

DISTRIBUTION AND ABUNDANCE OF MAINE'S FISH & WILDLIFE

DESIGNATING SPECIES OF GREATEST CONSERVATION NEED (SGCN)

Maine Department of Inland Fisheries and Wildlife biologists, with review and cooperation from conservation partners and species experts, offer the following criteria (and subcriteria) for designating Maine's eligible Species of Greatest Conservation Need (SGCN). The criteria and process for selecting SGCN are intended to be comprehensive, transparent, and based on best available science for prioritizing species of conservation concern at local, regional, and global scales. As proposed, fish and wildlife species (and subspecies) designated as priority 1 or 2 or 3 qualify as SGCN, and are thus eligible for State Wildlife Grant funding. The primary themes for SGCN prioritization include risk of extirpation, population trend, endemism, and regional conservation responsibility. Secondary themes for SGCN prioritization include climate change vulnerability and survey knowledge.

I. Priority 1 Designation (Highest Priority SGCN)

Generally, Priority 1 species include those that meet two or more of the following criteria:

1. **Risk of Extirpation** -- Have current (or proposed) state or federal Endangered or Threatened status, or global endangerment status (International Union for the Conservation of Nature [IUCN])
2. **Recent Significant Declines** -- A species is currently (within 15 years) undergoing steep population decline statewide or regionally, which has already led to, or if unchecked is likely to lead to, local extinction and/or significant range contraction.
3. **Regional Endemic** -- A species whose global geographic range is at least 90% contained within the area defined by USFWS Region 5, the Canadian Maritime Provinces, and southeastern Quebec (south of the St. Lawrence River).
4. **High Regional Conservation Priority** -- Identified as a high regional or global species of conservation concern by one of the following species assessment authorities (see Table 1 for Priority 1 subcriteria):
 - a. Northeast Endangered Species and Wildlife Diversity Technical Committee [NESWDTC] (all vertebrates and freshwater mussels) -- Therres 1999
 - b. Northeast Regional Synthesis [RSGCN] (all vertebrates, freshwater mussels, and tiger beetles) -- Terwilliger 2013
 - c. NatureServe (all taxa) -- NatureServe 2014
 - d. Partners in Flight (land birds). Partners In Flight Science Committee 2012 Species Assessment Database, version 2012.

- e. North American Waterbird Conservation Plan [NAWCP] (all waterbirds) – Kushlan et al. 2002 and 2006 (marsh birds)
- f. North Atlantic Regional Shorebird Plan [NARSP] (shorebirds) – Clark and Niles 2000
- g. U.S. Shorebird Conservation Plan [USSCP] (shorebirds) – U.S. Shorebird Conservation Plan 2004
- h. Birds of Conservation Concern (all birds) – USFWS 2008
- i. Northeast Partners In Amphibian and Reptile Conservation [NEPARC] (herpetofauna) – NEPARC 2010
- j. American Fisheries Society (freshwater & diadromous fish) – Jelks et al. 2011
- k. Atlantic States Marine Fisheries Commission Stock Assessments [ASMFC] - ASMFSC 2012
- l. Eastern Brook Trout Joint Venture [EBTJV] - EBTJV 2005
- m. Northeast Odonate Assessment (damselflies & dragonflies) – White et al. 2014

Note: Priority 1 designation is not intended for:

1. species who have expanded their range into Maine within the past 50 years
2. species with only Historic documentation (in most cases prior to mid-1970s)

II. Priority 2 Designation (High Priority SGCN)

Generally, Priority 2 species include:

- a) all other current or proposed State (Endangered, Threatened, or Proposed), Federal (Endangered, Threatened, Candidate, or Proposed) or Global (IUCN Critically Endangered or Threatened) risk of extirpation species, OR
- b) those that meet at least two of the following criteria:
 1. **Global Vulnerability** – A species designated as Vulnerable under the International Union for the Conservation of Nature [IUCN]
 2. **State Special Concern** – Listed as a current or proposed species of Special Concern in Maine.
 3. **Recent Significant Declines** – A species is currently (within 30 years) undergoing steep population decline statewide or regionally, which has already led to, or if unchecked is likely to lead to, local extinction and/or significant range contraction.
 4. **Regional Endemic** – A species whose global geographic range is at least 90% contained within the area defined by USFWS Region 5, the Canadian Maritime Provinces, and southeastern Quebec (south of the St. Lawrence River).
 5. **High Regional Conservation Priority** -- Identified as a high regional or global species of conservation concern by one of the following authorities (see Table 1 for Priority 2 subcriteria):
 - a. Northeast Endangered Species and Wildlife Diversity Technical Committee [NESWDTC] (all vertebrates and freshwater mussels) – Therres 1999
 - b. Northeast Regional Synthesis [RSGCN] (all vertebrates, freshwater mussels, and tiger beetles) – Terwilliger 2013

- c. NatureServe (all taxa) – NatureServe 2014
 - d. Partners in Flight (land birds). Partners In Flight Science Committee 2012 Species Assessment Database, version 2012.
 - e. North American Waterbird Conservation Plan [NAWCP] (all waterbirds) – Kushlan et al. 2002 and 2006 (marsh birds)
 - f. North Atlantic Regional Shorebird Plan [NARSP] (shorebirds) – Clark and Niles 2000
 - g. U.S. Shorebird Conservation Plan [USSCP] (shorebirds) – U.S. Shorebird Conservation Plan 2004
 - h. Birds of Conservation Concern (all birds) – USFWS 2008
 - i. Northeast Partners In Amphibian and Reptile Conservation [NEPARC] (herpetofauna) – NEPARC 2010
 - j. American Fisheries Society (freshwater & diadromous fish) – Jelks et al. 2011
 - k. Atlantic States Marine Fisheries Commission Stock Assessments [ASMFC] - ASMFSC 2012
 - l. Eastern Brook Trout Joint Venture [EBTJV] - EBTJV 2005
 - m. Northeast Odonate Assessment (damselflies & dragonflies) – White et al. 2014
 - n. Committee on the Status of Endangered Wildlife in Canada [COSEWIC] (all taxa) – COSEWIC 2013
6. **High Climate Change Vulnerability** – Whitman et al. 2013 and Galbraith et al 2014 (or other published source)
7. **Historical** -- Species currently listed as state (SH) or global (GH) Historical (by MDIFW or NatureServe) that have reasonable probability of rediscovery with further survey.

Note: Priority 2 designation is not intended for:

- 1. species who have expanded their range into Maine within the past 25 years

III. **Priority 3 Designation (Moderate Priority SGCN)**

Generally, Priority 3 species include those that meet at least one of the following criteria:

- 1. **Global Vulnerability** – A species designated as Vulnerable under the International Union for the Conservation of Nature [IUCN]
- 2. **State Special Concern** – Listed as a current or proposed species of Special Concern in Maine.
- 3. **Recent Significant Declines** – A species is currently (within 30 years) undergoing steep population decline statewide or regionally, which has already led to, or if unchecked is likely to lead to, local extinction and/or significant range contraction.
- 4. **Regional Endemic** – A species whose global geographic range is at least 90% contained within the area defined by USFWS Region 5, the Canadian Maritime Provinces, and southeastern Quebec (south of the St. Lawrence River).
- 5. **High Regional Conservation Priority** -- Identified as a high regional or global species of conservation concern by one of the following authorities (see Table 1 for Priority 2 subcriteria):

- a. Northeast Endangered Species and Wildlife Diversity Technical Committee [NESWDTC] (all vertebrates and freshwater mussels) – Therres 1999
 - b. Northeast Regional Synthesis [RSGCN] (all vertebrates, freshwater mussels, and tiger beetles) – Terwilliger 2013
 - c. NatureServe (all taxa) – NatureServe 2014
 - d. Partners in Flight (land birds). Partners In Flight Science Committee 2012 Species Assessment Database, version 2012.
 - e. North American Waterbird Conservation Plan [NAWCP] (all waterbirds) – Kushlan et al. 2002 and 2006 (marsh birds)
 - f. North Atlantic Regional Shorebird Plan [NARSP] (shorebirds) – Clark and Niles 2000
 - g. U.S. Shorebird Conservation Plan [USSCP] (shorebirds) – U.S. Shorebird Conservation Plan 2004
 - h. Birds of Conservation Concern (all birds) – USFWS 2008
 - i. Northeast Partners In Amphibian and Reptile Conservation [NEPARC] (herpetofauna) – NEPARC 2010
 - j. American Fisheries Society (freshwater & diadromous fish) – Jelks et al. 2011
 - k. Atlantic States Marine Fisheries Commission Stock Assessments [ASMFC] - ASMFSC 2012
 - l. Eastern Brook Trout Joint Venture [EBTJV] - EBTJV 2005
 - m. Northeast Odonate Assessment (damselflies & dragonflies) – White et al. 2014
 - n. Committee on the Status of Endangered Wildlife in Canada [COSEWIC] (all taxa) – COSEWIC 2013
6. **High Climate Change Vulnerability** – Whitman et al. 2013 and Galbraith et al 2014 (or other published source)
 7. **Understudied Rare Taxa** -- Recently documented or poorly surveyed rare species for which risk of extirpation is potentially high (e.g. few known occurrences) but insufficient data exist to conclusively assess distribution and status.
 8. **Historical** -- Species currently listed as state (SH) or global (GH) Historical (by MDIFW or NatureServe) that have reasonable probability of rediscovery with further survey.

Note: Priority 3 designation is not intended for:

1. species who have expanded their range into Maine within the past 10 years

Table 1. Vulnerability Concepts and Criteria for Selecting Maine SGCN

Vulnerability Factor	Authority	Metric	Potential Priority	Primary Taxa	Source
Extirpation	IUCN	CR or EN	1-2	All	IUCN
Extirpation	IUCN	VU	1-3	All	IUCN
Extirpation	USESAs	E or T or C or P	1-2	All	USFWS
Extirpation	MESA	E or T or P	1-2	All	MDIFW
Potential Extirpation	MDIFW	Special Concern (or PSC)	2-3	All	MDIFW
Potential Extirpation	NMFS	Species of Concern - SoC	2-3	Marine	NMFS
Recent Pop Decline	MDIFW	Steep declines < 15 yrs	1	All	Multiple
Recent Pop Decline	MDIFW	Steep declines < 30 yrs	2-3	All	Multiple
Regional Endemic	MDIFW	>90% of geographic range = Northeast	1-3	All	Multiple
Specialist Group Assessment	NESWDTC	> 1: Risk, Data, Area, Spec, Federal	1-3	Vertebrates & Mussels	Therres 1999
Specialist Group Assessment	RSGCN	High Resp AND Very High Concern	1	Vertebrates	Terwilliger 2013
Specialist Group Assessment	RSGCN	High Resp AND High Concern	2-3	Vertebrates	Terwilliger 2013
Specialist Group Assessment	NatureServe	G1-G2 (vertebrates) G1 (invertebrates)	1	All	NatureServe 2014
Specialist Group Assessment	NatureServe	G3 (vertebrates) G2 (invertebrates)	2-3	All	NatureServe 2014
Specialist Group Assessment	COSEWIC	E or T	2-3	All	COSEWIC 2013
Specialist Group Assessment	Partners in Flight	* US & CA Concern * Regional Concern or Stewardship species	1-3	Landbirds	PIFSC 2012
Specialist Group Assessment	NAWCP	High Concern	1-3	Waterbirds	Kushlan et al. 2002, 2006
Specialist Group Assessment	USSCP & NARSP	Highly Imperiled OR Spp of High Concern	1-3	Shorebirds	USSCP 2004, Clark & Niles 2000
Specialist Group Assessment	Birds of Cons Concern	Listed in BCR 14 or 30	1-3	All Birds	USFWS 2008
Specialist Group Assessment	NEPARC	High Resp AND High Concern (Red list)	1-3	Reptiles & Amphibians	NEPARC 2010
Specialist Group Assessment	American Fisheries Soc	Imperiled	1-3	Fish	Jelks et al. 2011
Specialist Group Assessment	ASMFC	Decreasing, Unstable/Decreasing, or Local Subpopulation	1-3	Marine Fish	ASMFC 2012

Specialist Group Assessment	EBTJV	Imperiled	1-3	Brook Trout	EBTJV 2005
Specialist Group Assessment	Northeast Odonate Assessment	High Vul OR [Mod Vul + Primary-Significant Responsibility]	1-3	Damselflies & Dragonflies	White et al. 2014
Climate Change	Manomet	High Vulnerability, > Low Confidence	2-3	All taxa	Whitman et al. 2013
Climate Change	PLOS ONE	High Concern, Highly Imperiled, or Critical	2-3	Shorebirds	Galbraith et al. 2014
Climate Change	Numerous	Miscellaneous	2-3	Marine	See references below with asterix
Rare & Poorly Surveyed	MDIFW	{<5 EOs and G4-G5 OR < 10 EOs and G3} AND specialized habitat concerns	3	All taxa	MDIFW Data
Historical	MDIFW and NatureServe (GH, SH)	Rediscovery potential	2-3	All	MDIFW Data

Metric Notes:

CR = Critically Endangered

EN = Endangered

VU = Vulnerable

E = Endangered

T = Threatened

C = Candidate

P = Proposed

G1-G5 and GH = NatureServe Global rarity ranks; range ranks are rounded down as follows: G1G2=G1, G1G3=G2

BCR = Bird Conservation Region

EO = Element Occurrence