Species at Risk Act
Management Plan Series

Management Plan for the Yellow-breasted Chat *virens* subspecies (*Icteria virens virens*) in Canada

Yellow-breasted Chat

2011

Environment Canada Environnement Canada

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PREFACE

The federal, provincial, and territorial government signatories under the Accord for the Protection of Species at Risk (1996) agreed to establish complementary legislation and programs that provide for effective protection of species at risk throughout Canada. Under the *Species at Risk Act* (S.C. 2002, c.29) (SARA), the federal competent ministers are responsible for the preparation of management plans for listed Special Concern species and are required to report on progress within five years.

The Minister of the Environment and the Minister responsible for the Parks Canada Agency is the competent minister for the management of the Yellow-breasted Chat *virens* subspecies and has prepared this plan, as per section 65 of SARA. This plan has also been prepared in cooperation with the Government of Ontario.

Success in the management of this species depends on the commitment and cooperation of many different constituencies that will be involved in implementing the directions set out in this plan and will not be achieved by Environment Canada and the Parks Canada Agency, or any other jurisdiction alone. All Canadians are invited to join in supporting and implementing this plan for the benefit of the Yellow-breasted Chat *virens* subspecies and Canadian society as a whole.

Implementation of this management plan is subject to appropriations, priorities, and budgetary constraints of the participating jurisdictions and organizations.

ACKNOWLEDGMENTS

This management plan was prepared by Michael Cadman and Ken Tuininga, Environment Canada, Canadian Wildlife Service - Ontario, and Dr. David Kirk, Aquila Conservation & Environment and Northern Bioscience. The many individuals who offered unpublished reports, personal communications and advice that were invaluable in completing this plan are gratefully acknowledged. They include Robert Askins, Pete Blancher, Mark Carabetta, Brian Craig, Paul F. J. Eagles, Graeme Gibson, Audrey Heagy, Jarmo Jalava, Michelle Kanter, Dan Kraus, Dan Lebedyk, Sarah Lehnen, Vicki M^{c}Kay, Andy Paulios, Bruce Peterjohn, Paul Pratt, Don Sutherland, Charlie Thompson and Alan Wormington. Thanks also go to the Canadian Wildlife Service staff that assisted in preparing this document for posting. Thanks are also extended to the many volunteers who provided data to the two Ontario Breeding Bird Atlas projects.

EXECUTIVE SUMMARY

Yellow-breasted Chat *virens* subspecies breeding populations are restricted in Canada to southwestern Ontario. Less than 1% of the entire *virens* subspecies' North American population occurs in the Lower Great Lakes-St. Lawrence Plain Bird Conservation Region (BCR 13; includes U.S.), and much less than 1% of the population occurs in Canada, all of which is in Ontario. Comparisons of the distribution and abundance of the subspecies between the first and second Ontario Breeding Bird Atlas suggests that it has experienced range retraction and significant population declines between the early 1980s and the early 2000s, and there are indications of on-going decline since then, including at the subspecies' strongholds in the province. The chief threat to the species is a decline in habitat quality and extent due to forest succession in the core breeding sites and other areas of suitable habitat in Ontario. Secondary threats are land clearance for development (e.g., agriculture and urbanization), which has caused habitat loss and fragmentation, and possibly nest parasitism by the Brown-headed Cowbird (*Molothrus ater)*.

The 5-year objective of this Management Plan is to maintain current population levels of the Yellow-breasted Chat *virens* subspecies in Canada. A longer-term objective may be established when the success of initial management activities and results of surveys and research can be assessed.

The actions to be taken for the conservation of this species are included in the following broad strategies: population monitoring, habitat/site management, research, and outreach and communication. Because the Yellow-breasted Chat *virens* subspecies is adapted to exploiting ephemeral, early successional habitats, and there is a high turnover of breeding individuals in the population, it is well suited to creative habitat management. Examples of such management include prescribed burns or mechanical cuts in forested areas that were formerly old field regenerating shrub habitats (e.g., parts of Point Pelee National Park), agricultural set-aside programs where succession is allowed on abandoned fields, and clearing trees along power-line rights of way.

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1. COSEWIC SPECIES ASSESSEMENT INFORMATION

Date of Assessment: November 2000

Common Name (population): Yellow-breasted Chat *virens* subspecies

Scientific Name: *Icteria virens virens*

COSEWIC Status: Special Concern (November 2000).*

Reason for Designation: This species nests in small but apparently stable numbers in southern Ontario. The movement of birds from the United States possibly helps support the numbers in Canada.

Canadian Occurrence: ON

COSEWIC Status History: Designated Special Concern in April 1994. Status re-examined and confirmed in November 2000.

*but subspecies met criterion for Threatened

2. SPECIES STATUS INFORMATION

The Yellow-breasted Chat is ranked globally as G5 (secure) by NatureServe (2009). The *virens* subspecies has not been ranked globally. Yellow-breasted Chat is ranked as S2B (imperiled) in Ontario (NHIC 2010). Although the Ontario designation does not refer specifically to the *virens* subspecies by name, only the *virens* subspecies occurs in Ontario.The *virens* subspecies is designated as a species of Special Concern under the *Species at Risk Act* in Canada.

3. SPECIES INFORMATION

3.1 Species Description

Largest of all wood-warblers (25 g), this species is a robustly built, large warbler with a bright yellow breast, a heavy bill and long tail (Eckerle and Thompson 2001). Its highly variable song is described as a series of whistles, squawks, rattles and catcalls. Only males sing and do so in the morning and evening and sometimes through the night at the peak of the breeding season (Eckerle and Thompson 2001). For more detailed information see the COSEWIC report (Cannings 2000) and Eckerle and Thompson (2001).

3.2 Population and Distribution

The Yellow-breasted Chat *virens* subspecies occurs in eastern North America (Figure 1). Its range extends from the eastern Great Plains and central Texas eastward. In Canada, it is restricted to Ontario, where there is a very small population, primarily restricted to the extreme southwest portion of the province (Figure 2).

Figure 1. Distribution of the Yellow-breasted Chat (from Eckerle and Thompson 2001). The *virens* subspecies' breeding range is the contiguous shaded blue portion of eastern North America shown above.

Based on breeding data from the Atlas of the Breeding Birds of Ontario (Cadman et al. 2007) and element occurrence data from the Natural Heritage Information Centre (NHIC), a recent estimate (for the period 2001-2005) of the population is 42 pairs or fewer (Eagles 2007, D. Sutherland, pers. comm.). The global population (mostly in the U.S.) was approximately 10 million birds (Rocky Mountain Bird Observatory 2009), so the Ontario population makes up 0.001% of the population.

Eagles (2007) states that "it is unlikely that the provincial population exceeds 50 pairs". Based on this number and the information below, almost 40% of this breeding population usually occurs in just two areas of the province: Point Pelee National Park and Pelee Island.

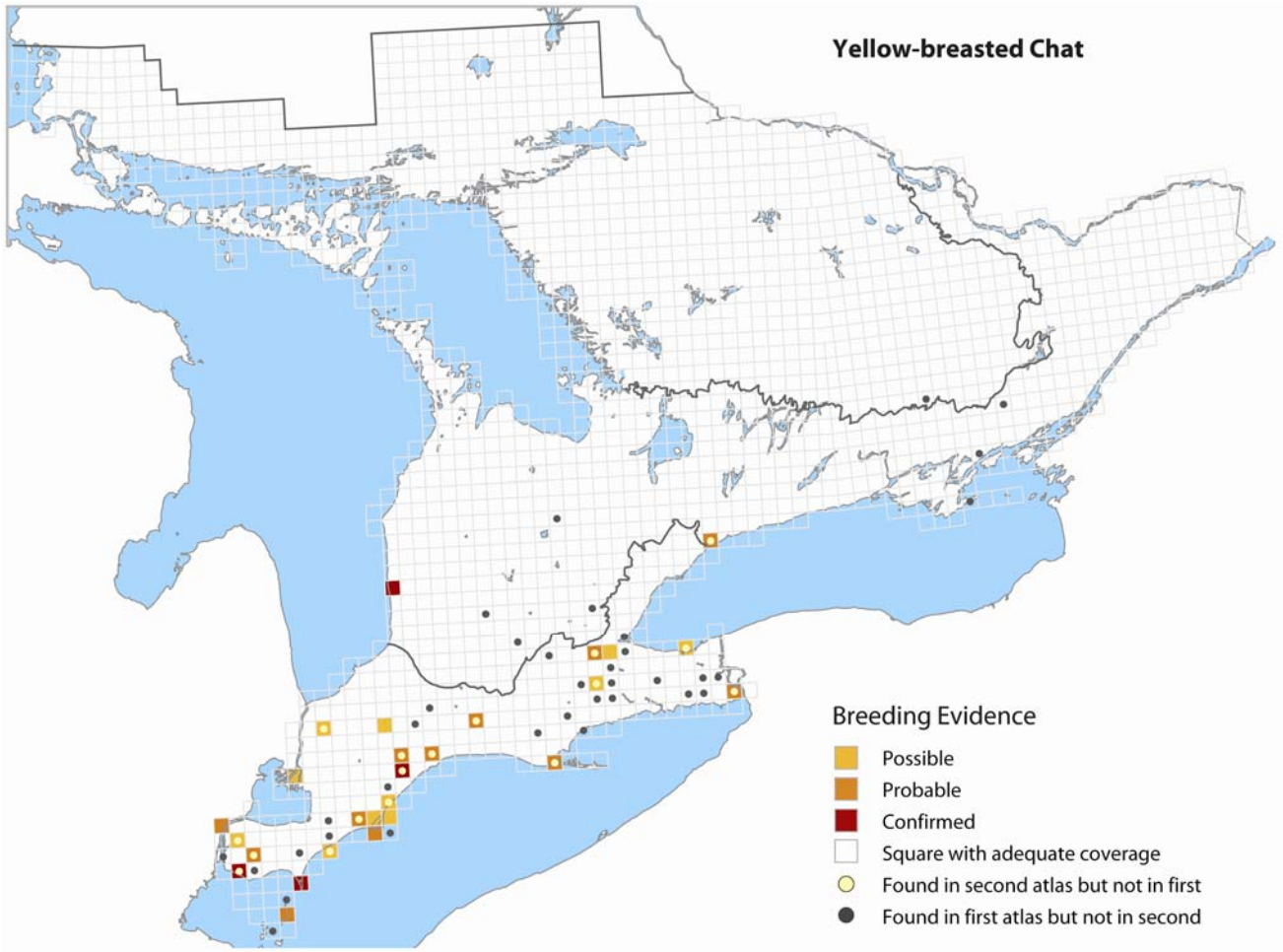

Figure 2. Distribution of the Yellow-breasted Chat *virens* subspecies in Ontario between 2001 and 2005 (Cadman et al 2007). Squares are 10x10km. Data collection for the first atlas referred to in the legend was 1981-1985.

More recent information suggests that the subspecies has declined markedly in the last few years in its main strongholds in Point Pelee National Park and perhaps also on Pelee Island. Wormington (1981) indicated that there were "over ten pairs" present in the park in 1981. As of 2007, only 2 pairs occurred in the park, in 2008 there were 3 pairs, and in 2009, only 1 pair was known (A. Wormington, pers. comm.). On Pelee Island, numbers are less certain due to a lack of consistent and extensive surveys, but there has apparently also been a decline there, from more than 10 pairs during the first atlas (1981-1985) to 5 to 6 known pairs in 2008 (G. Gibson, pers. comm.). Away from these core areas, there have been very few records since the second atlas (2005), which might also suggest a decline in the whole Ontario population. However, outside of the atlas periods there is very little information collected away from the two core areas, probably because birders are less active during the summer months and the subspecies is so uncommon.

3.3 Needs of the Yellow-breasted Chat *virens* subspecies

3.3.1 Habitat and biological needs

The Yellow-breasted Chat *virens* subspecies is apparently limited by the availability of suitable breeding habitat in southern Ontario and this is particularly evident by declines noted in two key areas: Point Pelee National Park and Pelee Island. It requires early successional habitats, which may include dense, low deciduous or coniferous vegetation (Eckerle and Thompson 2001). A wide variety of such habitats are used, including early shrubby re-growth on abandoned agricultural fields, power-line corridors, clear-cuts, fencerows, forest edges and openings and areas near water bodies (streams, ponds, swamps; see Eckerle and Thompson 2001). In Ontario, Eagles (2007) stated that "it utilizes regenerating old fields, forest edges, railway and hydro rights-of-way, young coniferous reforestations and, occasionally, wet willow-ash-elm thickets bordering wetlands. Tangles of grape and raspberry are a feature of most breeding sites".

Of the three types of shrubland described by Peterjohn (2006), the Yellow-breasted Chat occupies "young shrublands," that is, vegetation where woody cover becomes dominant but there are still patches of herbaceous vegetation. As these habitats age, woody plants (< 3 m tall and dominated by shrubs and woody vines) continue to encroach on the herbaceous vegetation. Young shrublands have a more highly diverse breeding bird community than transitional shrublands and are dominated by species preferring dense brushy vegetation. The suppression of fires in, for example, Point Pelee National Park, has likely negatively affected the species.

Although the species has been considered weakly area-sensitive (Rodewald and Vitz 2005), it will apparently occupy habitat patches as small as 2 ha (Askins 1994). However, recent research on edge avoidance and area sensitivity in Ohio suggests that larger habitat patches with minimum edge will be most beneficial for shrubland species such as Yellow-breasted Chat *virens* subspecies (Lehnen and Rodewald 2007, S. Lehnen, pers. comm.). Maintaining a minimum patch size of 4 ha or more of suitable habitat is recommended until it is demonstrated that Yellow-breasted Chat *virens* subspecies successfully use smaller areas (R. Askins, pers. comm).

3.3.2 Limiting factors

A number of factors limit the population of the Yellow-breasted Chat *virens* subspecies in Ontario:

1. It is at the extreme northern edge of its range.
2. The Yellow-breasted Chat *virens* subspecies population in northeastern North America is declining, which may limit potential for recolonization by source populations.
3. The number of birds arriving in any one year is probably dependent to some extent on the weather conditions in the spring (A. Wormington, pers. comm.).
4. The infrequency of wildfires in the Ontario range of this subspecies limits the creation and availability of shrubby successional habitat.

4. THREATS

4.1 Threat Assessment

Table 1. Threat Assessment Table

Threat	Level of Concern	Extent	Occurrence	Frequency	Severity	Causal Certainty
Natural Processes or Activities						
Successional Change	High	Widespread	Current	Continuous	High	High
Habitat Loss or Degradation						
Agricultural activities	Medium	Widespread	Current	Continuous	Medium	Medium
Residential development	Medium	Widespread	Current	Continuous	Medium	Medium
Natural Processes or Activities						
Cowbird parasitism	Uncertain	Uncertain	Uncertain	Uncertain	Uncertain	Uncertain

4.2 Description of Threats

1. Natural Processes or Activities - Successional change

The main threat to the Yellow-breasted Chat *virens* subspecies is the decline in the amount of its preferred habitat type (early successional shrub communities). The decline of the Yellow-breasted Chat *virens* subspecies in recent decades in northeastern North America is linked to the loss of early successional shrub habitats as much of the region's abandoned farmland has succeeded to more mature forest (Askins 2000). In the Lower Great Lakes Plain physiographic area, more than 50% of this habitat has been lost since 1966 (Dettmers and Rosenberg 2003). Extent, contiguity and habitat suitability of early successional vegetation has decreased dramatically in southern Ontario within the range of the Yellow-breasted Chat *virens* subspecies. Throughout much of southern Ontario, landscape cover tends to be composed of open farmland or forest cover with closed canopy. In the absence of management, many areas where the subspecies currently nests will become unsuitable due to vegetation succession. An example is in the core population in Point Pelee National Park where formerly suitable areas (such as the DeLaurier Complex, Ander's Field and the "Sparrow Field") are succeeding to forest cover. As a probable result, the park population has experienced significant declines. Only one pair is thought to have nested in 2009 (A. Wormington, pers. comm.). Although this example demonstrates the effect of leaving chat habitat to succeed to forest (as southern Ontario is a forest biome), it is not known whether the shrubby habitat formerly used by Yellow-breasted Chat *virens* subspecies is original to the park and elsewhere in Ontario, or whether it was created through human activity.

2. Habitat loss or degradation – Agricultural activities

The primary range of the Yellow-breasted Chat *virens* subspecies in Canada is in extreme southwestern Ontario, which is intensively cultivated and otherwise developed. The clearance of early successional shrubby habitats for agriculture may threaten suitable habitat, and few fields in these areas are abandoned to succession, limiting the creation of suitable habitat for Yellow-breasted Chat *virens* subspecies. There are few locations in this area where suitable habitat patches of 4 ha or larger exist or are likely to be created.

3. Habitat loss or degradation - Residential development

As with agricultural development, residential development that results in habitat loss threatens the Yellow-breasted Chat *virens* subspecies in Canada. On Pelee Island, it has been suggested that proposed expansion of the ferry terminal could bring further development to the island and thus detrimentally affect Yellow-breasted Chat *virens* subspecies habitat.

4. Natural Processes or Activities - cowbird parasitism

The Brown-headed Cowbird, an obligate brood parasite, expanded its range into the breeding range of the Yellow-breasted Chat *virens* subspecies in the late 19th and early 20th century following forest clearing and agricultural development (Falk 2007). The significance of nest parasitism and predation by the Brown-headed Cowbird on the Yellow-breasted Chat *virens* subspecies in Ontario is unknown. Of 16 nests reported in Ontario by Peck and James (1987), 25% were parasitized. Eckerle and Thompson (2001) reported 5 to 91% cowbird parasitism rates in various parts of the range, and also noted that host eggs disappear in parasitized nests, suggesting that cowbirds sometimes remove host eggs. However, because nestling Yellow-breasted Chat *virens* subspecies can coexist with young cowbirds (Eckerle and Thompson 2001), the effects of nest parasitism on reproductive success are uncertain.

5. ADDITIONAL INFORMATION REQUIREMENTS ABOUT THE SPECIES

The following information would enhance knowledge of the Yellow-breasted Chat *virens* subspecies in Ontario and facilitate management:

- A full survey of the subspecies occurrence is required to determine where the subspecies is currently breeding in Ontario so that management and research activities can be focused accordingly. Because the subspecies uses early successional, ephemeral sites, most breeding sites are used for very few years. With management to maintain the habitat, it is hoped that the site will be occupied more frequently or for longer periods;
    - Directed call-broadcast surveys are necessary to more confidently assess the distribution and population size of the Yellow-breasted Chat *virens* subspecies in Ontario; and crepuscular/nocturnal surveys might further improve detection.
- Empirical data on habitat characteristics, including patch size requirements, and successional processes in southern Ontario and neighbouring populations in the U.S.;

- An assessment of the amount and location of suitable habitat available to the subspecies in Ontario. Locating all breeding birds in the province, through the full survey mentioned above, will facilitate comparison of occupied and unoccupied sites;
- Updated and more complete data on the current distribution and abundance of the subspecies in neighbouring states (especially New York State, Ohio, northern Pennsylvania, Michigan and Wisconsin).

6. MANAGEMENT OBJECTIVE

The 5-year objective of this Management Plan is to maintain the Yellow-breasted Chat *virens* subspecies at its current population level in Canada. A longer-term objective may be established when the success of initial management activities and results of surveys and research can be assessed.

As the small Canadian population of the Yellow-breasted Chat *virens* subspecies occurs at the northern part of its continental range, and the vast majority of its continental distribution and population occurs further south in the United States, it is important to note that population changes at the continental level may have a significant effect on conservation of the population in Canada. As the northeastern portion of the continental population of the Yellow-breasted Chat *virens* subspecies is experiencing an ongoing downward population trend, its range may contract away from the current periphery. In such a case, despite the best efforts described in this management plan to ensure that sufficient suitable habitat is available and key threats are mitigated, the numbers of the Yellow-breasted Chat *virens* subspecies in Ontario may continue to decline.

7. ACTIONS AND PERFORMANCE MEASURES

The 5-year management objective for the Yellow-breasted Chat *virens* subspecies will be achieved through the following broad strategies, detailed in Table 2:

1. Determining population size and trend, location of breeding sites and distribution in Ontario.
2. Encouraging appropriate habitat management to sustain the current population.
3. Conducting research to determine characteristics of suitable breeding habitat.
4. Establishing partnerships, communications and outreach to implement strategies 1-3.

The actions, performance measures and implementation schedule proposed to implement the broad strategies and approaches outlined above are presented in Table 2.

7.1 Actions Already Completed or Underway

There are many species and habitats at risk in the Carolinian Region of southwestern Ontario, and several management plans or recovery planning documents for these are either completed or in development. The following plans are particularly pertinent to habitat management for the Yellow-breasted Chat *virens* subspecies. Most consider the Yellow-breasted Chat *virens* subspecies as a species of concern on the respective site(s) and may incorporate and recommend specific management actions to support on-the-ground Yellow-breasted Chat *virens* subspecies conservation initiatives.

- The draft Ecosystem-based Recovery Strategy for the Eastern Prickly Pear Cactus – Lake Erie Sand Spit Savannas in Canada, which refers primarily to Point Pelee National Park, Rondeau Provincial Park and Long Point.
- The proposed Recovery Strategy for the Eastern Prickly Pear Cactus in Canada.
- Management of the Ojibway Prairie complex, different parts of which are managed by the City of Windsor Parks and Recreation Department or by the Ontario Ministry of Natural Resources (P. Pratt, pers. comm.).
- The Ontario Landbird Conservation Plan for BCR 13 (Ontario Partners in Flight 2008) includes the Yellow-breasted Chat *virens* subspecies as a priority species. See Appendix A for more details. Some of the recommendations from that plan have been incorporated into this document.
- The Golden-winged Warbler Recovery Strategy includes management activities for shrubby habitats, so may be of importance for the Yellow-breasted Chat *virens* subspecies within its Ontario range, though the overlap in current range is small.
- A grassland bird action plan is currently in development by Environment Canada – Ontario, with assistance from Bird Studies Canada and others.
- The Walpole Island Ecosystem Recovery Strategy (Bowles 2005) describes recovery approaches for species at risk on Walpole Island First Nation.
- The "Action-on-the-Ground" program and up-coming Integrated Vegetation Management Plan and Fire Management Plans for Point Pelee National Park (B. Craig 2009, pers. comm.).
- On Pelee Island, the Management Plan for the Nature Conservancy of Canada's Brown's Road site, a.k.a. the Florian Diamante Nature Reserve (D. Kraus, pers. comm.).
- The Essex Forests and Wetlands Conservation Action Plan (CAP) (Ferguson et al. 2009), which includes all of Point Pelee including the national park, is complete. CAPs for the Hamilton and Short Hills - Fonthill areas are being developed during fall/winter 2009/10 (J. Jalava pers. comm.).
- The Western Lake Erie Islands Natural Area Conservation Plan (Nature Conservancy of Canada 2007).

7.2 Actions, Performance Measures, and Implementation Schedule

Because the Yellow-breasted Chat is a migratory bird protected under the *Migratory Birds Convention Act, 1994*, management of this species falls under the jurisdiction of the Government of Canada. The Parks Canada Agency is competent under SARA for all individuals in or on federal lands administered by the Agency. Consequently, the Canadian Wildlife Service of Environment Canada and the Parks Canada Agency will be responsible for monitoring the implementation of this management plan.

The implementation of this management plan should be monitored on a regular basis. A complete assessment of the management plan including its implementation and monitoring is required five years after the final plan has been posted on the SAR Public Registry. Environment Canada and the Parks Canada Agency will endeavour to support implementation of this plan, given available resources and varying species at risk conservation priorities.

Table 2. Actions, Performance Measures and Implementation Schedule

Action	Priority	Threats or concerns Addressed (see 1.5.1)	Performance Measures	Responsibility[1,2]	Timeline
1. Population monitoring					
1.1 Monitor provincial population to determine population size and trend, with greater intensity at known breeding sites, and encourage volunteer birders and conservation organizations to report Yellow-breasted Chat *virens* subspecies breeding season observations.	High	Need for accurate population information	Annual surveys completed at known breeding sites in Ontario. Breeding records from birders and organizations being submitted. Population size and trend determined.	EC PCA, OMNR, NGOs	2011-2015
1.2 Maintain a database of the locations and characteristics of breeding sites.	Medium	Need for accurate information on breeding sites	All breeding sites registered and important habitat and bio-physical attributes described.	EC OMNR, PCA, NGOs	2011-2015
2. Habitat/Site management					
2.1 Manage habitat in Point Pelee National Park and on Pelee Island to sustain the current population using existing knowledge of subspecies requirements.	High	1,2	Yellow-breasted Chat *virens* subspecies habitat requirements are integrated into management activities for Point Pelee National Park and key sites on Pelee Island. Effectiveness of management activities for Point Pelee National Park and sites on Pelee Island. Sufficient habitat exists, or is being managed for 2-3 pairs in Point Pelee National Park and 5 pairs on Pelee Island.	PCA, OMNR EC, NGOs.	2012-2015
2.2. Identify suitable sites near existing populations and manage for this subspecies. High priority to include sites near Point Pelee National Park, and near key sites on Pelee Island. .	High	1,2	Management plans, including both creation and management, for key sites completed. Habitat creation and management is underway.	EC OMNR, PCA; NGOs	2014-2015
2.3 Monitor habitat to see if loss is continuing and to identify threats to particular sites.	High	1,2	Inventory of habitat completed in years 1 and 5. Trend in amount of habitat determined.	EC OMNR, PCA; NGOs	2011-2015

Action	Priority	Threats or concerns Addressed (see 1.5.1)	Performance Measures	Responsibility[1,2]	Timeline
3. Research					
3.1 Determine characteristics of suitable breeding season habitat: vegetation and spatial requirements.	High	1,3	Habitat characteristics for known breeding sites measured and analyzed. Area sensitivity and edge avoidance of the subspecies in Ontario investigated.	EC, PCA, NGOs, universities	2013-2015
4. Outreach and Communication					
4.1 Promote a multi-species habitat management approach compatible with the needs of the Yellow-breasted Chat *virens* subspecies and other species at risk and rare habitats in communication with governments, conservation organizations and landowners.	High	1,2,3	Governments, conservation organizations and landowners have been contacted regarding this management plan and other relevant conservation initiatives, and adopt a multi-species approach where possible. Voluntary agreements in place with private landowners. Public and private lands managed in ways compatible with needs of the Yellow-breasted Chat *virens* subspecies, other shrub-successional species, species at risk and rare habitats.	EC PCA, OMNR, NGOs	2012-2015

[1]Identification of government agencies and non-governmental organizations is intended to be advice and does not commit the agency or organization to implementing the listed action. Implementing actions will be contingent upon each organization's or agency's available resources and varying species at risk conservation priorities.
[2] EC: Environment Canada; PCA: Parks Canada Agency; OMNR: Ontario Ministry of Natural Resources; NGOs: non-government organizations.

7.3 Narrative to Support Actions and Performance Measures

Prior to habitat management occurring, the benefits of the action to the Yellow-breasted Chat *virens* subspecies must be weighed against potential effects on other species at risk or significant habitats at that location. Habitat management actions for the Yellow-breasted Chat *virens* subspecies, listed as points 2.1 and 2.2 in Table 2 should also consider the following:

1. Using prescribed burns, mechanical clearing or other methods (see below) to create suitable habitat patches of 4 ha or larger is recommended. Where this is not feasible, smaller patches should be created.
    a. The highest priority site on which to undertake habitat management for the Yellow-breasted Chat *virens* subspecies is the DeLaurier Fields-Ander's Field Complex in Point Pelee National Park. This site has been occupied by as many as 8 pairs in recent years (2005, Parks Canada Agency 2008) suggesting that it may require less habitat change than other sites in the park. It is also large enough to contain one or more patches of suitable Yellow-breasted Chat *virens* subspecies habitat 5 ha or larger. Patches of this size are considered sufficient to support breeding populations (The Nature Conservancy 1998). High priority sites for management on Pelee Island are the Nature Conservancy of Canada's (NCC) Brown's Road property (also known as the Florian Diamante Nature Reserve), and the Stone Road Alvar property owned by Ontario Nature, Essex Region Conservation Authority and NCC, both of which have held one or more territorial birds in recent years, and have a long history of occupancy. The Pelee Island properties are on or around alvar habitat and have very thin, poor soil. This discourages tree growth and helps maintain the shrubby habitat.
2. Create clusters of dense shrub habitat patches (ideally 4 ha or greater) in areas not currently occupied by Yellow-breasted Chat *virens* subspecies but in close proximity to currently or recently occupied territories (clusters of shrub habitats may maximize usage and minimize dispersal costs – S. Lehnen, pers. comm.).
3. Encourage and initiate agricultural set-aside programs that allow regeneration of old fields. Note that this would need to be done in a multi-species context as it could conflict with conservation plans for grassland birds. On-going management will be required to maintain sufficient habitat on these sites at the right successional stage for the Yellow-breasted Chat *virens* subspecies.
4. Target riparian, lakeshore and buffer areas as particularly suitable for habitat maintenance and creation.
5. Actively create dense shrub habitat under hydroelectric powerlines or other corridors and rights of way.
6. In created or apparently suitable but unoccupied habitat use playback recordings to facilitate settlement (S. Lehnen, pers. comm.), a management technique used for endangered songbirds (Schlossberg and Ward 2004).

8. MEASURING PROGRESS

Because the Yellow-breasted Chat is a migratory bird protected under the *Migratory Birds Convention Act, 1994*, management of this species falls under the jurisdiction of the Federal Government. The Parks Canada Agency is competent under SARA for all individuals in or on federal lands administered by the Agency. Consequently, the Canadian Wildlife Service of Environment Canada and the Parks Canada Agency will be responsible for monitoring the implementation of this management plan.

The implementation of this management plan should be monitored on a regular basis using the performance measures outlined in Table 2. The conservation of the Yellow-breasted Chat *virens* subspecies in Canada will be monitored through the use of the population surveys proposed in Table 2. A complete assessment of the management plan including its implementation and monitoring is required five years after the final plan has been posted on the SAR Public Registry.

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APPENDIX A: EFFECTS ON THE ENVIRONMENT AND OTHER SPECIES

A strategic environmental assessment (SEA) is conducted on all SARA recovery planning documents, in accordance with the *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals*. The purpose of a SEA is to incorporate environmental considerations into the development of public policies, plans, and program proposals to support environmentally sound decision-making.

Recovery planning is intended to benefit species at risk and biodiversity in general. However, it is recognized that plans may also inadvertently lead to environmental effects beyond the intended benefits. The planning process based on national guidelines directly incorporates consideration of all environmental effects, with a particular focus on possible impacts upon non-target species or habitats. The results of the SEA are incorporated directly into the plan itself, but are also summarized below in this statement.

While this management plan will clearly benefit the environment by promoting the conservation of the Yellow-breasted Chat *virens* subspecies, several potentially adverse effects were also considered. The plan calls for creating early successional habitats suitable for the Yellow-breasted Chat *virens* subspecies. It was concluded that adverse effects on species at risk and other wildlife could be mitigated and the following measures have been incorporated into the plan: prior to creating new habitat, the effects of any actions on all other Species at Risk on the site will be considered and weighed against the potential benefits to the Yellow-breasted Chat *virens* subspecies. Taking these mitigation measures into account, it was concluded that the benefits of the plan outweigh the adverse effects on the environment that may result.

Shrub/successional landbirds are a priority guild for BCR 13 in Ontario (Ontario Partners in Flight 2008). Activities that benefit the Yellow-breasted Chat *virens* subspecies are likely to be beneficial to several of the 10 priority species in that guild, depending on where in the Yellow-breasted Chat *virens* subspecies range the activities take place. This includes species such as Black-billed Cuckoo (*Coccyzus erythropthalmus*), Blue-winged Warbler (*Vermivora pinus*), Brown Thrasher (*Toxostoma rufum*), Eastern Towhee (*Pipilo erythrophthalmus*), Field Sparrow (*Spizella pusilla*), Prairie Warbler (*Dendroica discolor*) and Willow Flycatcher (*Empidonax traillii*). None of these are currently listed as species at risk. The White-eyed Vireo (*Vireo griseus*), which is provincially significant, is a shrub/successional species whose primary nesting sites in the province (Point Pelee National Park, Long Point and Rondeau Provincial Park) are also important Yellow-breasted Chat *virens* subspecies breeding sites (James 2007) and might be affected by habitat management for the Yellow-breasted Chat *virens* subspecies.

In the core of the species' Ontario range, particularly in Point Pelee National Park and on Pelee Island, there are numerous other species at risk and rare habitats. Prior to undertaking habitat management to support the Yellow-breasted Chat *virens* subspecies, it will be necessary to refer to Species at Risk databases and consider the needs and management plans for the other species, habitats and sites to be affected.

There is concern for the loss of early successional habitats in parts of the species' range in Ontario that may have an effect on the Yellow-breasted Chat *virens* subspecies. The draft Ecosystem-based Recovery Strategy for the Eastern Prickly Pear Cactus – Lake Erie Sandspit Savannas (Dougan & Associates and M^{c}Kay 2009) addresses the Yellow-breasted Chat *virens* subspecies to some extent as a species of early successional habitat on the Lake Erie Sand Spits in question (Pelee, Rondeau and Long Point). It considers how management of some species in these environments might impact upon other species in these areas. It specifies that "recovery will require a mosaic of the component vegetation communities at each site, representing all seral stages, in order to continue to support all SAR addressed by this recovery strategy". Grassland, sand barren and savannah habitats of the sort necessary for the survival of the Eastern Prickly Pear Cactus are also important for the Yellow-breasted Chat *virens* subspecies and other shrubland species, such as White-eyed Vireo (D.A. Sutherland, pers. comm.).