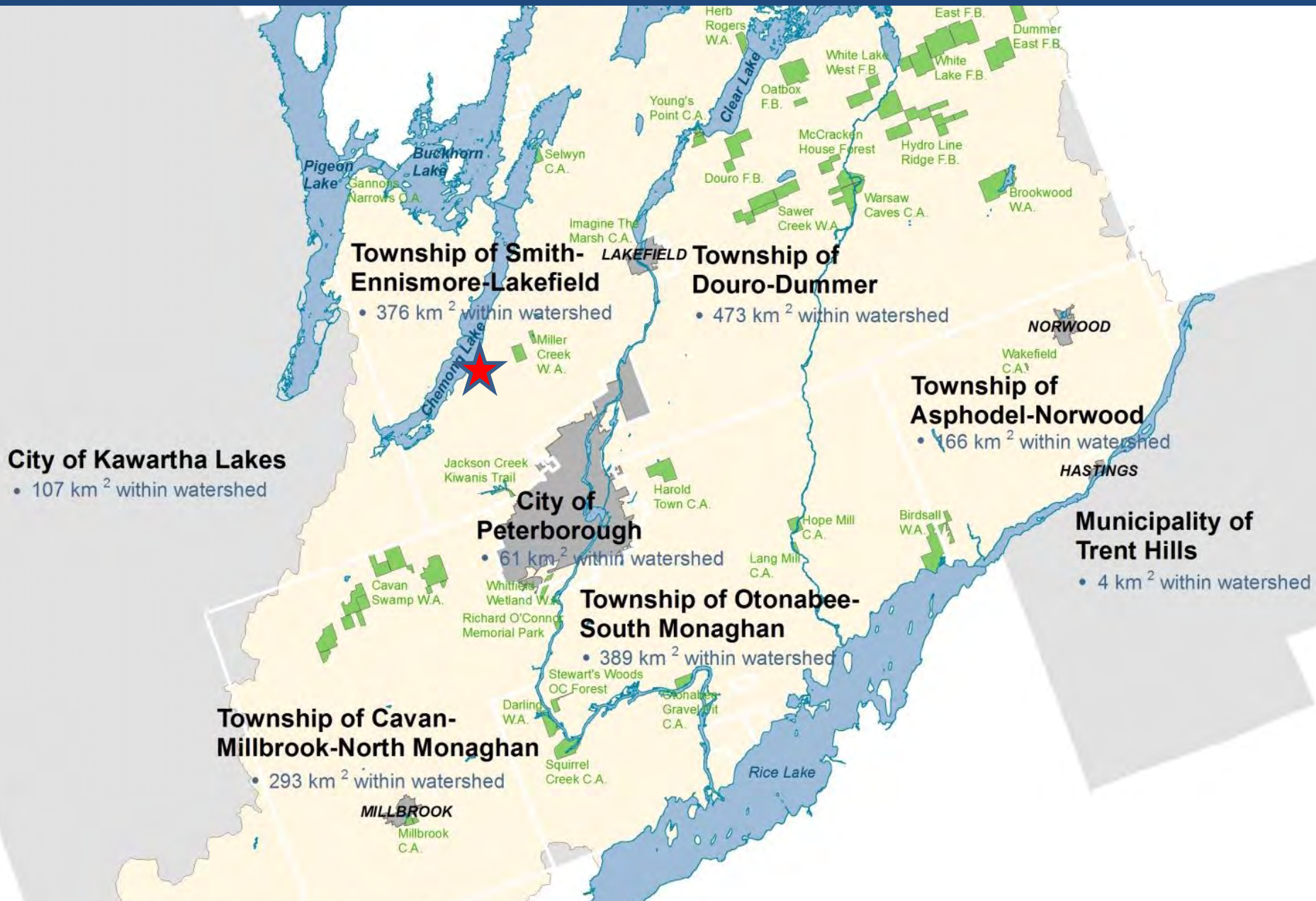
Using the Kawarthas Naturally Connected Natural Heritage System to Target Stewardship Projects on the Oak Ridges Moraine



*Kawarthas Naturally Connected
Natural Heritage System Launch
October 19, 2016*

- Otonabee Conservation is one of 36 Conservation Authorities across the Province
- Established in 1959
- Watershed jurisdiction of 1951 km²
- Partner in the KNC NHS Project since its inception



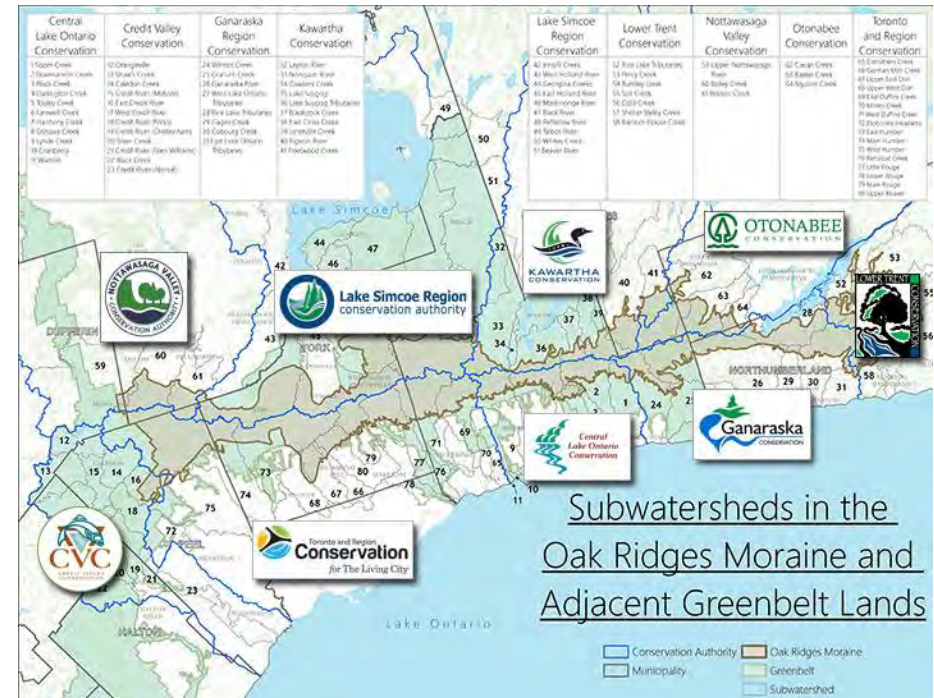


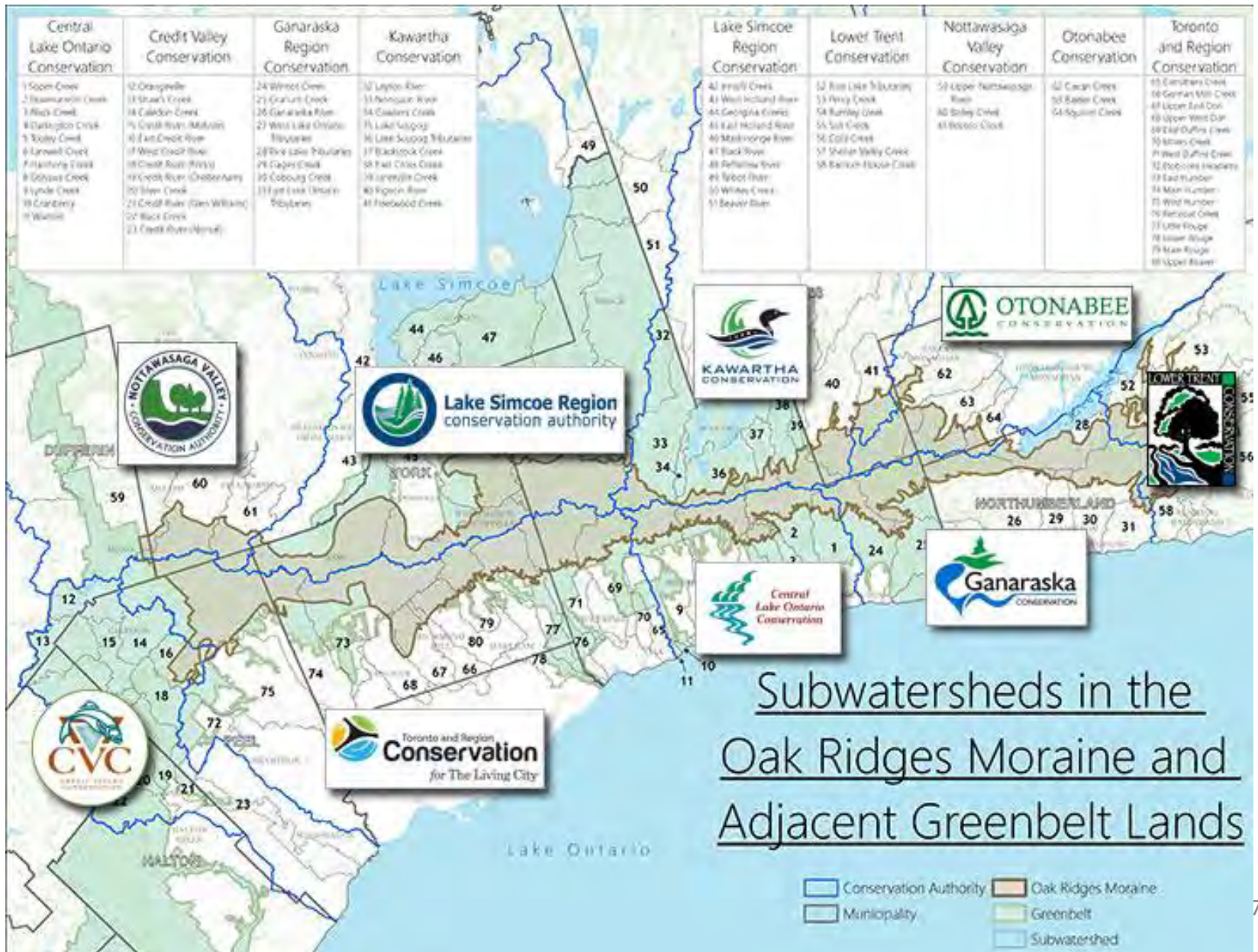
- 160 km long significant natural feature in Southern Ontario
- Sustains the health of many watersheds and diversity of species that live within them
- Contributes to groundwater recharge for deep aquifers which are drinking water sources and provide groundwater to over 65 watercourses flowing north and south into Georgian Bay, Lakes Simcoe, Scugog, Rice and Ontario.





- 9 Conservation Authorities across the Oak Ridges Moraine to advocate for and protect the moraine.
- Formed in response to the need for a comprehensive policy, planning and management approach geared to sustaining the health of the entire Oak Ridges Moraine.



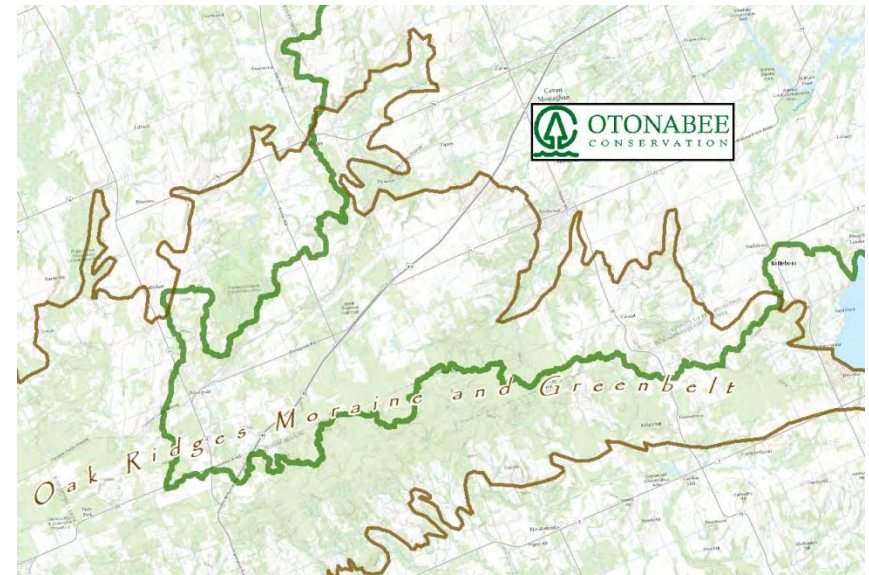


Subwatersheds in the
Oak Ridges Moraine and
Adjacent Greenbelt Lands

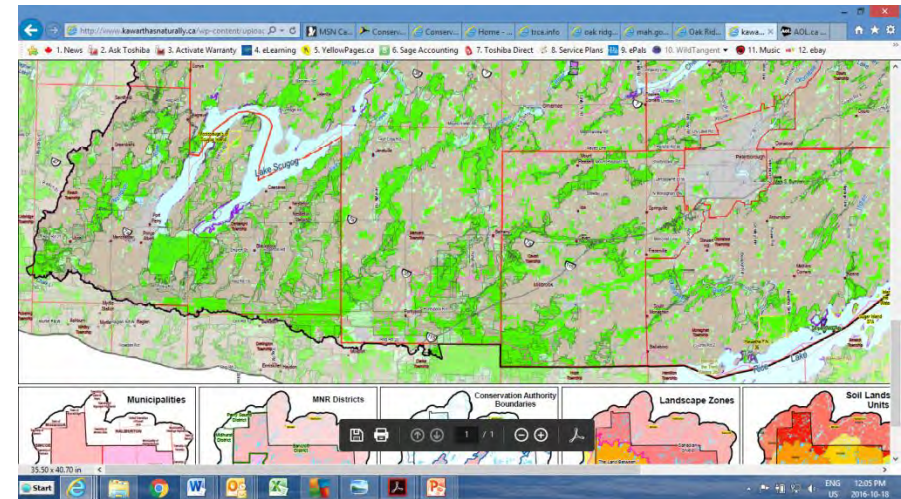
- ORM Report Card was published as a science based evaluation to inform the 2015 review of the ORM CP and Act.
- Confirmed further action needed to achieve goals and objectives of restoring and enhancing the environmental health of the lands included in the ORMCP and Greenbelt.

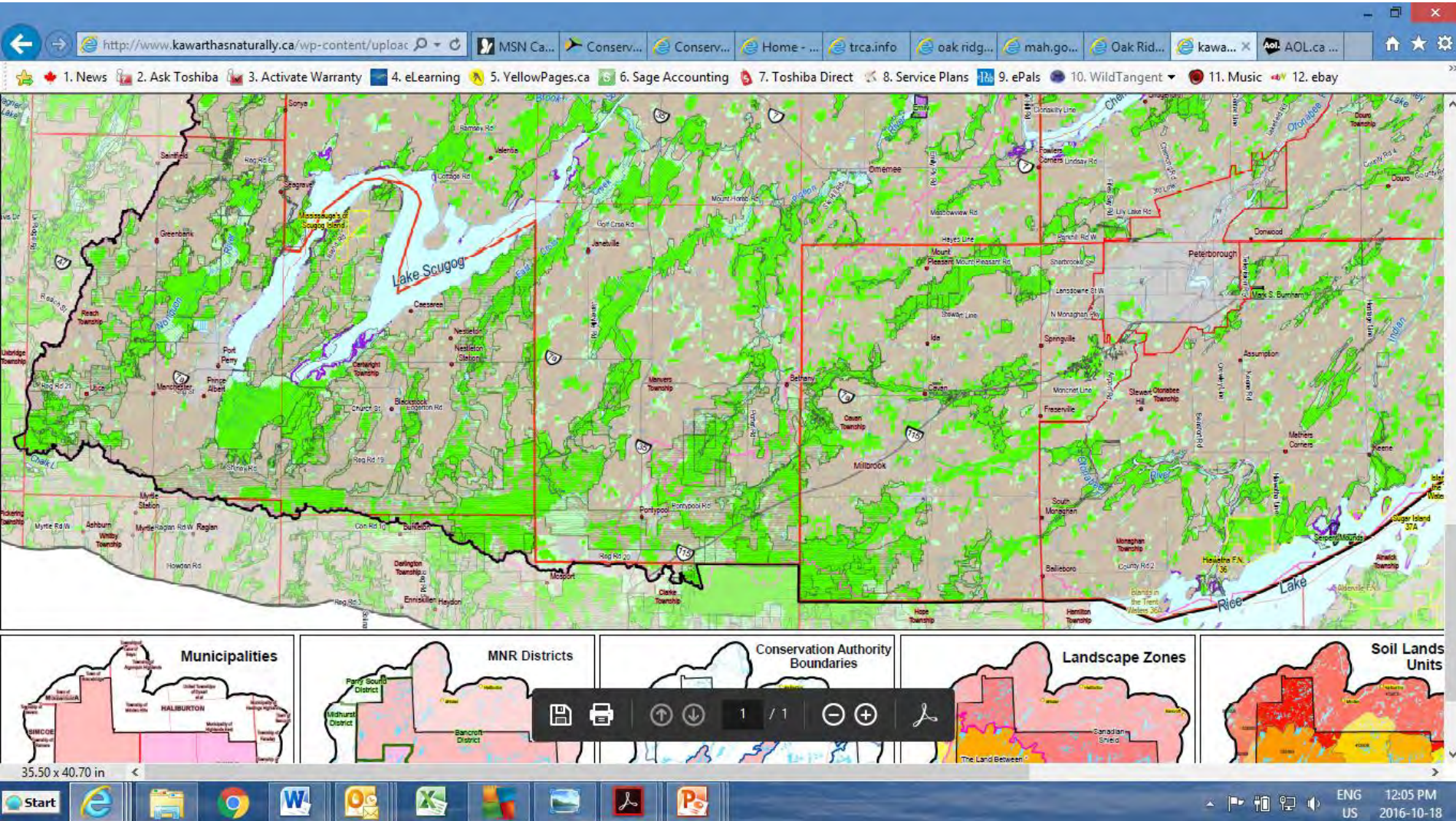


- Action Plan Project developed to identify a suite of high impact, high priority programs and projects to restore and enhance the environmental health of watersheds in the ORM/Greenbelt and funding approved in 2015

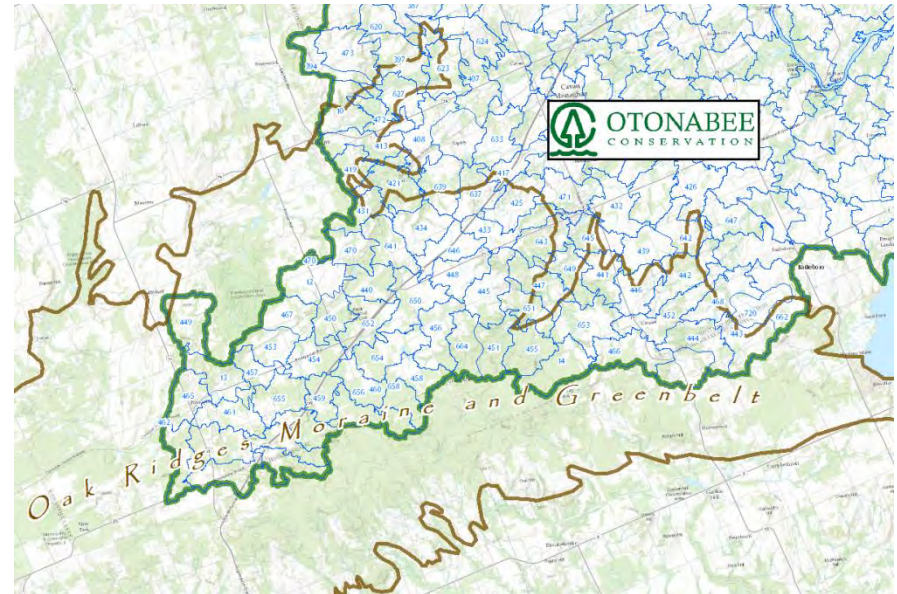


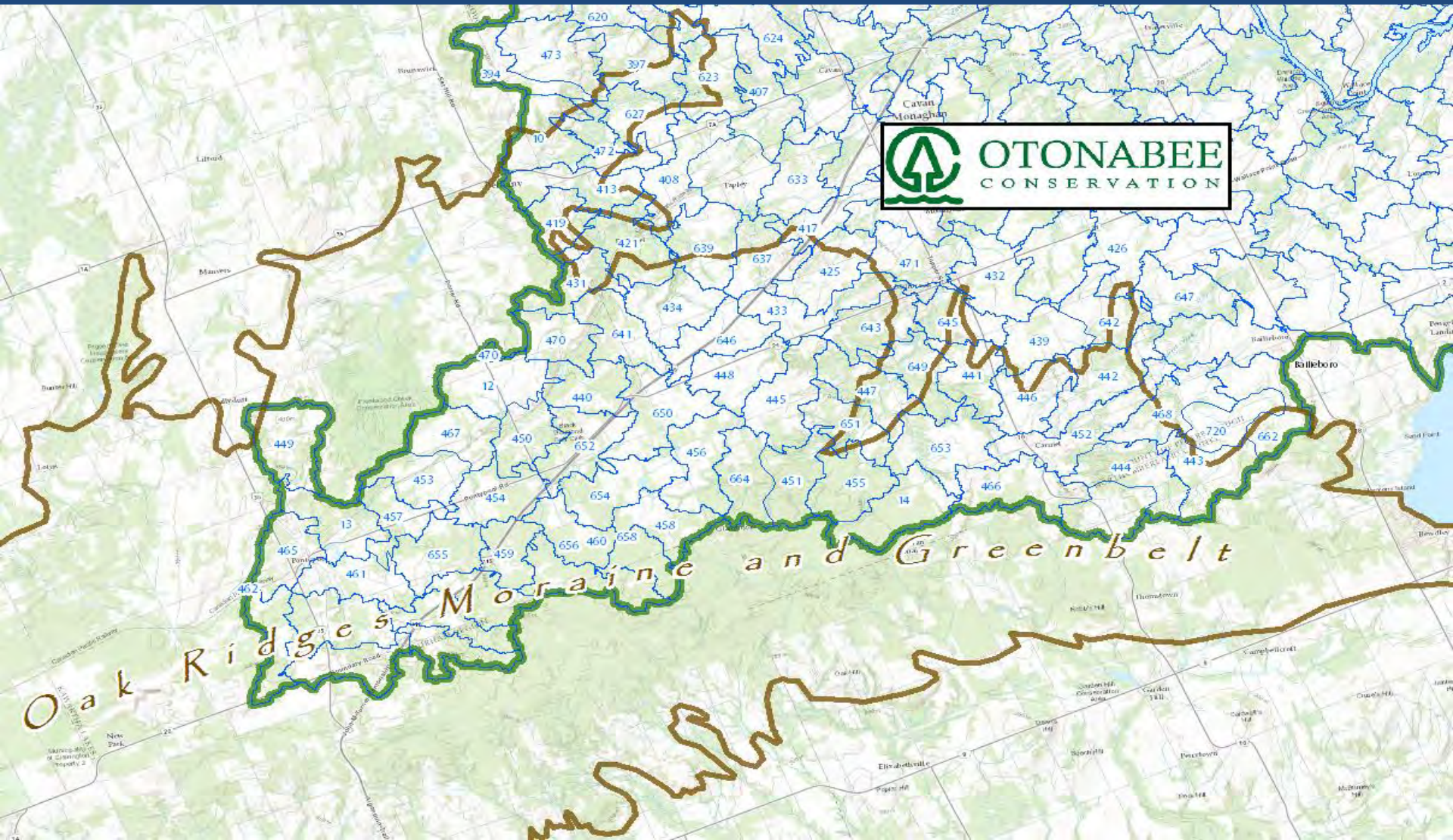
- ORCA used a GIS analyst process to target the priority areas for projects for the Action Plan Project, using the Kawarthas Naturally Connected Natural Heritage System Data



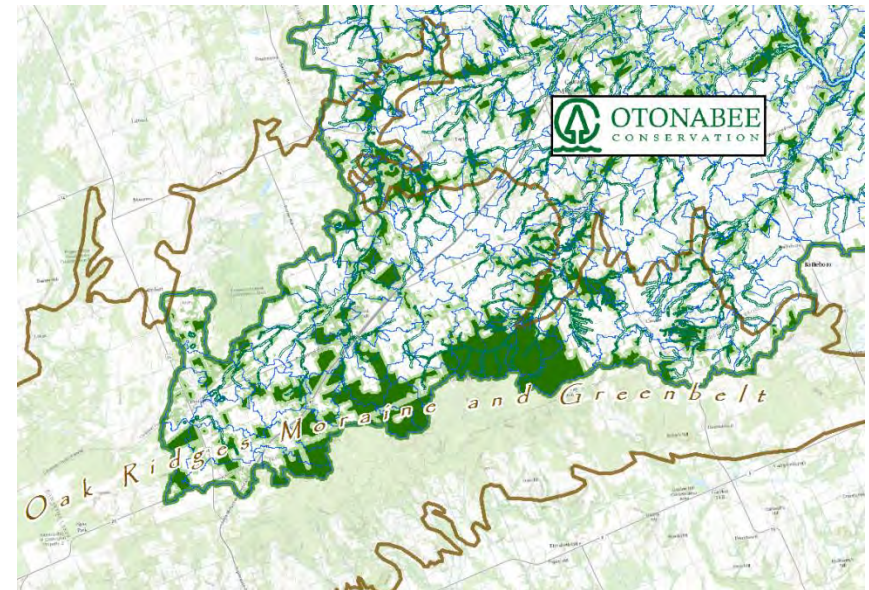


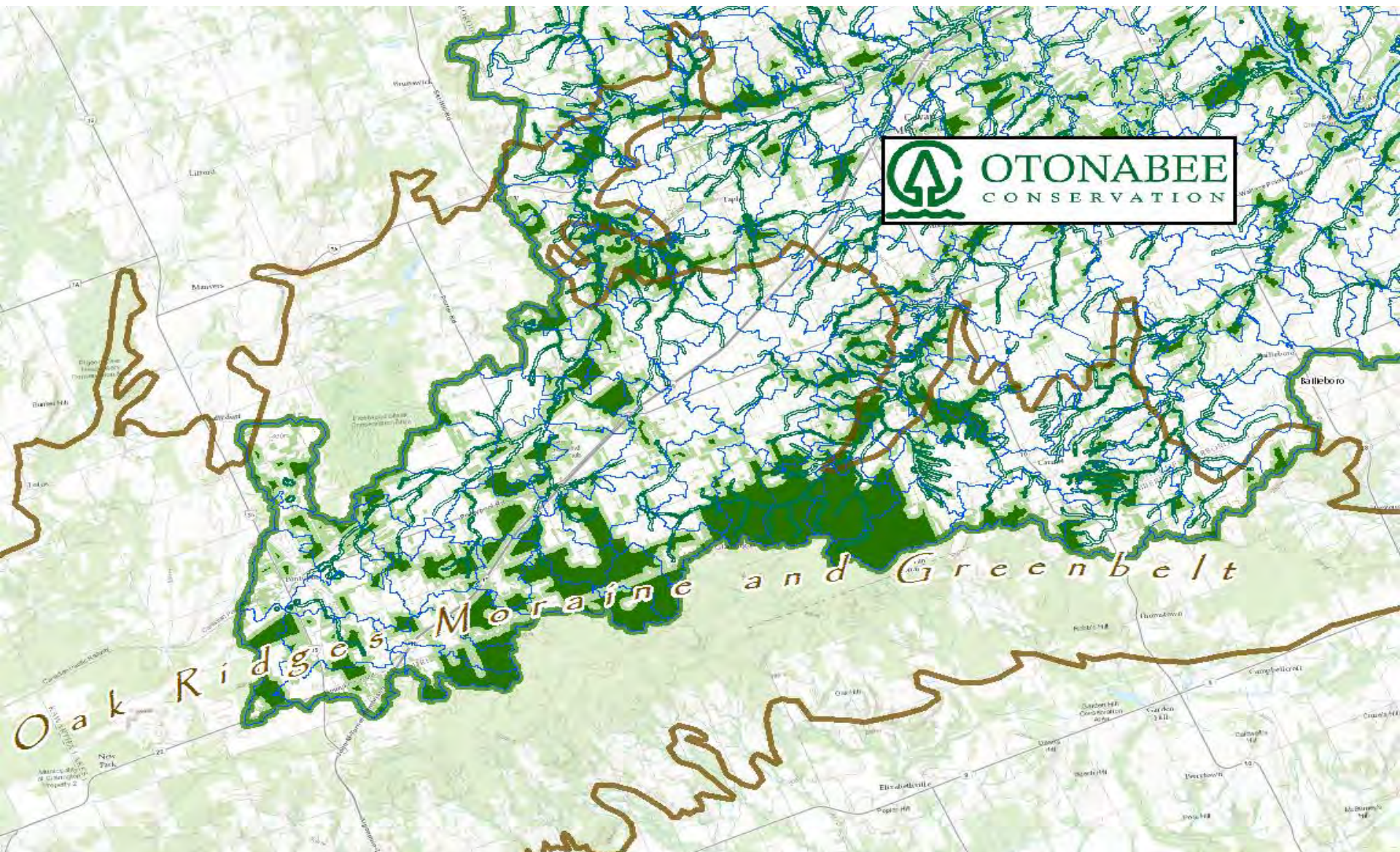
- GIS Sortward (ArcHydro ArcGIS module) was used to delineate catchments from 150-300 hectares in size in the ORCA portion of the Greenbelt and Oak Ridges Moraine.



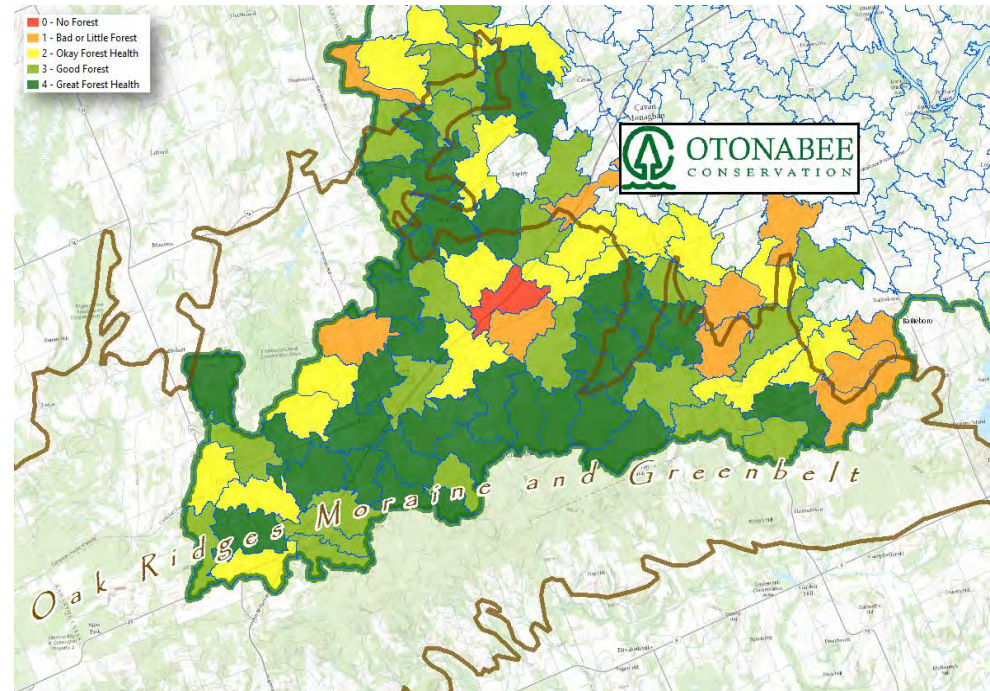


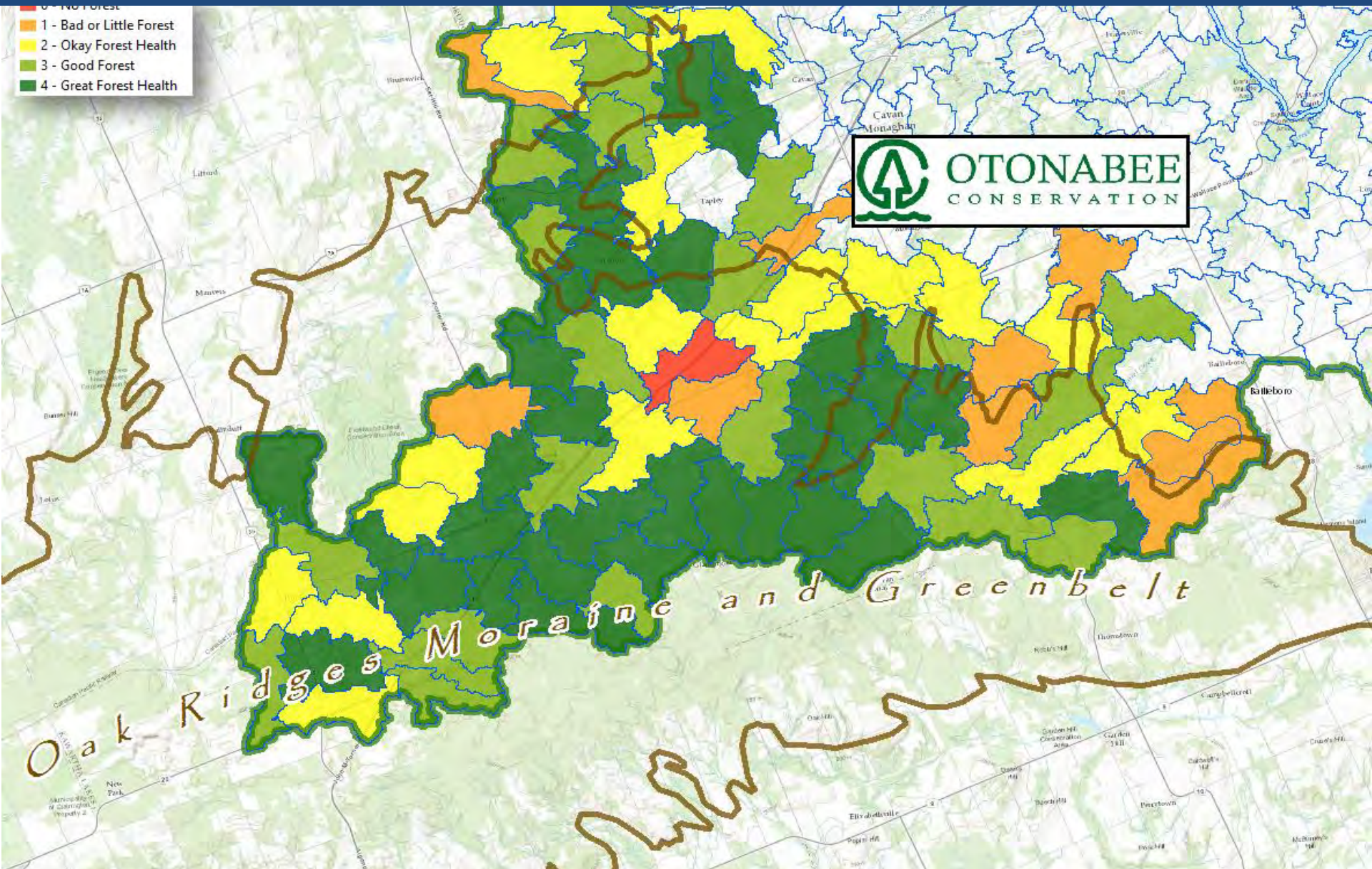
- The catchments were then analyzed using the following indicators of watershed health:
 - **forest cover (%)**
 - **forest interior (>100m)**
 - **forested riparian area**
 - **hydrology**
 - wetland cover and significance were also used but are not shown on map



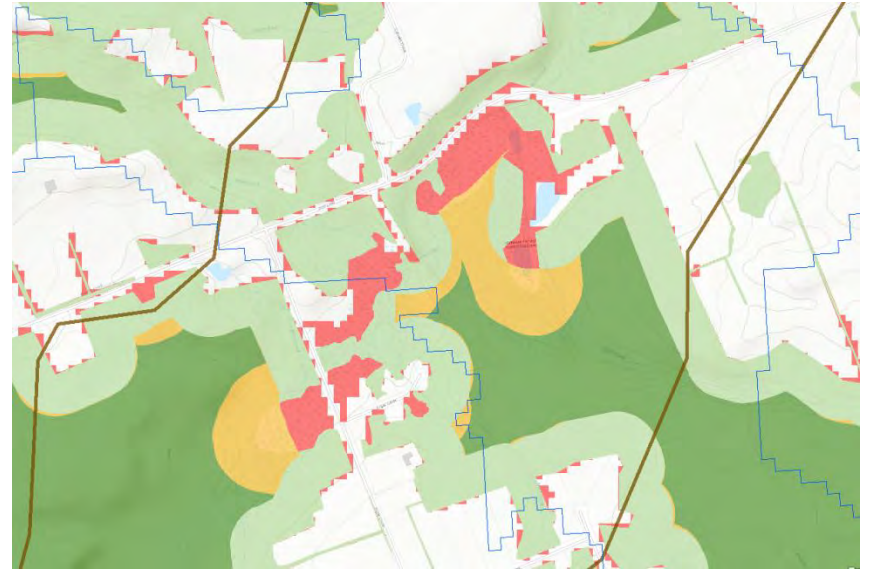


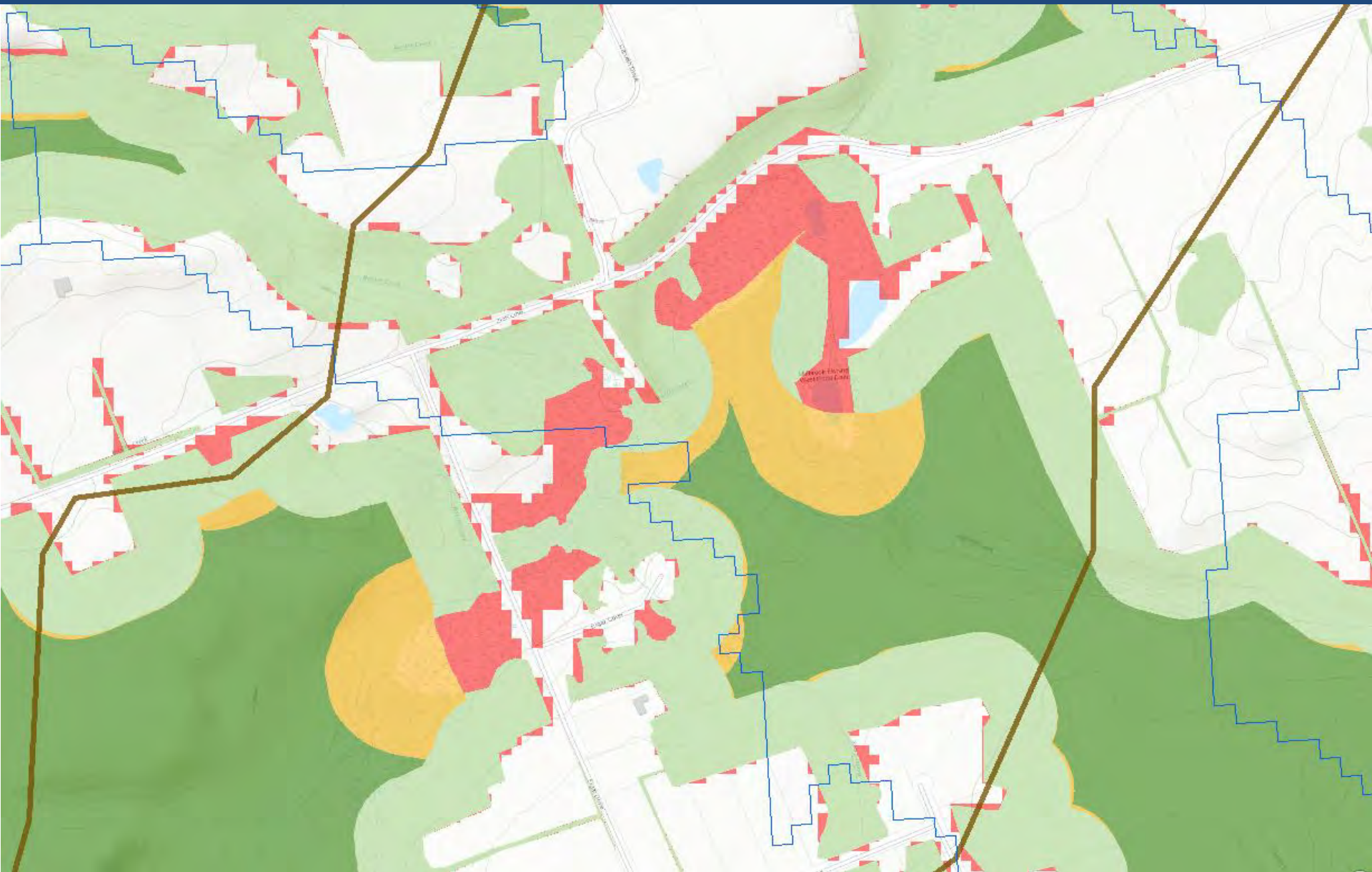
- These indicators were then converted into values that could be used to target catchments that would benefit the most from restoration projects, and which type of project would have the most benefit.



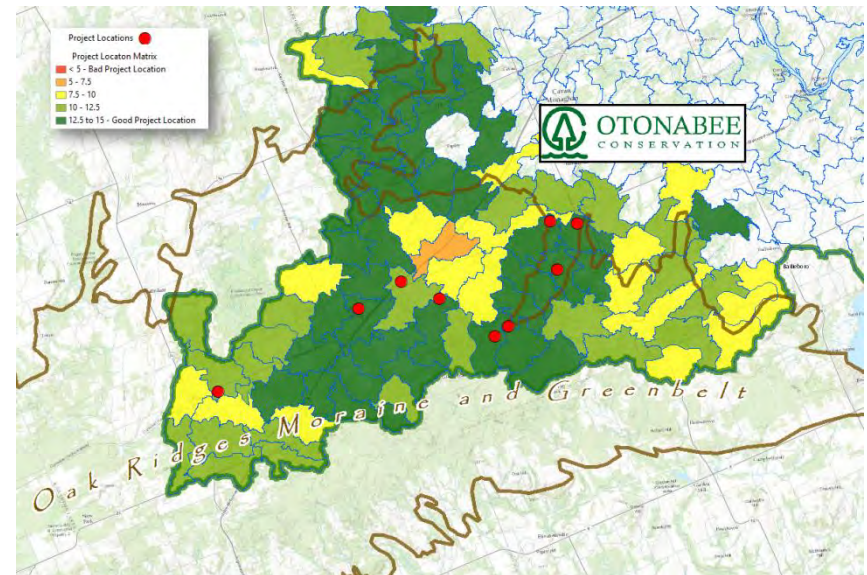


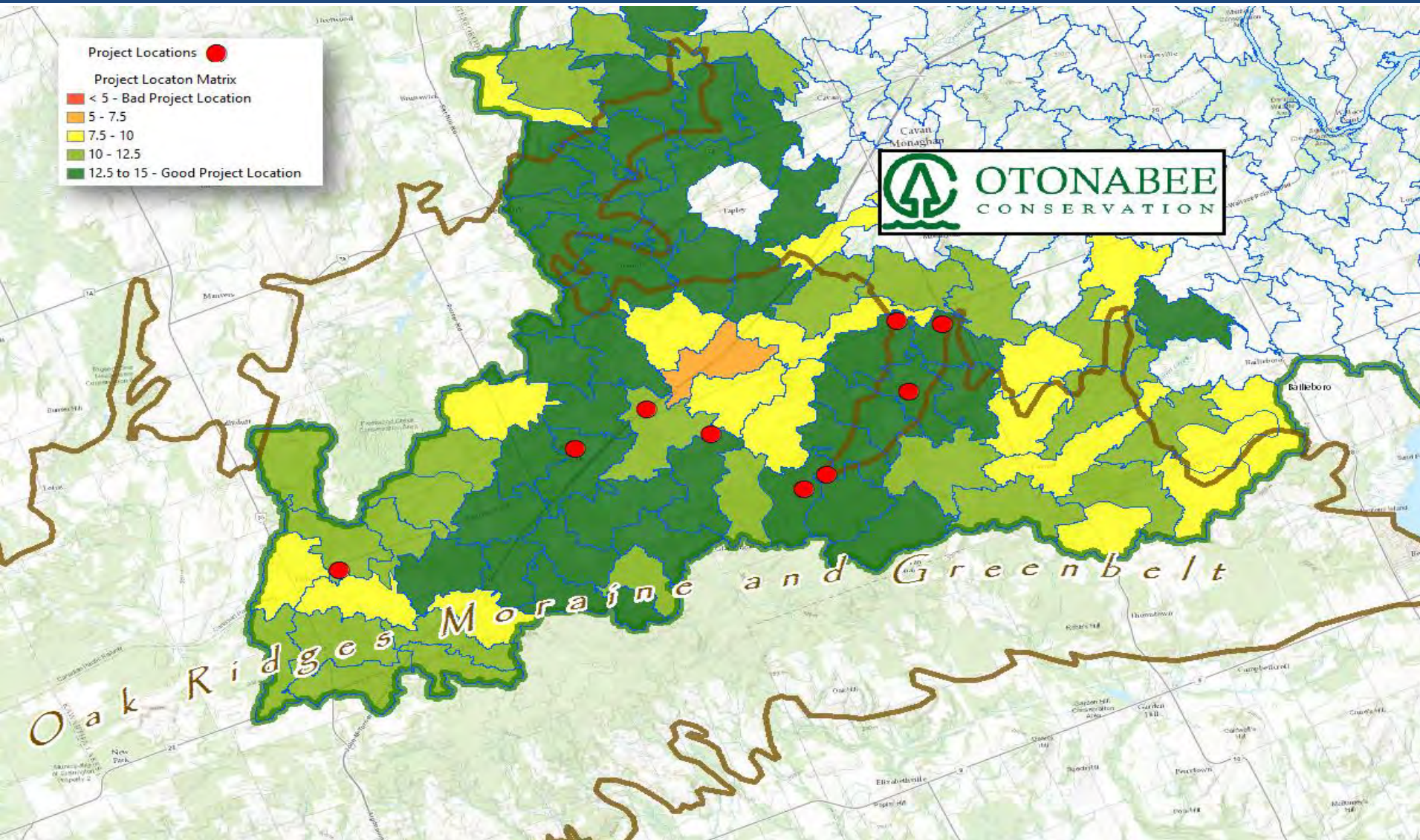
- The Kawartha Naturally Connected preferred solution data was then applied to the targeted catchments to assess the potential benefits of the project to the health of the catchment.
- This enabled priority project locations to be narrowed down to identify those with the most significant positive impact.





- Data used in Steps 3 & 4 was then integrated to identify catchments where projects would be most ecologically beneficial
- Land ownership, access and feasibility were also considered resulting in 9 potential project locations





- Confirmation of approval for these projects
- Identification of opportunities to further integration of KNC NHS data into targeting of stewardship projects and activities
- Ongoing promotion and communication of KNC



Thank You



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