Species classifications report to Minister by COSSARO on November 19, 2008.

Common Name	Scientific Name	COSSARO classification	Current SARO List
Eastern Flowering Dogwood	*Cornus florida*	Endangered	N/A
Ogden's Pondweed	*Potamogeton ogdenii*	Endangered	N/A
Eastern Pondmussel	*Ligumia nasuta*	Endangered	N/A
Red Knot *rufa* subspecies	*Calidris canutus rufa*	Endangered	N/A
Bearded Seal	*Erignathus barbatus*	Data Deficient	N/A
Karner Blue	*Lycaeides melissa samuelis*	Extirpated	Endangered
Black Buffalo	*Ictiobus niger*	Data Deficient	Special Concern
Orangespotted Sunfish	*Lepomis humilis*	Not eligible	Special Concern
Redside Dace	*Clinostomus elongatus*	Endangered	Threatened
Blackfin Cisco	*Coregonus nigripinnis*	Data Deficient	[Extinct]*
Timber Rattlesnake	*Crotalus horridus*	Extirpated	Endangered
American White Pelican	*Pelecanus erythrorhynchos*	Threatened	Endangered
Blunt-lobed Woodsia	*Woodsia obtusa*	Endangered	Endangered
Round-leaved Greenbrier	*Smilax rotundifolia*	Threatened	Threatened
Wood-poppy	*Stylophorum diphyllum*	Endangered	Endangered
Northern Brook Lamprey	*Ichthyomyzon fossor*	Special Concern	Special Concern
Flathead Catfish	*Pylodictis olivaris*	Data Deficient	[Data Deficient]*
Allegheny Mountain Dusky Salamander	*Desmognthus ochrophaeus*	Endangered	Endangered
Wood Turtle	*Glyptemys insculpta*	Endangered	Endangered
Peregrine Falcon	*Falco peregrinus*	Threatened	Threatened
Prothonotary Warbler	*Protonotaria citrea*	Endangered	Endangered
Red-headed Woodpecker	*Melanerpes erythrocephalus*	Special Concern	Special Concern

* Extinct and Data Deficient categories are not included in the SARO List regulation

Rationales for new classifications and changes to classifications from November 2008 COSSARO meeting

Eastern Flowering Dogwood (*Cornus florida*)
Endangered

Eastern Flowering Dogwood is a widespread small tree species of eastern North American forests that reaches its northern range limits in Ontario's Carolinian Zone. Although documented from 154 Ontario sites between 1975 and 2005, this species is declining at an estimated 7-8% per year due to Dogwood Anthracnose, a fungal disease which is decimating the species throughout its range. This species is classified as Endangered status based on observed declines which are expected to continue, population sustainability and mortality trends.

Ogden's Pondweed (*Potamogeton ogdenii*)
Endangered

Ogden's Pondweed is a globally imperiled aquatic plant that is found in slow-moving streams, beaver ponds, and lakes with clear, alkaline water. In Canada it is known from only three sites in southeastern Ontario where it was last collected in 1987. Recent fieldwork has documented the loss of habitat and probable extirpation of one population but failed to relocate the others. The presence of aquatic invasive plants suggests a further decline in overall area and quality of habitat. However, the species may still be present in Ontario in suitable habitats in the vicinity of previously known sites. This species classifies as Endangered based on the small number of Ontario occurrences and its global and northeastern North American rarity.

Eastern Pondmussel (*Ligumia nasuta*)
Endangered

The Eastern Pondmussel was once one of the most common unionid mussels in the lower Great Lakes. It has been lost from more than 85% of its Ontario range due to the zebra mussel invasion. It is now known from only two sites; a small population persists in the St. Clair River delta where zebra mussel densities are lower than in Lake St. Clair proper; and there is a newly discovered population in Lyn Creek in eastern Ontario. Zebra mussels and perhaps climate change threaten the St. Clair delta population. This species is classified as Endangered based on its rarity in northeastern North America, the small number of provincial populations and observed Ontario declines.

Red Knot *rufa* subspecies (*Calidris canutus rufa*)
Endangered

The *rufa* subspecies of Red Knot is a shorebird that breeds in the central Canadian Arctic and winters in Tierra del Fuego at the southern tip of South America. Although it does not breed in Ontario, Red Knot occurs in Ontario as both a spring and fall migrant. The species may occur just about anywhere in the province, but it does so in significant numbers and in a predictable and enduring fashion at relatively few sites in the Hudson Bay Lowlands. The Red Knot (ssp. *rufa*) has declined by $\geq$70% since the 1980s. Commercial decimation of the horseshoe crab and the resultant reduction in the

availability of horseshoe crab eggs, the principal food of knots during migratory staging on the US Atlantic coast, has led to reduced fitness of adults and reduced adult survival below levels considered necessary to maintain the taxon. Population viability analysis predicts that at the current rate of decline, the taxon may be extinct by 2010. This subspecies is classified as Endangered based on its global rarity, observed declines, population sustainability, threats, specialized life history and mortality trends.

Bearded Seal ((*Erignathus barbatus*)
Data Deficient

The Bearded Seal has a widespread distribution across the Arctic and sub-Arctic where it is dependant on sea ice on which to rest, moult, deliver and nurse pups. In Canada, Bearded Seal are present year-round in Arctic waters and in the Labrador Sea, Hudson Strait, Hudson Bay, and James Bay. In Ontario, they have been seen during the ice-free period from late July to mid-October in the mouth of the Winisk River and some distance upstream, and on sand spits attached to the mainland along the Hudson Bay coast. They have also been observed entering the Moose River estuary in James Bay. The species remains poorly known; there are no reliable or recent estimates of population size and distribution for Canada or Ontario. Because many aspects of the biology of bearded seals are not well understood and there is a lack of comprehensive observations in Ontario the species is classified as Data Deficient.

Karner Blue (*Lycaeides melissa samuelis*)
Extirpated

The Karner Blue is small butterfly that was known historically in Ontario from remnant oak savannahs at five sites: Rice Lake Plains, Toronto, St. Williams, London, and Port Franks-The Pinery. It has not been reliably reported at any site in the province since 1988, despite repeated searches of the historical sites of occurrence and other sites supporting populations of Wild Lupine (*Lupinus perennis*), the species' larval host plant. It was originally regulated as an endangered species in Ontario in 1973. It is now classified as Extirpated.

Black Buffalo (*Ictiobus niger*)
Data Deficient

The Black Buffalo is a large sucker that lives in large rivers and many smaller rivers in the Mississippi, Missouri, and Ohio River basins, as well as Lake Erie and southern Lake Michigan. In Ontario, the species is known from only two historic records in Lake Erie. Over the last decade, buffalo with subterminal mouths have been captured from numerous locations in the lower Great Lakes, but it is not clear if these individuals represent Black Buffalo or Smallmouth Buffalo. These individuals are being encountered more frequently and their range appears to be expanding. Black Buffalo may well be an introduced species in the Great Lakes basin. Black Buffalo was listed on the Species at Risk in Ontario list as Special Concern in 2004, however, based on the more recent assessment, there is insufficient information available to classify Black Buffalo in Ontario and therefore its status is Data Deficient.

Orangespotted Sunfish (*Lepomis humilis*)
Not Eligible

The Orangespotted Sunfish is found in the east-central United States, primarily in the Mississippi River basin and Gulf of Mexico drainages. It also occurs in western Lake Erie drainages of Ohio, Michigan, and Ontario where it appears to be introduced. In Ontario, the Orangespotted Sunfish is known from only five Essex County locations in the western Lake Erie drainage. The species was first discovered in Ontario in 1979 and there is compelling evidence that it has invaded Ontario after being introduced to the Great Lakes Basin in Ohio in the 1920s. The species does well in turbid systems and there does not appear to be any immediate threats. Orangespotted Sunfish was listed as Special Concern in 2004, but this status should be revoked as the weight of evidence suggests it is likely an introduced species that is not eligible to be classified.

Redside Dace (*Clinostomus elongatus*)
Endangered

The Redside Dace is a colourful minnow restricted to clear headwater tributary streams throughout its northeastern North American range. It is considered to be rare in all but two North American jurisdictions where it occurs, and is considered to be generally vulnerable to siltation and turbidity associated with human activities throughout its range. In Ontario, it occurs primarily in the Lake Ontario watershed within the 'Golden Horseshoe'. It was originally listed as a Threatened species in 2000. The Redside Dace has declined in most of the 24 Ontario drainages where it is known. This species is classified as Endangered based on observed Ontario declines, ongoing threats and its specialized life history.

Blackfin Cisco (*Coregonus nigripinnis*)
Data Deficient

The Blackfin Cisco is a member of the whitefish subfamily that used to inhabit the deep waters of the Great Lakes and perhaps some inland water bodies. It used to occur in Lakes Michigan and Huron, but has not been seen from these lakes in more than 50 years. The Blackfin Cisco may be present in Lake Nipigon and several inland lakes in Ontario, but the taxonomic validity of these fish has not been confirmed. The species was lost from the Great Lakes due over fishing and the impacts of predation and competition with exotic species. The Blackfin Cisco is classified as Data Deficient due to the taxonomic uncertainty related to the identity of fish in Lake Nipigon and in other Ontario Inland lakes.

Timber Rattlesnake (*Crotalus horridus*)
Extirpated

Timber Rattlesnakes are large venomous snakes that occur throughout the eastern and central United States, although they are locally extirpated or declining in many areas. The most recent confirmed record of the species in Ontario was made in the Niagara Gorge in 1941. More recent sightings elsewhere in the province are probably erroneous. The species' former range included Pelee Island and Point Pelee, the Niagara Escarpment, and possibly islands in Georgian Bay. It is unlikely that a snake of

this size would go undetected for so long. It was originally regulated as an Endangered species in Ontario in 1990. The new classification is Extirpated.

American White Pelican (*Pelecanus erythrorhynchos*)
Threatened

The American White Pelican is a large colonial nesting waterbird found in central North America. It is a globally rare (G3) species. Although some of the population seem threatened by habitat loss and extreme fluctuations in water levels, there is little evidence to suggest that these issues are a serious problem to Ontario's five extant breeding colonies. Ontario's largest colony on Lake of the Woods (estimated at 14,864 birds and one of the largest in Canada) seems to be stable while the smaller colonies on Lake Nipigon (estimated at 1,290 birds within 4 colonies) seem to be increasing in size. Ontario's population comprises approximately 10% of the global population. There is no evidence of reproductive or recruitment failure in Ontario, nor of increased mortality trends. These is also no evidence that the American White Pelican might be declining in Ontario at the present time, although potential threats include changing water levels, disturbance to nesting colonies, and disease such as avian botulism and West Nile virus. It was originally regulated as an Endangered species in Ontario in 1977. Due to its global rarity, the limited number of Ontario occurrences, and Ontario's conservation responsibility (at least 10% of the global population), the American White Pelican is classified as Threatened in Ontario.

Blunt-lobed Woodsia (*Woodsia obtusa*)
Endangered

The Blunt-lobed Woodsia is a small fern found in wooded areas of open rock talus where it occupies dry, calcareous, south-facing slopes. It is globally secure across its eastern North America range and is at the northern periphery of this range in southern Canada where it is known from four sites in eastern Ontario and five sites in southern Quebec. Although no declines have been documented in Ontario, the species is threatened by habitat disturbance and spread of exotic shrub Common Buckthorn (*Rhamnus cathartica*). As a consequence of the small number of fragmented populations and potential threats to the habitat from human activities and exotic invasives the classification of Blunt-lobed Woodsia as Endangered in Ontario is continued.

Round-leaved Greenbrier (*Smilax rotundifolia)*
Threatened

The Round-leaved Greenbrier is a woody climbing vine that can reach lengths of over 4 m and is usually found in open woodland habitats. The species occurs across much of eastern North America from southwestern Nova Scotia to northern Florida, eastern Texas and north to eastern Michigan and southwestern Ontario. In Ontario, there are 13 extant Round-leaved Greenbrier populations all of which are found near the north shore of Lake Erie. One population at Point Pelee is extirpated. The population size in Ontario is estimated to be less than 250 mature individuals capable of reproduction. The main threats to this species are habitat destruction and modification. The majority of occurrences are confined to small woodlots where they exist as fragmented

populations. More than half of the colonies are unisexual and rely on vegetative reproduction to survive in the absence of seed production. The species is classified as Threatened in Ontario due to the small number of locations combined with ongoing threats to the extent and quality of its habitat.

Wood-poppy (*Stylophorum diphyllum*)
Endangered

The Wood-poppy is a showy perennial herb with a bright yellow flower that is found in forested ravines and along floodplains of forested streams. It occurs only in northeastern North America where it is known from 15 states and the province of Ontario. In Ontario, there are three extant Wood-poppy populations all of which are found in the vicinity of London in the Carolinian zone. The populations are small – it is estimated that there are approximately 530 mature plants in total. One population was significantly reduced by filling in the 1990s. The species is threatened in Ontario by habitat destruction and modification, impacts from adjacent development, competition from invasive plant species, and recreational activities. The species is classified as Endangered in Ontario due to the small area occupied and small number of locations combined with ongoing threats to the extent and quality of its habitat.

Northern Brook Lamprey (*Ichthyomyzon fossor*)
Special Concern

The Northern Brook Lamprey is a small (<18 cm), non-parasitic lamprey that inhabits clear streams. The larvae burrow into silt and sand substrates where they live as filter feeders for 3 to 7 years. The non-feeding adult stage only lasts for about 6 months and individuals die after spawning. The species has a patchy distribution in northeastern North America where it is known from 12 states as well as the provinces of Manitoba, Ontario and Québec. In Ontario, the Northern Brook Lamprey has been found in at least 29 different locations in the Great Lakes (Lake Superior, Huron and Erie drainages) and Ottawa River/St. Lawrence River watersheds since 1990 based on the presence of adults. It is likely that there are a few additional occurrences where larvae have been collected, but these are difficult to distinguish from the larvae of the closely related Silver Lamprey (*Ichthyomyzon unicuspis*). The Northern Brook Lamprey may have been lost from about one quarter of the Great Lakes tributaries that it used to inhabit. The species is threatened by the use of the lampricide TFM which is used to control the invasive Sea Lamprey (*Petromyzon marinus*). Water level manipulations, changes in water temperature and pollution have also been identified as threats. The Northern Brook Lamprey is classified as Special Concern due to the limited number of occurrences, coupled with its specialized life history and the threat associated with ongoing lampricide treatments in Great Lakes tributaries.

Flathead Catfish (*Pylodictis olivaris*)
Data Deficient

The Flathead Catfish is a large fish that can grow up to 1.5 m in length and weigh more than 56 kg. They inhabit the turbid waters of large, slow-moving rivers and reservoirs. The species is found in the Mississippi River and Gulf of Mexico drainages as well as the extreme southern portion of the Great Lakes. Despite extensive sampling, only six

adult individuals have been collected from Ontario (three from Lake Erie and three from Lake St. Clair) and there is no evidence that there is an established population within the province. The species is probably most limited by cool water temperatures in Ontario. The Flathead Catfish is classified as Data Deficient due to the lack of evidence of an established population existing in Ontario.

Allegheny Mountain Dusky Salamander (*Desmognathus ochrophaeus*)
Endangered

Allegheny Mountain Dusky Salamander is a globally secure eastern North American species in the lungless salamander family. It is found in Canada at a few sites in extreme southern Québec and a single site in Ontario's Niagara Gorge. Its presence in Ontario was only recently confirmed based on genetic analysis although it has probably been present in the province for centuries. The Ontario population is restricted to a single cold-water seepage flowing through a steep rocky wooded slope and is vulnerable to a variety of threats which might affect water quality or quantity. Human impacts on the surrounding forest and associated habitat could also affect the species. Intensive searches on nearby slopes have failed to find additional locations for the species. The size of the Ontario population is unknown but is probably small and there is no information on population trend in Ontario. Based on the single location and threats to the seep in which it resides, the Allegheny Mountain Dusky Salamander is assessed as Endangered in Ontario.

Wood Turtle (*Glyptemys insculpta*)
Endangered

The Wood Turtle inhabits areas with rivers and streams with moderate currents, sand or gravel substrates, nearby nesting sites and diverse terrestrial habitats. During their active season they may be found in rivers, streams, bogs, swamps, wet meadows, forests, upland fields and farmland. There are fewer than 50 extant locations in ten municipalities in central and southern Ontario. The turtle is threatened by habitat loss and degradation, predation, illegal collection and road mortality. There is strong evidence to suggest that the species is declining throughout most of its global range in northeastern North America, including Ontario, and that unless actions are taken to reverse these trends, the species will disappear from large parts of its range. Wood Turtles are popular in the pet trade and command high prices. Illegal collection for the pet trade is probably occurring in Ontario. The biological characteristics of this species (slow growth rate, late maturity, high egg and hatchling mortality) make it very vulnerable to any increase in adult mortality. Road mortality and habitat fragmentation are increasing in southern and central Ontario, and turtle populations are also faced with high populations of many egg predators. Based on the global decline, human threats and specialized life history the status of the Wood Turtle remains classified as Endangered.

Peregrine Falcon (*Falco peregrinis*)
Threatened

The Peregrine Falcon is a well-known falcon that has undergone a dramatic change in distribution and abundance across its North American, Canadian and Ontario range. In

Ontario it is found primarily around the Great Lakes but is expanding its range into new areas. It occurs at natural cliffs along much of the Great Lakes where it hunts along the lakeshore in open habitats. It also nests in urban areas and manmade cliffs in central and southern Ontario. This falcon was once a regular breeding species across most of North America, and Ontario. Due to the ingestion and bioaccumulation of DDT, its population collapsed and it did not breed in Ontario from the mid-1960s through the mid-1980s. The prohibition on DDT use in North America followed by sustained recovery efforts in Ontario and elsewhere has resulted in increasing populations across North America. The Ontario population has expanded from 0 in 1985 to a minimum of 78 territories in 2005. Historic natural cliff habitat in northern Ontario has been reoccupied, and new habitat has been colonized in urban southern Ontario. Some cliff habitat in eastern Ontario is only now becoming reoccupied. The Peregrine Falcon is a remarkably plastic and resilient species. While there are ongoing concerns about the effects of new and old chemicals in the environment and the potential effects of USA harvest for falconry, the species appears to face no major threats to its continued recovery at this time. Population numbers and range infilling are expected to continue to increase. The species' status in Ontario was downlisted from Endangered to Threatened in 2006. This reassessment supports the continued status of Threatened due to the falcon's susceptibility to new chemicals (e.g. PBDE) in its environment and the relatively small Ontario population.

Prothonotary Warbler (*Protonotaria citrea*)
Endangered

The Prothonotary Warbler is an Endangered songbird found in eastern North America in swamp forests, wetland thickets and wetlands with wooded edges. It requires snags or nest boxes usually near open water, suitable mosses for lining its nests, and forest and open habitats for foraging. The breeding population of Prothonotary Warbler in Ontario is very small (28-34 individuals) and continues to decline. The continent-wide Breeding Bird Survey suggests a long-term decline of about 40% over 40 years (1966-2005). The Ontario population has decline by 80% in the past decade. It continues to suffer from degradation of its habitat by exotic plant species (e.g. *Phragmites*) at two thirds of its sites and through interspecific competition for nests and destruction of its eggs and young by House Wren. In consideration of the observed global and Ontario population declines, and human threats from invasive exotics it is appropriate that the classification of Endangered continue.

Red-headed Woodpecker (*Melanerpes erythrocephalus*)
Special Concern

The Red-headed Woodpecker is a striking black, white and red woodpecker found in central and eastern North America. In Ontario it is found south of the Canadian Shield and in the northwest near Rainy River. It inhabits primarily open deciduous woodlands, particularly with dead snags used for nesting. Formerly a common summer resident in Ontario, the Red-headed Woodpecker has been in decline in the province since the 1960s. Evidence from the Ontario Breeding Bird Atlas suggests that the Red-headed Woodpecker may have declined by as much as 66% in the past 20 years. Factors responsible for its decline include: loss of its preferred habitat, including a reduction in

the availability of suitable nest sites, competition for available nest sites with exotic species and road mortality. The decline in the Red-headed Woodpecker in Ontario is consistent with declines elsewhere in the species' range. Although the population has declined it is still widespread across its range in Ontario; it was reported from 329 squares in the recent Ontario Breeding Bird Atlas (2001-2005). Based on this reassessment, the status of Red-headed Woodpecker is classified as Special Concern.