

## Appendix B: Habitats of New York State critical to SGCN

The following habitat types of New York State were adapted from: Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (Eds.). (2002). *Ecological Communities of New York State, Second Edition*. A revised and expanded edition of Carol Reschke's *Ecological Communities of New York State*. (Draft for review). Albany, NY: New York Natural Heritage Program, New York State Department of Environmental Conservation.

### *Estuarine*

<b>Subsystem</b>	<b>Habitat</b>
Cultural	Shoreline
	Structure
Deep subtidal	Mud
	Other
	Pelagic
	Rocky
	Sand/ gravel
	SAV
	Structure
Intertidal	Emergent marsh
	Mudflats
	Other
	Rocky
	Sand/ gravel
	Shoreline
	Structure
Shallow subtidal	Mud
	Other
	Pelagic
	Rocky
	Sand/gravel
	SAV
	Stucture
Unknown	Unknown

## ***Lacustrine***

<b>Subsystem</b>	<b>Habitat</b>
Coastal plain	Mud
	Other
	Pelagic
	Rocky
	Sand/ gravel
	SAV
	Structure
Cold water deep	Mud
	Other
	Pelagic
	Rocky
	Sand/ gravel
	SAV
	Structure
Cold water shallow	Mud
	Other
	Pelagic
	Rocky
	Sand/ gravel
	SAV
	Structure
Cultural	Cement pond
	Treatment pond
Unknown	Unknown
Warm water deep	Mud
	Other
	Pelagic
	Rocky
	Sand/ gravel
	SAV
	Structure
Warm water shallow	Mud
	Other
	Pelagic
	Rocky
	Sand/ gravel
	SAV
	Structure

## ***Marine***

<b>Subsystem</b>	<b>Habitat</b>
Cultural	Shoreline
	Structure
Deep subtidal	Mud
	Pelagic
	Rocky
	Other
	Sand/ gravel
	SAV
Intertidal	Structure
	Emergent marsh
	Mudflats
	Other
	Rocky
	Sand/ gravel
	Shoreline
Shallow subtidal	Structure
	Mud
	Other
	Pelagic
	Rocky
	Sand/gravel
	SAV
Unknown	Unknown

## ***Palustrine***

<b>Subsystem</b>	<b>Habitat</b>
Cultural	Impoundment
	Other
Mineral soil wetland	Coniferous forested
	Deciduous forested
	Emergent marsh
	Meadow
	Deciduous/ coniferous
	Other
	Pond/ lake shore
	Shrub swamp
Peatlands	Bog/ fen
	Other
Unknown	Unknown

## ***Riverine***

<b>Subsystem</b>	<b>Habitat</b>
Coastal plain stream	Marsh
	Other
	Rocky bottom
	Sand/ gravel bottom
	SAV
	Mud bottom
	Structure
Cultural	Culvert/ concrete channel
Cold water stream	Marsh
	Mud bottom
	Rocky bottom
	Other
	Sand/ gravel bottom
	SAV
	Structure
Deep water river	Pelagic
	Mud bottom
	Rocky bottom
	Sand/ gravel bottom
	Structure
Deep water stream	Other
Warm water stream	Marsh
	Other
	Mud bottom
	Rocky bottom
	Sand/gravel bottom
	SAV
	Stucture
Unknown	Unknown

## ***Subterranean***

<b>Subsystem</b>	<b>Habitat</b>
Cultural	Mines
	Tunnels
Natural	Aquatic caves
	Terrestrial caves

## ***Terrestrial***

<b>Subsystem</b>	<b>Habitat</b>
Alpine/ mountain	Northern coniferous
	Northern deciduous
	Cliffs and open talus
	Other
Barrens/ woodlands	Cultural
	Deciduous/coniferous
	Northern coniferous
	Northern deciduous
	Other
	Shrublands
	Southern coniferous
Southern deciduous	
Coastal	Beach/ shoreline
	Cultural
	Dunes
	Other
	Sand/ gravel bar
Forested	Cultural
	Deciduous/ coniferous
	Northern coniferous
	Northern deciduous
	Other
	Southern coniferous
Southern deciduous	
Maritime	Beach/ shoreline
	Cultural
	Dunes
	Grasslands
	Heathlands
	Other
	Shrublands
Open upland	Beach/ shoreline
	Cliffs & open talus
	Cultural
	Dunes
	Grasslands
	Heathlands
	Other
	Sand/ gravel bar
Unknown	Unknown

## Appendix C:

A complete list of all the threats to SGCN listed in the CWCS planning database.

<b>Direct Impacts to Aquatic Individuals, Populations, or Genetic Diversity</b>
1. Human Disturbance - Direct and Indirect: <ul style="list-style-type: none"> <li>a. vehicle collisions: boats; jetskis</li> <li>b. entanglement, entrainment, impingement; electrocution</li> <li>c. illegal or unregulated harvest; overharvest, including eggs</li> </ul>
2. Contaminants, pesticides
3. Disease
4. Interspecific interactions: <ul style="list-style-type: none"> <li>a. loss of host species</li> <li>b. disturbed predator/prey cycles</li> <li>c. competition for life support (food, spawning sites, cover) from non-native species or species in places or numbers not historically found</li> <li>d. detrimental hybridization</li> <li>e. parasites</li> </ul>
5. Susceptibility to stochastic events: <ul style="list-style-type: none"> <li>a. weather; storm events</li> <li>b. species with isolated distributions</li> <li>c. rare species</li> </ul>

<b>Loss of Aquatic Habitat Quantity - Streams &amp; Rivers; Lakes, Ponds; Reservoirs; Wetlands, Vernal Pools; Associated Riparian Areas; Oceans</b>
6. Conversion from natural to cultural: resource extraction (mining); snagging; construction of docks, piers, and boathouses; dredging; filling; aquatic vegetation control. Wetlands/Vernal Pools: filling; draining; mosquito control; fragmentation or loss of connectivity.
7. Climate change: sea level rise; temperature changes
8. Alteration by natural processes: beaver activity; spring flooding
9. Sedimentation/Erosion: stormwater; agriculture; silviculture; road sanding; construction site runoff; cleaning roadside ditches
10. Altered hydrology: barriers (dams, weirs, culverts, bridges); water withdrawal/management; stormwater; floodplain alteration
11. Loss of streamside buffers (loss of resting and shelter area)
12. Competition from exotics: purple loosestrife; phragmites; water chestnut, etc.

**Loss of Aquatic Habitat Quality (Degraded health of system)**

- 13. Degradation of water quality: water chemistry; temperature; sediment; toxics; nutrients; algal blooms; on-site septics; acid rain; drainage(wetlands/vernal pools): agricultural, commercial, and residential purposes; mosquito control (wetlands/vernal pools): chemical application
- 14. Altered hydrology: water level management; stormwater; floodplain alteration; ground water extraction
- 15. Habitat composition altered by invasives or non-native species
- 16. Habitat composition altered by overuse: beaver; geese; swans; muskrat

**Direct Impacts to Terrestrial Individuals, Populations, or Genetic Diversity**

- 1. Human Disturbance - Direct and Indirect:
  - a. vehicle/structure collisions, including mowing; wind towers, cell towers, power lines
  - b. entanglement, including litter
  - c. illegal or unregulated harvest; overharvest, including eggs
- 2. Contaminants, pesticides
- 3. Disease
- 4. Interspecific interactions:
  - a. loss of host species
  - b. disrupted predator/prey cycles
  - c. competition for life support (food, nest sites, cover) from non-native species or species in places or numbers not historically found
  - d. detrimental hybridization
  - e. parasites
- 5. Susceptibility to stochastic events:
  - a. weather; storm events
  - b. species with isolated distributions
  - c. rare species

<b>Loss of or Degraded Terrestrial Habitat - Forests, Shrublands, Grasslands, Unique Natural Areas, Early Successional Areas</b>	
6.	Conversion from natural to cultural: urbanization, agriculture (row cropping), resource extraction (mining)
7.	Conversion from one natural covertype to another: succession; forestry; agricultural reversion
8.	Climate change: range restriction; changes in distribution; impacts to migration and breeding
9.	Erosion: silviculture; agriculture; stormwater
10.	Barriers: roads; development
11.	Pollution: acid rain; soil contamination
12.	Habitat composition altered by invasives or non-native species
13.	Habitat composition altered by overuse: deer browse

<b>Loss of or Degraded Terrestrial Habitat Function</b>	
14.	Fragmentation of habitat types
15.	Reduction of patch size, shape, area
16.	Human-created abrupt edges resulting in negative edge effects
17.	Loss of connectivity necessary to maintain metapopulations: decrease in travel corridors; increase in fragmentation
18.	Insensitive/unsustainable agricultural and silvicultural practices
19.	Active alteration of natural processes: fire, which would have reverted succession; flood control