



SGCN and Habitat Threats

Level 1 Threat Energy Production and Mining

Level 2 Threat: Mining and Quarrying

Exploring for, developing, and producing minerals and rocks

Species Associated With This Threat:		SGCN Priority Level P1 = 50 / P2 = 62 / P3 = 4		
Class	Ray-finned Fishes (<i>Actinopterygii</i>)	SGCN Priority		
	Atlantic Salmon (<i>Salmo salar</i>)	1		
	Severity: High Severity Actionability: Actionable with Difficulty Mining in streams can impact substrate quality, disrupt Atlantic salmon 0+ and 1+ parr populations. Likelihood is moderate and increasing. Spatial extent is Western Maine.			
	Brook Trout (<i>Salvelinus fontinalis</i>)	2		
	Severity: High Severity Actionability: Moderately Actionable Gravel mining near waterbodies can detrimentally affect groundwater dynamics			
Class	Birds (<i>Aves</i>)	SGCN Priority		
	Bank Swallow (<i>Riparia riparia</i>)	1		
	Severity: Moderate Severity Actionability: Highly Actionable While gravel and sand pits create nesting habitat, active operations can collapse banks or destroy colonies mid-season. Closure of pits can also lead to habitat loss if alternatives are unavailable. Mitigation during breeding season is feasible.			
	Grasshopper Sparrow (<i>Ammodramus savannarum</i>)	1		
	Severity: Moderate Severity Actionability: Actionable with Difficulty Gravel and sand mining in suitable grasslands or blueberry barrens destroys habitat.			
	Peregrine Falcon (<i>Falco peregrinus</i>)	1		
	Severity: Moderate Severity Actionability: Highly Actionable Peregrine falcons that nest in active quarries face a risk of nest failure if operations are not adjusted to minimize disturbance. Without cooperation between quarry operators and wildlife biologists, breeding pairs may be particularly vulnerable during the nesting season.			
Class	Insects (<i>Insecta</i>)	SGCN Priority		
	Barrens Itame (<i>Macaria exonerata</i>)	2		
	Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction			
	Barrens Metarranthis Moth (<i>Metarranthis apiciaria</i>)	2		
	Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction			



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Class	Insects (<i>Insecta</i>)	SGCN Priority
	Bold-based Zale Moth (<i>Zale lunifera</i>) Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction	2
	Broad Sallow (<i>Xylotype capax</i>) Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction	2
	Cobweb Skipper (<i>Hesperia metea metea</i>) Severity: Moderate Severity Actionability: Moderately Actionable	2
	Dusted Skipper (<i>Atrytonopsis hianna hianna</i>) Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction	3
	Eastern Buckmoth (<i>Hemileuca maia maia</i>) Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction	2
	Edwards' Hairstreak (<i>Satyrrium edwardsii edwardsii</i>) Severity: Moderate Severity Actionability: Moderately Actionable Barren habitat is often targeted for mining	2
	Hessel's Hairstreak (<i>Callophrys hesseli hesseli</i>) Severity: Moderate Severity Actionability: Moderately Actionable At least one site is proximate to active quarrying	1
	Oblique Zale (<i>Zale obliqua</i>) Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction	2
	Pine Barrens Zanclognatha (<i>Zanclognatha martha</i>) Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction	2
	Pine Devil (<i>Citheronia sepulcralis</i>) Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss (e.g., sand and gravel extraction)	3



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Class Insects (<i>Insecta</i>)		SGCN Priority
Pink Sallow (<i>Psectraglaea carnosa</i>)		3
Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss (e.g., sand and gravel extraction)		
Red-winged Sallow (<i>Xystocephalus rufago</i>)		2
Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction		
Similar Underwing (<i>Catocala similis</i>)		2
Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction		
Sleepy Duskywing (<i>Erynnis brizo</i>)		2
Severity: Moderate Severity Actionability: Moderately Actionable Barren habitat is often targeted for mining		
Twilight Moth (<i>Lycia rachelae</i>)		2
Severity: Moderate Severity Actionability: Moderately Actionable habitat loss; xeric pine barrens are prime areas for sand and gravel extraction		
Waxed Sallow Moth (<i>Chaetagnathia cerata</i>)		3
Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss (e.g., sand and gravel extraction)		
Class Reptiles (<i>Reptilia</i>)		SGCN Priority
Blanding's Turtle (<i>Emydoidea blandingii</i>)		1
Severity: Moderate Severity Actionability: Moderately Actionable Development and operation of quarries and gravel can contribute to habitat loss, degradation, and fragmentation		
Northern Black Racer (<i>Coluber constrictor constrictor</i>)		1
Severity: High Severity Actionability: Moderately Actionable Loss of habitat to quarries and more often gravel/sand extraction are substantial threats		
Spotted Turtle (<i>Clemmys guttata</i>)		1
Severity: Moderate Severity Actionability: Moderately Actionable Development and operation of quarries and gravel can contribute to habitat loss, degradation, and fragmentation		
Class Eudicots (<i>Eudicots</i>)		SGCN Priority



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Class	Eudicots (<i>Eudicots</i>)	SGCN Priority
	Allegheny Vine (<i>Adlumia fungosa</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	American Chestnut (<i>Castanea dentata</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	American Ginseng (<i>Panax quinquefolius</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Barren-strawberry (<i>Geum fragarioides</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Beach Plum (<i>Prunus maritima</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Bitternut Hickory (<i>Carya cordiformis</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Boreal Bedstraw (<i>Galium kamtschaticum</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Canada Buffaloberry (<i>Shepherdia canadensis</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Chestnut Oak (<i>Quercus montana</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Comb-leaved Mermaid-weed (<i>Proserpinaca pectinata</i>)	2
	Severity: High Severity Actionability: Highly Actionable	
	Cut-leaved Toothwort (<i>Cardamine concatenata</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Douglas' Knotweed (<i>Polygonum douglasii</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Dwarf Dandelion (<i>Krigia virginica</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Early Crowfoot (<i>Ranunculus fascicularis</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	



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Class	Eudicots (<i>Eudicots</i>)	SGCN Priority
	Flowering Dogwood (<i>Benthamidia florida</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Fogg's Goosefoot (<i>Chenopodium foggii</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Great Rhododendron (<i>Rhododendron maximum</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Hairy Boneset (<i>Eupatorium pubescens</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Hairy Bush-clover (<i>Lespedeza hirta ssp. hirta</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Lance-leaved Draba (<i>Draba cana</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Livelong Saxifrage (<i>Saxifraga paniculata ssp. neogaea</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Michaux's Sandwort (<i>Minuartia michauxii</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Missouri Rockcress (<i>Boechera missouriensis</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Mountain Honeysuckle (<i>Lonicera dioica</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Mountain-laurel (<i>Kalmia latifolia</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Narrow-leaved Goldenrod (<i>Euthamia caroliniana</i>)	2
	Severity: High Severity Actionability: Highly Actionable	
	New Jersey Tea (<i>Ceanothus americanus</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Northern Blazing Star (<i>Liatris novae-angliae</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	



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Class	Eudicots (<i>Eudicots</i>)	SGCN Priority
	Northern Stickseed (<i>Hackelia deflexa</i> var. <i>americana</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Northern Wild Comfrey (<i>Cynoglossum virginianum</i> var. <i>boreale</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Pale Jewel-weed (<i>Impatiens pallida</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Rattlesnake Hawkweed (<i>Hieracium venosum</i> var. <i>nudicaule</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Robbins' Milk-vetch (<i>Astragalus robbinsii</i> var. <i>minor</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Robinson's Hawkweed (<i>Hieracium robinsonii</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Rock Whitlow-grass (<i>Draba arabisans</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Rue-anemone (<i>Thalictrum thalictroides</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Scarlet Oak (<i>Quercus coccinea</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Seneca Snakeroot (<i>Polygala senega</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Silverling (<i>Paronychia argyrocoma</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Smooth Draba (<i>Draba glabella</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Smooth Rockcress (<i>Boechera laevigata</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Spotted Wintergreen (<i>Chimaphila maculata</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	



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Class	Eudicots (<i>Eudicots</i>)	SGCN Priority
	Squirrel-corn (<i>Dicentra canadensis</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Summer Grape (<i>Vitis aestivalis</i> var. <i>bicolor</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Swamp Birch (<i>Betula pumila</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Tufted Saxifrage (<i>Saxifraga cespitosa</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Unicorn Root (<i>Aletris farinosa</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Upland Boneset (<i>Eupatorium sessilifolium</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Upright Bindweed (<i>Calystegia spithamea</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	White-topped Aster (<i>Sericocarpus asteroides</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Wild Coffee (<i>Triosteum aurantiacum</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
Class	Clubmoss (<i>Lycopodiopsida</i>)	SGCN Priority
	Southern Bog-clubmoss (<i>Lycopodiella appressa</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
Class	Monocots (<i>Monocots</i>)	SGCN Priority
	Autumn Coral-root (<i>Corallorhiza odontorhiza</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Bicknell's Sedge (<i>Carex bicknellii</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Bur-reed Sedge (<i>Carex sparganioides</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	



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Class	Monocots (<i>Monocots</i>)	SGCN Priority
	Canada Mountain-ricegrass (<i>Piptatherum canadense</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Cliff Muhly (<i>Muhlenbergia sobolifera</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Clothed Sedge (<i>Carex vestita</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Dawn-land Sedge (<i>Carex waponahkikensis</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Dwarf Bulrush (<i>Lipocarpa micrantha</i>)	2
	Severity: High Severity Actionability: Highly Actionable	
	Houghton's Flatsedge (<i>Cyperus houghtonii</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Intermediate Sedge (<i>Carex media</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Livid Sedge (<i>Carex livida</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Long-tubercled Spike-rush (<i>Eleocharis tuberculosa</i>)	2
	Severity: High Severity Actionability: Highly Actionable	
	Moor Rush (<i>Juncus stygius</i> ssp. <i>americanus</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Muhlenberg Sedge (<i>Carex muehlenbergii</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	New England Northern Reed Grass (<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Nodding Pogonia (<i>Triphora trianthophora</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Orono Sedge (<i>Carex oronensis</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	



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Class	Monocots (<i>Monocots</i>)	SGCN Priority
	Pickering's Reed Bent-grass (<i>Calamagrostis pickeringii</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Ram's-head Lady's-slipper (<i>Cypripedium arietinum</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Secund Rush (<i>Juncus secundus</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Sharp-scaled Manna-grass (<i>Glyceria acutiflora</i>)	2
	Severity: High Severity Actionability: Highly Actionable	
	Showy Orchid (<i>Galearis spectabilis</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Slender Spikerush (<i>Eleocharis nitida</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Small Whorled Pogonia (<i>Isotria medeoloides</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Spreading Sedge (<i>Carex laxiculmis</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Swarthy Sedge (<i>Carex adusta</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Variable Sedge (<i>Carex polymorpha</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	White Bluegrass (<i>Poa glauca</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Wild Chess (<i>Bromus kalmii</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
Class	Fern (<i>Polypodiopsida</i>)	SGCN Priority
	Blunt-lobed Grapefern (<i>Botrychium oneidense</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	



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Class Fern (<i>Polypodiopsida</i>)	SGCN Priority
Blunt-lobed Woodsia (<i>Woodsia obtusa</i>)	1
Severity: High Severity Actionability: Moderately Actionable	
Broad Beech Fern (<i>Phegopteris hexagonoptera</i>)	2
Severity: High Severity Actionability: Moderately Actionable	
Green Spleenwort (<i>Asplenium viride</i>)	1
Severity: High Severity Actionability: Moderately Actionable	
Maidenhair Fern (<i>Adiantum viridimontanum</i>)	1
Severity: High Severity Actionability: Moderately Actionable	
Male Fern (<i>Dryopteris filix-mas</i> ssp. <i>brittonii</i>)	1
Severity: High Severity Actionability: Moderately Actionable	
Northern Woodsia (<i>Woodsia alpina</i>)	1
Severity: High Severity Actionability: Moderately Actionable	
Slender Cliffbrake (<i>Cryptogramma stelleri</i>)	1
Severity: High Severity Actionability: Moderately Actionable	
Smooth Woodsia (<i>Woodsia glabella</i>)	1
Severity: High Severity Actionability: Moderately Actionable	

Habitats Associated With This Threat:

Macrogroup Acadian-Northern Appalachian Forest

Acadian Low Elevation Spruce-Fir-Hardwood Forest

Mines for minerals, hard rock, metals; some constituent ecological systems are more prone to being developed as gravel pits.

Acadian Sub-boreal Spruce Flat

Mines for minerals, hard rock, metals; some constituent ecological systems are more prone to being developed as gravel pits.

Acadian-Appalachian Montane Spruce-Fir Forest

Mines for minerals, hard rock, metals; some constituent ecological systems are more prone to being developed as gravel pits.

Acadian-Northern Appalachian Forest Macrogroup- Unknown Habitat System

Mines for minerals, hard rock, metals; some constituent ecological systems are more prone to being developed as gravel pits.

Acadian-Northern Appalachian Forest Macrogroup- Unknown Habitat System

Very small, localize rock mines and gravel pits.



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Macrogroup Acadian-Northern Appalachian Forest

Laurentian-Acadian Northern Hardwood Forest

Very small, localize rock mines and gravel pits.

Laurentian-Acadian Pine-Hemlock-Hardwood Forest

Very small, localize rock mines and gravel pits.

Laurentian-Acadian Sub-boreal Dry-Mesic Pine-Black Spruce-Hardwood Forest

Mines for minerals, hard rock, metals; some constituent ecological systems are more prone to being developed as gravel pits.

Macrogroup Laurentian-Acadian Flooded & Swamp Forest

Laurentian-Acadian Floodplain Forest

Macrogroup Lotic

Cold Rivers

Mining and quarrying can dramatically affect physical habitat, groundwater dynamics or geochemical conditions.

High Slope Headwater

Mining and quarrying can dramatically affect physical habitat, groundwater dynamics or geochemical conditions.

Low Slope Headwater

Mining and quarrying can dramatically affect physical habitat, groundwater dynamics or geochemical conditions.

Moderate Slope Headwater

Mining and quarrying can dramatically affect physical habitat, groundwater dynamics or geochemical conditions.

Transitional Small and Medium Rivers

Mining and quarrying can dramatically affect physical habitat, groundwater dynamics or geochemical conditions.

Unknown Thermal Regime Small and Medium Rivers

Mining and quarrying can dramatically affect physical habitat, groundwater dynamics or geochemical conditions.

Macrogroup North American Boreal & Subboreal Alkaline Fen

Laurentian-Acadian Alkaline Fen

peat harvesting/burning unlikely to restart in near future, but impacts could be significant

Macrogroup North American Boreal & Subboreal Bog & Acidic Fen

Acadian Maritime Bog

peat harvesting/burning unlikely to restart in near future, but impacts could be significant

Eastern Boreal-Sub-Boreal Acidic Basin Fen

peat harvesting/burning unlikely to restart in near future, but impacts could be significant

Eastern Boreal-Sub-Boreal Bog

peat harvesting/burning unlikely to restart in near future, but impacts could be significant

North American Boreal & Subboreal Bog & Acidic Fen Macrogroup - Unknown Habitat System

peat harvesting/burning unlikely to restart in near future, but6 impacts are significant



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Macrogroup North American Boreal & Subboreal Bog & Acidic Fen

North-Central Interior and Appalachian Acidic Peatland
peat harvesting/burning unlikely to restart in near future, but impacts could be significant

Macrogroup North Atlantic Coastal Forest & Woodland

Northern Atlantic Coastal Plain Pitch Pine Barrens
Very small, localize rock mines and gravel pits.



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The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, threats, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.