



November 16, 2010

Vivian Brownell  
Senior Species at Risk Biologist  
Species at Risk Branch  
Ministry of Natural Resources  
1st Floor, North Tower  
300 Water Street  
Peterborough, Ontario K9J 8M5

**RE: Redside Dace Habitat Regulations**

Dear Ms. Brownell,

Thank you for the opportunity to provide comments regarding the Ministry of Natural Resources (MNR) draft habitat regulation for Redside Dace (*Clinostomus elongatus*) under the *Endangered Species Act, 2007* (ESA). Conservation Ontario is the network of Ontario's 36 conservation authorities, many of which have Redside Dace within their watersheds.

Please be advised that occupied Redside Dace habitat is found within watersheds managed by the following conservation authorities (CAs): Ausable Bayfield Conservation, Central Lake Ontario Conservation Authority, Conservation Halton, Credit Valley Conservation, Grand River Conservation Authority, Hamilton Region Conservation Authority, Lake Simcoe Region Conservation Authority, Saugeen Valley Conservation Authority and Toronto and Region Conservation Authority.

Below are responses to the questionnaire that accompanied the Redside Dace Workbook posted on MNR's website.

**5. Are there any additional areas/features (not listed in question 4) that you think OMNR should consider including in the habitat regulation? If yes, what areas/features do you believe should be included and please explain why.**

The following comments are submitted regarding the areas recommended for inclusion in the habitat regulation as outlined in the questionnaire.

Currently occupied stream reaches

The workbook states that occupied reaches are determined based on a record within the past 20 years within the Aquatic Resource Area. Using a 20 year time period creates the need to re-sample so that in year 21 there is an ability to determine if the reach is still occupied. Occupied reaches based on a 20 year timeframe should only be relevant if sufficient sampling has been undertaken within the reach during that time period. A lack of data should not be sufficient for a non-occupied reach designation, and these areas should have targeted surveys to identify if the species is still present. Habitat should only be left undesignated if it can be demonstrated that a sufficient number of targeted sampling events have been undertaken that can demonstrate with a

P.O. Box 11, 120 Bayview Parkway Newmarket Ontario L3Y 4W3  
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high probability that the habitat is no longer suitable or available to the species. Additionally there needs to be a formal process in place that allows for the updating and revising of occupied habitat areas (e.g. new sampling records, range expansions or contractions), including the delisting of streams as occupied habitat.

#### Meander belt of the stream

Clarity is requested regarding what methodology should be used to determine/establish the meander belt and who will be responsible for this determination.

For your information a link to a "Belt Width Delineation Protocol" (2001) developed for the Toronto and Region Conservation Authority (TRCA) is provided:  
<http://www.sustainabletechnologies.ca/Portals/Rainbow/Documents/Belt%20Width%20Delineation%20Procedures.pdf>. This document recommends a protocol for the delineation of meander belt width for watercourses within TRCA's jurisdiction. Since the development of a meander belt width protocol must consider the physical processes that occur along a meandering watercourse, as well as the context and scale at which the meander belt will be used, several different procedures have been devised.

#### 30 m adjacent riparian habitat

It is recommended that MNR clearly define the term "riparian habitat". It is unclear whether this term is strictly a linear distance from the stream edge or if it relates to other ecological functions or criteria such as a specific flood return period or a specific vegetation community type. For example, in a well defined valley situation the meander belt might extend to the toe of the valley wall, and the vegetation communities on the valley wall would not be typical "riparian" species and may contribute very little to the habitat needs of Redside Dace.

#### Headwater areas

It is recommended that "headwater areas" be clearly defined. It is requested that MNR clarify whether the entire upstream catchment area and all related water draining to it will be regulated, as is suggested by the use of the word "areas", and what distance from the occupied reach will be captured through the regulation of upstream headwater areas.

#### Historically occupied stream reaches where there is a high likelihood of rehabilitation

Regulating historically occupied stream reaches where there is a high likelihood of rehabilitation is supported. Protecting these features/areas will greatly benefit the hydrologic cycle, which will not only benefit Redside Dace, but the instream features, stream geomorphology and other species living alongside Redside Dace. It is more of a holistic protection plan than just protecting the species. However, clarification is requested regarding the following points:

It is requested that "historically occupied" be further defined, clarifying whether certain criteria must be met regarding the likelihood of rehabilitation in order for an area to be classified as such. It is also requested that information be provided to clarify whether historically occupied stream reaches have to be directly connected (i.e. accessible) to a currently occupied reach to be regulated, or whether they can be physically separated (i.e. by a dam or be in another subwatershed). Additionally, clarification is requested as to whether a historically occupied reach would require the same level of permitting as an occupied reach.

It will be important to understand what caused the decline in the species and whether the causal factor(s) has been or can be remedied. Without comprehensive barrier inventories, stream flow gauges to define the hydrological regime, detailed channel morphology surveys or water chemistry data available for all of the species' habitats, the designations could be difficult to support as they would seem subjective and not based in science.

The following additional areas/elements are also recommended for inclusion in the habitat regulation.

- Watercourse hydrology has not been explicitly regulated to protect the species. Without some controls around the timing, frequency, duration and volume of flows to the watercourse, as the catchment becomes urbanized its structure and form are likely to be degraded over time, negatively affecting hydrology. For example, changes in hydrology has been the causal factor driving the decline of aquatic ecosystem health and integrity in the Greater Toronto Area, and if left unaddressed there is very little hope that the species' habitat there can be effectively protected for the future.
- Total landscape impervious cover within a given catchment as it pertains to stormwater runoff and groundwater infiltration should be addressed. Impervious cover has impacts to the hydrology of the watercourse; it is important for maintaining a natural flow regime in watercourses over time as more area is urbanized. The Ministry's own research (Stanfield and Kilgour, 2010 unpublished) illustrates that areas with above 10-11% impervious cover (measured by the Land Disturbance Index), which includes the meander belt width of the stream and associated riparian area, do not provide a significant benefit to the fish community. The workbook indicates that it is primarily the riparian area that will be regulated to protect Redside Dace, and therefore it is believed that in urbanized areas there would still be a significant risk to the species.
- It is recommended that MNR consider potential impacts to Redside Dace habitat due to changes in water quantity. There is a concern that water taking could significantly reduce the available habitat of this species and therefore should perhaps be restricted in occupied reaches and their headwaters. The addition of water to a watercourse may also need to be regulated (i.e. large scale dewatering projects) as these projects can, in some cases, dramatically alter habitat temperature and rates of erosion that could degrade the habitat of this species.
- Water quality is a key component of habitat and should be addressed as such through a habitat regulation, specifically with regard to levels of total suspended solids and turbidity for the species. Releases of sediment into watercourses are a continual issue that can negatively impact this species, and requires the establishment of criteria for what is acceptable. Water temperature for viable Redside Dace habitat should also be addressed; for example, the warming of a watercourse through the addition of stormwater can have potential impacts to the species. Existing stormwater management practices/guidelines are not sufficient to address water quality issues; Low Impact Development practices and new standards for water management and construction practices should be considered in order to be successful in protecting Redside Dace habitat. Similarly, management of chlorides needs to be addressed.
- Subdivisions can take up to 10 years to approve. Adequate rules and standards are required at specific points in the land use planning process to prevent having to backtrack when plans are far advanced. It is important to note that many areas of Redside Dace habitat in Ontario are located within the "white belt" growth planning areas. Therefore, there is need for Provincial coordination to protect endangered species within Ontario's land use planning framework, which will require involvement from ministries such as MNR, the Ministry of the Environment, Ministry of Municipal Affairs and Housing and Ministry of Energy and Infrastructure. In addition, transition rules will be required to address large scale development that has been proceeding through approval processes when habitat regulations are enacted.
- Habitat features that support the life history of Redside Dace should be included in the regulation (i.e. breeding and feeding habitats as well as overwintering habitat, which is currently a knowledge gap). All of these specific habitats should be described in detail in order to more effectively determine if an overall benefit to the species is or has been achieved through project construction/implementation/restoration.
- Habitat as it relates to the catchment or subcatchment should be described in the regulation.

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Water management has always been addressed on a lot by lot basis, however, the cumulative effects of changes in the catchment or subcatchment can have a profound effect on watercourse structure and form. Water management models are simply models and do not always reflect reality, and as such other guidance for engineers is required in order to assist in the protection of the species.

- Instream barriers (e.g. dams, weirs, perched culverts, etc.) that currently limit, restrict impact or protect the habitat of the Redside Dace should be referred to in the regulation. Some of these instream structures may play important roles in determining the ultimate fate of the species in some watersheds, and the removal or preservation of these structures may serve a vital role in protecting the species.

**6. Do you believe that your activities or current or planned future activities could be positively or negatively affected by protected habitat for Redside Dace (e.g., existing or proposed use of lands that may be restricted by the regulation)?**

Yes

**If Yes, please list any activities you feel would be affected and for each activity state whether it would be negatively or positively impacted.**

The impact of this regulation would be both positive and negative based on the broad scope of CA operations across their jurisdiction.

Positive Impacts

The proposed regulation is anticipated to restrict further upstream headwater degradation; the protection of this species habitat will further the CAs' watershed objectives for the preservation and protection of healthy rivers and streams. The protection of this species habitat will also afford a multitude of other aquatic species protection as well. The objective of CAs to protect the biological diversity of their watersheds will be further enhanced by the effective implementation of this regulation. For CAs with Redside Dace within their watersheds, this habitat forms a vital component to the aquatic ecosystem integrity that CAs are trying to achieve with watershed planning and through their roles in land use and infrastructure planning and permitting.

The protection afforded by this regulation shall assist in not only protecting aquatic biological diversity but terrestrial as well, and may assist in the protection and recovery of other endangered species or species of conservation concern.

Additionally, CAs' public education, outreach and stewardship activities will likely also benefit from the implementation of this regulation.

Negative Impacts

Land management activities such as existing or planned natural restoration projects/areas, or trail construction and/or maintenance on CA-owned or other publicly owned lands might be restricted or need to be designed/re-designed to conform with the new regulation as these activities frequently occur in valley and stream corridor areas that fall under the regulation.

Delays may be caused by this regulation for undertaking infrastructure repairs or improvements, or the installation of new infrastructure..

Delays/denials and/or additional costs in relation to aquatic ecosystem surveying for site specific environmental/ecological investigations or studies. This is particularly concerning because these surveys and monitoring programs are critical in filling CAs' knowledge gaps around the specific ecological/habitat requirements for Redside Dace.

**To the extent feasible and practical, please provide your comments about the importance of those potentially affected activities/areas to your enjoyment and personal and economic use of these lands.**

- Restoration of stream corridors and the control of public access via trails are important components of CAs' watershed management activities which may be delayed or prevented by the regulation.
- CAs' regional monitoring programs and other ecological surveys are critical to improving their understanding of their watershed's response to land use changes as well as the specific ecological requirements for species like Redside Dace. Not being able to conduct these works because of the regulation would not serve CAs well.

**7. In your opinion, what effect would environmental protection from a habitat regulation have on the existing value of your lands and on the value of surrounding lands?**

It is unclear whether "value" in this context is referring to ecological or economic value. It is believed that environmental protection of Redside Dace would result in an increase in the ecological value of the watershed by increasing a wide range of ecosystem services provided within it. However, in some watersheds this environmental protection is expected to result in a reduction in the economic value of land with occupied reaches.

**Additional comments?**

Protecting Redside Dace habitat would create larger connections for other wildlife using the riparian area as a corridor to and from the fragmented pockets of forest.

**8. Rate how strongly you agree or disagree with the following statements:**

**a) Ensuring that Redside Dace will be available for future generations is NOT a concern of mine at all**

Strongly disagree

**b) Ensuring that Redside Dace habitat is protected through a habitat regulation is VERY important to me**

Strongly agree

**9. Please indicate whether you believe there are other environmental and social benefits flowing from protecting Redside Dace habitat:**

**a) Recreational Opportunities**

Yes

**b) Safeguarding the environment**

Yes

**c) Smarter urban development**

Yes

**d) Quality of Life or Personal Well-being**

Yes

**e) Attracting Investment**

Yes

**f) Access to Nature**

Yes

**g) Are there other positive benefits related to Redside Dace habitat regulation?**

- If the habitat is actually protected and no further declines of the species occur then the whole aquatic ecosystem will also largely be preserved and watercourses will begin to exhibit more ecological integrity, including enhanced water quality, over time.
- Public health will benefit from a general improvement in water quality due to the result listed above, as well as from cleaner air from maintaining more vegetation on the landscape.
- Economic benefits are anticipated due to improved stream hydrology resulting in less erosion and therefore less erosion protection work required in the future.
- Benefits to other aquatic species given the increased attention paid to maintaining a wide riparian zone and stormwater quantity and quality.

**10. If you have scientific information or knowledge that would be helpful to the development of the habitat regulation for the Redside Dace please elaborate below.**

Many CAs voluntarily provide any data they have regarding Redside Dace in their watersheds to MNR on a regular basis. Should MNR wish to develop a regular, standardized reporting or information sharing program with CAs that have Redside Dace within their watersheds, MNR is encouraged to initiate a formal agreement with individual conservation authorities.

**11. Do you have any other comments that would be helpful to the development of the habitat regulation for the Redside Dace?**

- Redside Dace, like other fish, are a product of their environment. Since the water in which they live originates on lands adjacent to and upstream from their location in the watercourse, protecting those adjacent and upstream areas is critical to ensuring the survival of Redside Dace. Protection should include maintaining these areas in a natural condition and controlling sediment run-off when development does occur. Protecting just the stream in which Redside Dace live will not result in protection of the species.
- In some watersheds Redside Dace habitat is found primarily in agricultural areas. With that in mind, the following comments are submitted for consideration:
  - Information is requested regarding how a 30-meter buffer would impact agricultural land use and operating practices. MNR is encouraged to discuss the proposed 30-meter adjacent riparian habitat with agricultural groups to ensure farmers continue to have access to their lands for crops, pasturing, etc. A stewardship approach or

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compensation is recommended where the implementation of protection measures will impact the operation of a farm. MNR is requested to consider the potential implications of restricting activities within a 30-metre riparian zone to the livelihoods of those who make their living off the land when deciding what protection of the zone will involve. Rather, it is recommended that MNR consider what the system needs by way of a buffer area to maintain or restore its ecological and hydrologic functions to support Redside Dace.

- Information is requested regarding how the regulation would be applied to habitat within agricultural drainage features.
- MNR is requested to give consideration to what headwater areas should be protected through regulation. It is requested that MNR limit its regulation to protect headwater areas that contribute to the specific functions necessary to support Redside Dace, rather than providing blanket protection to all headwater areas simply because they are the headwaters of identified reaches.
- Conservation Halton has determined a significant increase in the number of Northern Pike in the headwaters of Bronte Creek, an area where there were significant numbers of Redside Dace in the past. However, no Redside Dace have been observed recently in Bronte Creek, which could suggest that predation is a contributing factor in the decline of Redside Dace as well.
- Specific details regarding the regulation's review and permitting processes are requested. It is recommended that mandatory review and permitting timelines be set in order to mitigate costly, lengthy wait times for permit decisions.

Once again, thank you for the opportunity to provide comments on the discussion material posted on MNR's website regarding habitat regulations for Redside Dace under the ESA. If you have any questions regarding the above comments please contact myself at (905) 895-0716 ext. 228.

Sincerely,

*[Original signed]*

Natasha Leahy  
Policy and Planning

c.c. CA GMs/CAOs