

ASSESSING WILDLIFE MOVEMENT POTENTIAL WITHIN THE CLOCA JURISDICTION

Northeastern Transportation and Wildlife Conference September 12, 2016







CONSERVATION AUTHORITIES OF ONTARIO



CLOCA JURISDICTION

Sert State





- Water budget, temperature and quality
- Fisheries and aquatic habitat
- Terrestrial natural heritage and wetlands

CLOCA ACTION PLANS



- Target Improve wildlife habitat connectivity in the CLOCA juridiction.
- Action Plan #5: Wildlife Corridor Protection and Enhancement Plan
 - Document existing conditions in each watershed
 - Assess corridor connectivity
 - Conduct movement barrier analysis
 - Identify restoration opportunities
 - Implementation tasks and priorities





CLOCA WILDLIFE HABITAT NETWORK





STEP 1: IDENTIFYING CORRIDOR GAPS

- Majority of wildlife corridors follow creek corridors in CLOCA jurisdiction
 - Creeks buffered in ArcGIS to create 'ideal' corridor layer
 - Displayed beneath existing conditions layer to highlight gaps in continuity
- Map is an easy way to direct restoration and stewardship efforts









STEP 2: IDENTIFYING CORRIDOR BARRIERS

- Plotted location of every crossing of the WHN by a road or rail line
- Field surveys
 - Presence of watercourse/culvert beneath road
 - Continuous bank/evidence of use
 - Culvert measurements to determine Openness Ratio (OR)
 - Traffic volume, speed limit, road quality
 - Habitat on either side of the road
 - Evidence of roadkill

BACKGROUND			INFRASTRUCTURE					
Evaluator:	J. Scott	2	Watercourse?	Yes			194	
Date:	11/17/11		Culvert/Bridge?	Yes - Bridge	Height (h):	4 m	Width (w):	26.5 m
Time:	11:12 am		Road Width (I):	22.5 m	Lanes:	4	Sidewalk?	No
Watershed:	Lynde Creek				Paved/Gravel?	Paved	Shoulder?	Curb
Location:	Zone 17				Speed:	80 km/h	No. cars/5 min	86
	661878 m E	4863733 m N	Openness Ratio (h x w / I):		4.71			

WILDLIFE						
Adjacent Habitat:	Cattail marsh surrounded by deciduous forest to the north. Meadow with some cedar trees on the edges to the south.					
Terrestrial Passage?	Yes Present on both sides of watercourse. Cobble, gravel, and sand.					
Evidence of Use?	Yes Tracks in sand.					
Evidence of Roadkill?	Yes 2 raccoons and 1 bird (Northern Flicker).					

Рнот	OS
52:	Animal tracks under the bridge
53:	Bridge, taken from south side.







CRITERIA	VALUE		
 Culvert height ≥ 3.0 m OR ≥ 0.6 	EXCELLENT		
Terrain is present along entire length of culvert/bridge	(suitable for all wildlife)		
• Culvert height \geq 1.0 m			
• OR ≥ 0.25	(suitable for small mammals		
Terrain is present along entire length of culvert/bridge	and reptiles)		
• Culvert height \geq 1.0 m			
• OR ≥ 0.1			
• Terrain is present along entire length of culvert/bridge	(suitable for small mammals only)		
• Culvert height \geq 0.5 m	MODERATE 🔶		
• OR ≥ 0.25	(suitable for reptiles and		
• Terrain may or may not be present	amphibians only)		
• Any breaks in the habitat network that do not			
meet the above 4 criteria, but where the barrier is a gravel road with a traffic volume < 3 cars/5 min	(low risk of mortality from cars)		
• Any breaks in the habitat network where a culvert	POOR		
exists, but does not meet the criteria in first 5 categories	(not suitable for most wildlife)		
• Any breaks in the habitat network that do not	VERY POOR		
meet the criteria in any of the categories listed above and where there is no culvert	(mobile wildlife at highest risk of being hit on road)		

Break location inaccessible

•

UNKNOWN

ACTION PLAN RECOMMENDATIONS

Protection

- Adopt the CLOCA NHS into Regional and Municipal Official Plans
- Adopt policies that support connectivity in the watershed
- Promote wildlife-friendly designs along the Lake Ontario Shoreline
- Promote landowner protection of NHS (outreach) and enable the dedication of sensitive lands to the municipalities

Restoration (key areas identified)

- Review mowing practices on public lands adjacent to the NHS and adopt best-management practices
- Actively promote corridor restoration projects in key restoration sites
- Initiate restoration projects on public lands

Removal of Barriers (active culvert replacement not advocated)

- Avoid fragmentation of the WHN through good planning, i.e., incorporate NHS maps into planning
- Identify instances where avoidance not possible and initiate communication with CLOCA
- Develop a training program for Regional and Municipal Works staff to introduce Action Plan
- Provide staff with skills to recognize when wildlife movement issues present and involve CLOCA
- Enables staff to budget for projects accordingly
- Covers gap for projects that occur without CLOCA consultation, e.g., culvert maintenance
- Exposes staff to standard mitigation techniques, e.g., signage, over-sized culverts, fencing

Evaluation

- Develop a database to track corridor improvements over time
- Endeavour over the long term to have crossings that are Very Good or better within the Landscape corridor system
 and Moderate or better within the Local corridor system
- Seek funding to undertake hotspot analysis and follow-up field work in future





QUESTIONS?

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DURHAM

Report available online at:

http://cloca.ca/resources/Natural%20Heritage/Wildlife_ Corridor_Protection_Enhancement_Plan_2015.pdf

