



Rhode Island Wildlife Action Plan

Appendices 1a, 1b, 1c, 1d, 1e, 1f

Table of Contents

Appendix 1a. Rhode Island SWAP Data Sources 1

Appendix 1b. Rhode Island Species of Greatest Conservation Need 30

Appendix 1c. Regional Conservation Needs-Species of Greatest Conservation Need 50

Appendix 1d. List of Rare Plants in Rhode Island 62

Appendix 1e: Summary of Rhode Island Vertebrate Additions and Deletions to 2005 SGCN List 74

Appendix 1f: Summary of Rhode Island Invertebrate Additions and Deletions to 2005 SGCN List 77

Appendix 1a. Rhode Island SWAP Data Sources

This appendix lists the information sources that were researched, compiled, and reviewed in order to best determine and present the status of the full array of wildlife and its conservation in Rhode Island (Element 1). A wide diversity of literature and programs was consulted and compiled through extensive research and coordination efforts. Some of these sources are referenced in the Literature Cited section of this document, and the remaining sources are provided here as a resource for users and implementing parties of this document as well as for future revisions. Sources include published and unpublished data, reports, and correspondence from existing conservation programs and are listed in alphabetical order.

World Wide Web Resources

Organization	Website Address
American Birding Association	www.aba.org
American Planning Agency, Rhode Island Chapter	http://www.rhodeislandapa.org/
Atlantic Coastal Cooperative Statistics Program	http://www.accsp.org/
Audubon Society of Rhode Island	http://www.asri.org/
Coastal America	http://www.coastalamerica.gov
Coastal Institute	www.ci.uri.edu/
Coastal Resources Center	www.crc.uri.edu/
Coastal Resources Management Council	http://www.crmc.state.ri.us/
Critical Lands Analysis Project (URI)	http://www.edc.uri.edu/criticallands/
Ducks Unlimited	http://www.ducks.org/
Eco RI News	http://www.ecori.org/
Environmental Council of Rhode Island (ECRI)	http://www.environmentcouncilri.org/
Governor's Narragansett Bay and Watershed Planning Commission	http://www.ci.uri.edu/GovComm/
<i>A Greener Path ... Greenspace and Greenways for RI's Future</i>	http://www.planning.ri.gov/documents/guide_plan/greenways_rpt84.pdf
Greenwich Bay Special Area Management Plan (SAMP)	http://www.crmc.ri.gov/samp_gb.html
Grow Smart Rhode Island	http://www.growsmartri.com/
The Institute for Participatory Management and Planning	http://www.consentbuilding.com/
Land Trust Alliance	http://www.landtrustalliance.org/about/regional-programs/ne
MapCoast Partnership	www.mapcoast.org
Narragansett Bay Commission	http://narrabay.com/
Narragansett Bay Estuary Program	www.nbep.org/
Narragansett Bay Gateway	www.narrbay.org/
Narrow River Preservation Association	http://www.narrowriver.org/
National Audubon Society	http://www.audubon.org/
National Wildlife Federation	http://www.nwf.org/
National Wild Turkey Federation	http://www.nwtf.org/
NatureServe	http://www.natureserve.org/
The Nature Conservancy	http://nature.org/wherewework/northamerica/states/rhodeisland/
New England Association of Resource Conservation and Development Areas- Rhode Island	http://www.newenglandrcd.org/RI_Page.html
New England Wildflower Society- Plant Conservation Program	http://www.newenglandwild.org/conserv

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Organization	Website Address
New England Water Pollution Control Commission	http://www.neiwpcc.org/
North Atlantic Coast Cooperative Ecosystems Studies Unit (CESU)	http://www.naccesu.org/
North Atlantic Right Whale Consortium	http://www.narwc.org/
Northeast Aquatic Nuisance Species Panel	http://www.northeastans.org/
Partnership for Narragansett Bay	http://www.ci.uri.edu/Projects/PNB/default.html
Pawtuxet River Watershed Council	http://www.pawtuxet.org/
<i>Providence Plan</i>	www.provplan.org/
Rhode Island Agricultural Experiment Station	http://web.uri.edu/riaes/research/
Rhode Island Association of Conservation Commissions (RIACC)	http://www.riacc-online.org/
Rhode Island Bays, Rivers, and Watershed Coordination Team	http://www.coordinationteam.ri.gov/
Rhode Island Census Data	http://www.dlt.ri.gov/lmi/census.htm
Rhode Island Conservation Stewardship Collaborative	http://www.ricsc.org/
Rhode Island Coverts Project	http://www.rircd.org/covertsprojectintroduction.htm
Rhode Island Dept. of Environmental Management (RI DEM)	http://www.dem.ri.gov/pubs/index.htm
RI DEM, Division of Fish and Wildlife	http://www.dem.ri.gov/programs/bnatures/fishwild/index.htm
RI DEM Hunting and Trapping Regulation Guide	http://www.dem.ri.gov/pubs/regs/regs/fishwild/hunt1415.pdf
Rhode Island Economic Development Corporation (Commerce RI)	http://www.commerceri.com/
Rhode Island Forest Conservators Organization	http://www.rifco.org/
Rhode Island Geographic Information System (RIGIS)	www.edc.uri.edu/rigis/
Rhode Island Habitat Restoration	www.edc.uri.edu/restoration/
Rhode Island Invasive Species Council	http://rinhs.org/invasive-species-portal/riisc/
Rhode Island Land and Water Partnership	http://www.landandwaterpartnership.org/index.php
Rhode Island Land Trust Council	http://www.rilandtrusts.org/
Rhode Island League of Cities and Towns	http://www.rileague.org/
Rhode Island Natural Heritage Program	www.dem.ri.gov/programs/bpoladm/plandev/heritage/index.htm
Rhode Island Natural History Survey	www.rinhs.org
Rhode Island Resource Conservation and Development Area Council, Inc.	http://www.rircd.org/
Rhode Island Rivers Council	http://www.ririvers.org/
Rhode Island Saltwater Anglers Association	www.RISAA.org
Rhode Island Sea Grant	seagrant.gso.uri.edu/
<i>Rhode Island State Guide Plan</i>	http://www.planning.state.ri.us/planning/
Rhode Island Surfrider Foundation	www.risurfrider.org/
<i>Rhode Island Travel Corridors Plan</i>	http://www.planning.ri.gov/documents/comp/Rhode%20Island%20Travel%20Corridors.pdf
Rhode Island Wild Plant Society	http://www.riwps.org

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Organization	Website Address
<i>Rivers Policy and Classification Plan</i>	http://www.planning.ri.gov/documents/guide_plan/rivers.pdf
Roger Williams Zoo Conservation Programs	http://www.rwpzoo.org/137/conservation-roger-williams-park-zoo
Ruffed Grouse Society	http://www.ruffedgrousesociety.org/
Salt Ponds Coalition	http://www.saltpondscoalition.org/
Save the Bay	http://www.savebay.org/homepage
Saugatucket River Heritage Corridor Coalition	http://robadue.com/srhcc/
Scituate Conservation Commission	http://www.scituatericonservation.org/
Scituate Land Trust	http://www.scituateri.org/land%20trust%204.htm
South County Greenspace Project	http://www.dem.ri.gov/programs/bpoldm/suswshed/scgreen.htm
South County Watersheds Technical Planning Assistance Project	http://www.dem.ri.gov/programs/bpoldm/suswshed/sctpap.htm
<i>South Kingstown Comprehensive Community Plan</i>	http://www.southkingstownri.com/town-government/municipal-departments/planning/comprehensive-community-plan
South Kingstown Land Trust	http://sklt.org/
Special Area Management Plans for RI	http://www.crmc.ri.gov/samps.html
State Planning Council Publications	http://www.planning.state.ri.us/statewideplanning/localplanning/planguidelines.php
Teaming with Wildlife	http://www.teaming.com/
Trout Unlimited	http://www.tu.org
Trust for Public Land	http://www.tpl.org/
URI Dept. of Natural Resources Science	http://nrs.uri.edu/
URI Environmental Data Center	http://www.edc.uri.edu/
URI Cooperative Extension Service	http://web.uri.edu/riaes/extension/
URI Watershed Watch	http://www.uri.edu/ce/wq/ww/index.htm
<i>The Urban and Community Forest Plan</i>	http://www.planning.ri.gov/documents/guide_plan/Forest_rpt97.pdf
U.S. Fish and Wildlife Service (USFWS)	http://www.fws.gov
USFWS Tribal Wildlife Grants Program (2007-2012)	http://www.fws.gov/nativeamerican/pdf/twg-projects-summary-2007-2012.pdf
The Wildlife Society	http://www.wildlife.org/
The Wildlife Management Institute	http://www.wildlifemanagementinstitute.org/
Watershed Counts	http://www.watershedcounts.org/
Wood-Pawcatuck Watershed Association	http://www.wpwa.org/
Woonasquatucket Greenspace Project	http://www.dem.ri.gov/programs/bpoldm/suswshed/woongsp.htm
Woonasquatucket River Watershed Council	http://www.woonasquatucket.org/

Existing Conservation and Management Plans Reviewed

Plan	Source	Reference
<i>Freshwater Ecoregions of North America: A Conservation Assessment</i>	World Wildlife Fund	Abell et al. (2000)
<i>Atlantic Coast Joint Venture Strategic Plan</i>	Atlantic Coast Joint Venture	ACJV (2004)
<i>Atlantic Coast Joint Venture Strategic Plan Update</i>	Atlantic Coast Joint Venture	ACJV (2009)
<i>Ecosystem Restoration Ten Mile River East Providence, RI Project Report and Environmental Assessment</i>	US Army Corps of Engineers (ACOE)	ACOE (2005)
<i>Mute Swan: An Invasive Species and Its Management in Rhode Island</i>	RI DEM	Allin (2002)
<i>North Atlantic Coast Ecoregional Conservation Plan Update</i>	The Nature Conservancy	Anderson et al. (2006)
<i>Northeast Habitat Guides: A Companion to the Aquatic and Terrestrial Habitat Maps</i>	The Nature Conservancy	Anderson et al. (2013)
<i>Habitat Inventory and Resource Mapping for Narragansett Bay and Associated Coastline</i>	ASA	ASA (1992)
<i>Description of the Ecoregions of the United States</i>	U.S. Forest Service	Bailey (1995)
<i>Lower New England – Northern Piedmont Ecoregional Conservation Plan</i>	The Nature Conservancy	Barbour et al. (2003)
<i>North Atlantic Coast Ecoregional Conservation Plan</i>	The Nature Conservancy	Beers and Davison (1999)
<i>Final Report of Two Workshops: "Environmental Monitoring in Rhode Island: A Synthesis" and "Developing Ecological Indicators - Vital Signs for Narragansett Bay and Coastal Ponds"</i>	The Partnership for Narragansett Bay	Berounsky (2002)
<i>Coastal Property and Landscape Management Guidebook: How to Save Time, Money, and the Coastal Environment</i>	Save the Bay	Blanchard (1999)
<i>United States Shorebird Conservation Plan</i>	Manomet Center for Conservation Sciences	Brown et al. (2001)
<i>Cultural Heritage And Land Management Plan For The Blackstone River Valley National Heritage Corridor</i>	Blackstone River Valley National Heritage Corridor Commission (BRVNHCC)	BRVNHCC (1989)
<i>Using Shrubland Mapping to Sample for New England Cottontails</i>	URI NRS	Buffum (2012a)
<i>A New Tool for Mapping Forest Habitats in Rhode Island</i>	URI NRS	Buffum (2012b)
<i>Freshwater Ecoregions of the World-118: Northeast US & Canada Atlantic Drainages</i>	FEOW	Burridge, M. and N. Mandrak (2013)

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Plan	Source	Reference
<i>Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States</i>	Metropolitan Conservation Alliance	Calhoun and Klemens (2002)
<i>Northern Atlantic Regional Shorebird Plan</i>	Northern Atlantic Shorebird Habitat Working Group	Clark and Niles (2000)
<i>Ecological Systems of the United States: A Working Classification of U.S. Terrestrial Systems</i>	NatureServe	Comer et al. (2003)
<i>American Woodcock Population Status 2009</i>	USFWS	Cooper, T.R., and K. Parker (2009)
<i>Rhode Island Aquatic Invasive Species Management Plan</i>	Aquatic Nuisance Species Task Force (CRMC, URI, RINHS)	CRMC et al. (2007)
<i>Partners in Flight Landbird Conservation Plan: Physiographic Area 09: Southern New England</i>	American Bird Conservancy	Dettmers and Rosenberg (2000)
<i>Long-term Monitoring Program Narragansett Bay, National Estuarine Research Reserve</i>	Durant	Durant (2011)
<i>South Kingstown, Rhode Island, Comprehensive Community Plan Five-Year Update</i>	Town of South Kingstown	Edwards and Kelcey (2005)
<i>Rhode Island Ecological Communities Classification</i>	Richard Enser	Enser (2011)
<i>Natural Communities of Rhode Island</i>	Richard Enser, Rhode Island Natural Heritage Program & Julie Lundgren, The Nature Conservancy	Enser and Lundgren (2006)
<i>Comprehensive Conservation and Management Plan for Narragansett Bay</i>	U.S. Environmental Protection Agency (EPA)	EPA (1992)
<i>Index of Watershed Indicators: An Overview</i>	Environmental Protection Agency	EPA (2002)
<i>Strategic Plan for the Restoration of Anadromous Fishes to Rhode Island Coastal Streams</i>	RI DEM	Erkan (2002) Updated info available at: http://www.edc.uri.edu/restoration/html/intro/fish.htm#fcase
<i>Rhode Island Habitat Restoration Team Portal Demonstration Workshop Report</i>	ESS Group, Inc. for RI CMRC	ESS Group (2003)
<i>Rhode Island Department of Environmental Management Quality Management Plan</i>	RI DEM	Getz (2010)
<i>Partners in Flight Landbird Conservation Plan: Physiographic Area 27: Northern New England</i>	Partners in Flight	Hodgman and Rosenberg (2000)
<i>Final Watershed Management Plan for Green Hill and Eastern Ninigret Ponds, South Kingstown and Charlestown, RI</i>	Horsley Witten Group, Inc.	Horsley Witten Group, Inc. (2007)

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Plan	Source	Reference
<i>Waterbird Conservation for the Americas: The North America Waterbird Conservation Plan</i>	Waterbird Conservation for the Americas	Kushlan et al. (2002) Version 2: Available online only at: http://www.waterbirdconservation.org/nawcp.html
<i>Draft Forestry, Agriculture, and Land Use Change Strategies for Reducing Greenhouse Gas Emissions in Rhode Island</i>	RI DEM	Lazarus and Smith (2004)
<i>2004 Blackstone River Watershed Five-Year Action Plan</i>	MA Executive Office of Environmental Affairs (EOEA)	MA EOEA (2004)
<i>Mid-Atlantic/New England/Maritimes Region Waterbird Conservation Plan</i>	MANEM Waterbird Conservation Group	MANEM (2006)
<i>Rivers of Life: Critical Watersheds for Protecting Freshwater Biodiversity</i>	The Nature Conservancy	Master et al. (1998)
<i>Ecologically Sound Mosquito Control Management in Wetlands</i>	Xerces Society	Mazzacano and Black (2013)
<i>Development of a Statewide Freshwater Wetland Restoration Strategy: Site Identification and Prioritization Methods</i>	University of Rhode Island (URI)	Miller and Golet (2001) Phase I and II update available at: http://www.dem.ri.gov/programs/benviron/water/wetlands/rsdev.htm
<i>RI Ecological Communities Photo Atlas</i>	URI	Monahan and Payne (2012)
<i>State of the Birds 2014 Report on Public Lands and Waters</i>	North American Bird Conservation Initiative (NABCI)	NABCI, U.S. Committee. 2014
<i>Narrow River Handbook: A Guide to Living in the Watershed 2008</i>	Narrow River Preservation Association	Narrow River Preservation Association (2008)
<i>Consolidated Atlantic Highly Migratory Species Fishery Management Plan</i>	National Oceanic and Atmospheric Administration (NOAA)	National Marine Fisheries Service (NMFS) (2006)
<i>Atlantic Salmon Fishery Management Plan</i>	NEFMC	NEFMC (1987) Amendments online at: http://www.nmfs.noaa.gov/sfa/reg_svcs/fmp/fmp_collection.htm (in October 2014)
<i>Deep-Sea Red Crab Fishery Management Plan</i>	NEFMC	NEFMC (2002) Amendments online at: http://www.nmfs.noaa.gov/sfa/reg_svcs/fmp/fmp_collection.htm (in October 2014)
<i>Northeast Multispecies (Large Mesh/Groundfish) Fishery Management Plan</i>	NEFMC	NEFMC (2003a) http://www.nmfs.noaa.gov/sfa/reg_svcs/fmp/fmp_collection.htm (in October 2014)
<i>Northeast Multispecies (Small Mesh/Whiting) Fishery Management Plan</i>	NEFMC	NEFMC (2003b)
<i>Northeast Skate Complex Fishery Management Plan</i>	NEFMC	NEFMC (2003c) http://www.nmfs.noaa.gov/sfa/reg_svcs/fmp/fmp_collection.htm (in October 2014)

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Plan	Source	Reference
<i>Monkfish Fishery Management Plan</i>	NEFMC	NEFMC (2004) http://www.nmfs.noaa.gov/sfa/reg_svcs/fmp/fmp_collection.htm (in October 2014)
<i>Atlantic Herring Fishery Management Plan</i>	New England Fishery Management Council (NEFMC)	NEFMC (2006) Amendments online at: http://www.nmfs.noaa.gov/sfa/reg_svcs/fmp/fmp_collection.htm
<i>Atlantic Sea Scallop Fishery Management Plan</i>	NEFMC	NEFMC (2007) Amendments online at: http://www.nmfs.noaa.gov/sfa/reg_svcs/fmp/fmp_collection.htm (in October 2014)
<i>Final Amendment 1 to the Fishery Management Plan for Atlantic Tunas, Swordfish and Sharks</i>	National Marine Fisheries Service	NMFS (2003)
<i>Recovery Plan for U.S. Population of Atlantic Green Turtle</i>	NMFS and USFWS	NMFS and USFWS (1991a)
<i>Recovery Plan for U.S. Population of Loggerhead Turtle (Caretta caretta)</i>	NMFS and USFWS	NMFS and USFWS (1991b)
<i>Recovery Plan for Leatherback Turtles in the U.S. Caribbean, Atlantic and Gulf of Mexico</i>	NMFS and USFWS	NMFS and USFWS (1992)
<i>Recovery Plan for Hawksbill Turtles in the U.S. Caribbean Sea, Atlantic Ocean, and Gulf of Mexico</i>	NMFS and USFWS	NMFS and USFWS (1993)
<i>Recovery Plan for U.S. Population of Loggerhead Turtle (Caretta caretta) Second Revision</i>	NMFS and USFWS	NMFS and USFWS (2008)
<i>Draft Bi-National Recovery Plan for the Kemp's Ridley Sea Turtle Second Revision March 2010</i>	NMFS, USFWS, and Secretariat of Environment & Natural Resources Mexico	NMFS, USFWS, and SEMARNAT (2010)
<i>Amendment 2 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan</i>	NOAA Fisheries	NOAA Fisheries (2008)
<i>Amendment 1 to the Consolidated Atlantic highly Migratory Species Fishery Management Plan Essential Fish Habitat</i>	NOAA Fisheries	NOAA Fisheries (2009)
<i>Amendment 3 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan</i>	NOAA Fisheries	NOAA Fisheries (2010)
<i>Amendment 5 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan</i>	NOAA Fisheries	NOAA Fisheries (2011)
<i>North American Waterfowl Management Plan: Strengthening the Biological Foundation-2004 Implementation Framework</i>	North American Waterfowl Management Plan Committee	North American Waterfowl Management Plan Committee (2004)

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Plan	Source	Reference
<i>Managing Grasslands, Shrublands, and Young Forest Habitats for Wildlife: A Guide for the Northeast</i>	RI DEM Northeast Upland Habitat Technical Committee	Northeast Upland Habitat Technical Committee (2006)
<i>Unified Watershed Assessment and Restoration Priorities in Rhode Island</i>	Natural Resources Conservation Service (NRCS) and RI DEM	NRCS and RI DEM (1998)
<i>Mobilizing Private Landowners to Manage Forests for Wildlife Habitat- the Experience of the Rhode Island Coverts Program</i>	Dept of Natural Resource Science (NRS) URI	NRS URI (2011)
<i>The Global 200: Priority ecoregions for global conservation</i>	World Wildlife Fund	Olson and Dinerstein (2002)
<i>The Pawcatuck Watershed Report</i>	Pawcatuck Watershed Partnership	Pawcatuck Watershed Partnership (1998) Updates on specific invasive species online at: http://www.wpwa.org/reports.php
<i>Commercial Fishing License Reform Initiative – Phase II</i>	The Coastal Institute	Petruny-Parker et al. (2001)
<i>America’s Living Oceans: Charting a Course for Sea Change. A Report to the Nation, Recommendations for a New Ocean Policy</i>	Pew Oceans Commission	Pew Oceans Commission (2003)
<i>Ongoing Nekton Monitoring Within the NERRS</i>	Raposa	Raposa (2006)
<i>A protocol for Long-term Monitoring of Harbor Seals in Narragansett Bay, RI</i>	Raposa, Dapp	Raposa and Dapp (2009)
<i>Home Range and Habitat Use Patterns of Eastern Box Turtles on Prudence Island, RI</i>	Raposa, Kutcher	Raposa and Kutcher (2007)
<i>Monitoring Wildlife in the Narragansett Bay National Estuarine Research Reserve Using Weekly Driving Surveys</i>	Raposa, Rehor	Raposa and Rehor (2004)
<i>An Ecological Profile of the Narragansett Bay National Estuarine Research Reserve</i>	Edited by Kenneth B. Raposa and Malia L. Schwartz	Raposa and Schwartz, eds. (undated)
<i>A protocol for rapidly monitoring macroalgae in the Narragansett Bay Research Reserve</i>	Raposa, Russell, and Bertrand	Raposa et al. (2011)
<i>Establishment of Riparian and Shoreline Buffers and the Taxation of Property Included in Buffers</i>	Rhode Island Rivers Council	Rhode Island Rivers Council (2005)
<i>A Vision for Rhode Island Agriculture: A Five-Year Strategic Plan</i>	RI DEM and RI Agricultural Partnership	RI Agricultural Partnership (2011)
<i>Recommendations for Management of the Woonasquatucket River and Promenade Street District</i>	RI CRMC	RI CMRC (2008a)
<i>RI Ocean Special Area Management Plan (SAMP)</i>	URI	RI CMRC (2010a)

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Plan	Source	Reference
<i>Marine Resources Development Plan</i>	RI CRMC	RI CRMC (2006)
<i>Marine Resources Development Plan Implementation</i>	RI CRMC	RI CRMC (2007)
<i>RI Coastal and Estuarine Land Conservation Plan</i>	RI CRMC	RI CRMC (2008b)
<i>Rhode Island Coastal and Estuarine Land Conservation Plan</i>	CRMC, NOAA	RI CRMC (2010b)
<i>A Greener Path ... Greenspace and Greenways for Rhode Island's Future</i>	RI DA	RI DA (1994)
<i>Water Supply Policies for Rhode Island</i>	RI DA	RI DA (1997)
<i>The Urban and Community Forest Plan</i>	RI DA	RI DA (1999)
<i>Governor's Growth Planning Council 2001: Property Tax Subcommittee Report</i>	RI DA	RI DA (2001)
<i>Governor's Growth Planning Council 2001: State Programs and Sustainable Development Inventory, Analysis and Recommendations Report</i>	RI DA	RI DA (2002a)
<i>Rhode Island Drought Management Plan</i>	RI DA	RI DA (2002b) Updates available online at: http://www.wrb.state.ri.us/work_programs_drought.html
<i>Scituate Reservoir Watershed Management Plan</i>	RI DA	RI DA (2002c) Update of Scituate Watershed Zoning Project: http://www.dem.ri.gov/programs/bpoladm/suswshed/scituate.htm
<i>Rhode Island Energy Plan</i>	RI DA	RI DA (2002d) Update due in November 2014
<i>Rivers Policy and Classification Plan</i>	RI DA	RI DA (2004)
<i>Forest Resources Management Plan</i>	RI DA	RI DA (2005)
<i>State Guide Plan Overview</i>	RI DA	RI DA (2014) http://www.planning.ri.gov/planning/overview/index.php
<i>Rhode Island Growth Priorities for 2000 and Beyond</i>	RI DA and URI	RI DA and URI (2000)
<i>Land Use 2025 State Guide Plan Element 121 Report Number 109</i>	RI DA Division of Planning	RI DA Division of Planning (2006)
<i>Land Use 2025: An Update</i>	RI DA Division of Planning	RI DA Division of Planning (2006)
<i>Rhode Island Water 2030</i>	RI DA, Division of Planning	RI DA Division of Planning (2010)
<i>Total Maximum Daily Load for Total Phosphorous Loads to Stafford Pond</i>	RI DEM	RI DEM (1998a)
<i>Forestry Asset Management Plan</i>	RI DEM	RI DEM (2001a)

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Plan	Source	Reference
<i>The Rhode Island Parks and Beach System Study and Asset Management Plan</i>	RI DEM	RI DEM (2001b)
<i>Fecal Coliform TMDL Development for Hunt River, Rhode Island</i>	RI DEM	RI DEM (2001c)
<i>Fecal Coliform TMDL for Pettaquamscutt (Narrow) River Watershed, Rhode Island</i>	RI DEM	RI DEM (2001d)
<i>Fecal Coliform TMDL Development for Scrabbletown Brook, Rhode Island</i>	RI DEM	RI DEM (2001e)
<i>Narrow River Watershed Action Plan 2001-2004</i>	RI DEM	RI DEM (2001f)
<i>Draft Salt Ponds Watershed Action Plan 2001-2004</i>	RI DEM	RI DEM (2001g)
<i>Draft Saugatucket Watershed Action Plan 2001-2004</i>	RI DEM	RI DEM (2001h)
<i>Draft Woonasquatucket Watershed Action Plan</i>	RI DEM	RI DEM (2001i)
<i>Rhode Island Greenhouse Gas Action Plan, Final Phase I Report</i>	RI DEM	RI DEM (2002a)
<i>Phase II Intergovernmental Working Group (IWG), Management of Rhode Island Recreational Fisheries, A Marine Recreational Fishing License for RI</i>	RI DEM	RI DEM (2002b)
<i>Fecal Coliform TMDL Development for Barrington River, Rhode Island</i>	RI DEM	RI DEM (2002c)
<i>Fecal Coliform TMDL Development for Crooked Brook, Rhode Island</i>	RI DEM	RI DEM (2002d)
<i>Fecal Coliform TMDL for Palmer River, Rhode Island</i>	RI DEM	RI DEM (2002f)
<i>Stock Status of Marine Resources and Summary of Fisheries Management in Rhode Island</i>	RI DEM	RI DEM (2002g)
<i>Fecal Coliform TMDL for the Runnins River, Rhode Island</i>	RI DEM	RI DEM (2002h)
<i>South County Greenspace Protection Strategy</i>	RI DEM	RI DEM (2003a)
<i>Draft Total Maximum Daily Load, The Sakonnet River – Portsmouth Park and The Cove – Island Park</i>	RI DEM	RI DEM (2003b)
<i>Final Pathogen TMDL for the Saugatucket River, Mitchell Brook, Rocky Brook and Indian Run Brook</i>	RI DEM	RI DEM (2003c)
<i>Total Phosphorous TMDL for Chickasheen Brook, Barber Pond, and Yawgoo Pond, Rhode Island</i>	RI DEM	RI DEM (2003d)
<i>Mute Swan Management Plan</i>	RI DEM DFW	RI DEM (2006)
<i>Soil Erosion Best Management Practices</i>	RI DEM	RI DEM (2007)
<i>Ocean State Outdoors: Rhode Island's Comprehensive Outdoor Recreation Plan</i>	RI DEM	RI DEM (2009) Amended
<i>2010 DEM Workplan Report</i>	RI DEM	RI DEM (2010a)

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Plan	Source	Reference
<i>Narragansett Bay National Estuarine Research Reserve Management Plan 2010-2015</i>	RI DEM	RI DEM (2010b)
<i>Wetland BMP Manual: Techniques for Avoidance and Minimization</i>	RI DEM	RI DEM (2010c)
<i>State of Rhode Island Department of Environmental Management Freshwater Wetlands Program Core Elements Plan</i>	RI DEM for EPA	RI DEM (2011a)
<i>State of RI 2011 Annual report to the Governor on the Activities of the Dam Safety Program</i>	RI DEM Office of Compliance and Inspection	RI DEM (2011b)
<i>Rhode Island Freshwater Lakes and Ponds: Aquatic Invasive Plants and Water Quality Concerns</i>	RI DEM	RI DEM (2012)
<i>2014 Management Plan for the Crustacean Fishery Sector</i>	RI DEM DFW Marine Fisheries	RI DEM (2014a)
<i>2014 Management Plan for the Finfish Fishery Sector</i>	RI DEM DFW Marine Fisheries	RI DEM (2014b)
<i>Draft 2015 Management Plan for the Finfish Fishery Sector</i>	RI DEM DFW Marine Fisheries	RI DEM (2014c)
<i>2014 Management Plan for the Shellfish Fishery Sector</i>	RI DEM	RI DEM (2014d)
<i>Rhode Island Low Impact Development Site Planning Design Guidance Manual</i>	RI DEM and RI CMRC	RI DEM and RI CMRC (2011)
<i>Prioritizing Non-regulatory Protection of Vernal Pools in the Queen's River Watershed, RI</i>	RI DEM and EPA	RI DEM and EPA (2007)
<i>Integrating Rapid Assessment with Biological and Landscape Indicators of Freshwater Wetland Condition</i>	RI DEM & RI NHS	RI DEM and RI NHS (2011)
<i>Performance Partnership Agreement, State Fiscal Years 2011 and 2013</i>	RI DEM and EPA	RI DEM and US EPA (2011)
<i>Dealing with Resident Canada Geese</i>	RI DEM and USDA	RI DEM and USDA (2002)
<i>Rhode Island Marine Fisheries Stock Status & Management 2007 In Review</i>	RI DEM	RI DEM DFW Marine Fisheries (2007)
<i>Rhode Island Wetlands Priority Plan</i>	RI DEM OWR	RI DEM OWR (2003e)
<i>State of Rhode Island and Providence Plantations Water Monitoring Strategy 2005-2010</i>	RI DEM OWR	RI DEM OWR (2005a)
<i>Total Maximum Daily Load Analysis for Greenwich Bay Waters</i>	RI DEM OWR	RI DEM OWR (2005b)
<i>Rhode Island Freshwater Wetland Monitoring and Assessment Plan</i>	RI DEM OWR	RI DEM OWR (2006a)
<i>Total Maximum Daily Load Analysis for Green Hill Pond, Ninigret Pond, Factory Pond Stream and Teal Pond Stream, South Kingstown and Charlestown, Rhode Island</i>	RI DEM OWR	RI DEM OWR (2006b)
<i>RI Freshwater Wetland Monitoring and Assessment Plan</i>	RI DEM OWR	RI DEM OWR (2006c)

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Plan	Source	Reference
<i>TMDL for Dissolved Oxygen and Phosphorous Mashapaug Pond, RI</i>	RI DEM OWR	RI DEM OWR (2007a)
<i>TMDL for Phosphorous For Eutrophic Ponds</i>	RI DEM OWR	RI DEM OWR (2007b)
<i>Woonasquatucket River Fecal Coliform Bacteria and Dissolved Metals TMDL</i>	RI DEM OWR	RI DEM OWR (2007c)
<i>TMDL Dissolved Metals Indian Run Brook</i>	RI DEM OWR	RI DEM OWR (2008a)
<i>TMDL Analysis for Point Judith Pond Waters Pathogen/Bacteria Impairments</i>	RI DEM OWR	RI DEM OWR (2008b)
<i>TMDL Analysis for Buckeye Brook Watershed Fecal Coliform and Enterococci Bacteria Impairments</i>	RI DEM OWR	RI DEM OWR (2008c)
<i>Rhode Island Regulation and Protection Status and Trends</i>	RI DEM OWR	RI DEM OWR (2009)
<i>Rapid Assessment of Freshwater Wetland Condition Year-3 Development of a Rapid Assessment Method for Freshwater Wetlands in Rhode Island</i>	RI DEM OWR	RI DEM OWR (2010a)
<i>TMDL Analysis for the Pawcatuck River and Little Narragansett Bay Waters Bacteria Impairments</i>	RI DEM OWR	RI DEM OWR (2010b)
<i>TMDL to Address Phosphorous Impairment to Belleville Ponds and Belleville Upper Pond Inlet</i>	RI DEM OWR	RI DEM OWR (2010c)
<i>RI Statewide Total Maximum Daily Load for Bacteria Impaired Waters</i>	RI DEM OWR	RI DEM OWR (2011a)
<i>State of Rhode Island and Providence Plantations 2012 Integrated Water Quality Assessment Report</i>	RI DEM OWR	RI DEM OWR (2012)
<i>Rhode Island Nonpoint Source Pollution Management Plan</i>	RI DEM OWR	RI DEM OWR (2014)
<i>Fecal Coliform and Total Phosphorous TMDLs for Kickemuit Reservoir</i>	RI DEM OWR	RI DEM OWR(2006d)
<i>Rapid Assessment of Freshwater Wetland Condition Atlantic White Cedar Swamps, Bogs, and Fens</i>	RI DEM OWR	RI DEM OWR(2011b)
<i>Rhode Island Waterborne Passenger Transportation Plan</i>	RI Department of Transportation (RI DOT) and State Planning Council	RI DOT and State Planning Council (1998)
<i>Report on the Analysis of True Color Aerial Photography to map and Inventory Zostera marina L. in Narragansett Bay and Block Island, RI</i>	RI EDC, NBNERR, Save the Bay	RI EDC et al. (2007)
<i>Rare Native Animals of Rhode Island</i>	RI Natural History Survey	RI NHS (2006)
<i>Rare Native Plants of Rhode Island</i>	RI Natural History Survey	RI NHS (2007)
<i>Partners in Flight North American Landbird Conservation Plan</i>	Partners in Flight	Rich et al. (2004)

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Plan	Source	Reference
<i>Terrestrial Ecoregions of North America: A Conservation Assessment</i>	World Wildlife Fund	Ricketts et al. (1999)
<i>Rhode Island's Natural Heritage Under Siege: Meeting the Challenge of Invasive Species</i>	Rhode Island Natural History Survey (RINHS)	RINHS (2003)
<i>Water Supply Policies-Statutes</i>	RI Water Resources Board (RIWRB)	RIWRB (2014) Online at: http://www.wrb.state.ri.us/policy.html
<i>Partners In Flight Continental Priorities and Objectives Defined at the State and Bird Conservation Region Levels: Rhode Island</i>	Partners in Flight	Rosenberg (2004)
<i>Recommended Plantings for Migratory Songbird Habitat Management</i>	URI NRS	Smith and McWilliams (2011)
<i>Marine Ecoregions of the World: A Bioregionalization of Coastal and Shelf Areas</i>	Spalding et al.	Spalding et al. (2007)
<i>Farming and Forest Strategies</i>	RI DEM	Taintor (2001)
<i>Best Management Practices for American Woodcock and Ruffed Grouse in Rhode Island</i>	RI DEM	Tefft (2010)
<i>Priorities for Conservation: 1996 Annual Report Card for U.S. Plant and Animal Species</i>	The Nature Conservancy	TNC (1996)
<i>Piedmont Ecoregion: A plan for Biodiversity Conservation Draft Implementation Document</i>	TNC	TNC (2006)
<i>Town of Cumberland Comprehensive Plan, 1991-2010, Five Year Update.</i>	Town of Cumberland	Town of Cumberland (2004)
<i>Rhode Island Critical Resources Atlas</i>	University of Rhode Island	URI (2004)
<i>RI Agricultural Experiment Station/RI Cooperative Extension (RIAES/RICE) State Plan of Work 2011-2015</i>	URI	URI (2010)
<i>Can Forest Management Maintain the Extent of Shrubland Habitat in Rhode Island A Spatial Analysis</i>	URI	URI NRS (2011)
<i>Identification of Potential Areas for Creating Habitat for New England Cottontail in Rhode Island</i>	URI	URI NRS (2012a)
<i>Concept for Forest Management Demonstration Peckham Farm University of Rhode Island</i>	URI	URI NRS (2012b)
<i>Invasive Plant Atlas of New England (IPANE)</i>	USDA, USFWS, New England Wildflower Society, University of Connecticut, Columbia University, USGS, EDD MapS	USDA et al. (2014)
<i>Puritan Tiger Beetle (Cicindela puritana G. Horn) Recovery Plan</i>	USFWS	USFWS (1993a)

APPENDIX 1a: RHODE ISLAND WAP DATA SOURCES

Plan	Source	Reference
<i>Dwarf Wedge Mussel (Alasmidonta heterodon) Recovery Plan</i>	USFWS	USFWS (1993b)
<i>Northeastern Beach Tiger Beetle (Cicindela Dorsalis Dorsalis Say) Recovery Plan</i>	USFWS	USFWS (1994)
<i>American Woodcock Management Plan</i>	USFWS	USFWS (1996a)
<i>Piping Plover (Charadrius melodus), Atlantic Coast Population, Revised Recovery Plan</i>	USFWS	USFWS (1996b)
<i>Expanding the Vision: 1998 Update, North American Waterfowl Management Plan</i>	USFWS, SEMARNAP Mexico, and Canadian Wildlife Service	USFWS (1999)
<i>Rhode Island National Wildlife Refuge Complex: Draft Comprehensive Conservation Plan</i>	USFWS	USFWS (2000)
<i>Bog Turtle (Clemmys muhlenbergii), Northern Population, Recovery Plan</i>	USFWS	USFWS (2001)
<i>Block Island National Wildlife Refuge Comprehensive Conservation Plan</i>	USFWS	USFWS (2002a)
<i>John H. Chafee National Wildlife Refuge Comprehensive Conservation Plan</i>	USFWS	USFWS (2002b)
<i>Ninigret National Wildlife Refuge Comprehensive Conservation Plan</i>	USFWS	USFWS (2002c)
<i>Sachuest Point National Wildlife Refuge Comprehensive Conservation Plan</i>	USFWS	USFWS (2002d)
<i>Trustom Pond National Wildlife Refuge Comprehensive Conservation Plan</i>	USFWS	USFWS (2002e)
<i>An Inventory of Coastal Wetlands, Potential Restoration Sites, Wetland Buffers, and Hardened Shorelines for the Narragansett Bay Estuary: An Assessment Report from the National Wetlands Inventory Program</i>	USFWS	USFWS (2003)
<i>Dwarf Wedge Mussel (Alasmidonta heterodon) Draft 5-Year Review: Summary and Evaluation</i>	USFWS	USFWS (2007a)
<i>Puritan Tiger Beetle Draft 5-Year Review: Summary and Evaluation</i>	USFWS	USFWS (2007b)
<i>USFWS Strategic Plan Fiscal Year 2007-2011 Region 5, Partners for Fish and Wildlife Program Coastal Program</i>	USFWS	USFWS (2007c)
<i>American Woodcock Conservation Plan, A summary of and recommendations for woodcock conservation in North America February 2008</i>	USFWS	USFWS (2008)

Plan	Source	Reference
<i>Northeastern Beach Tiger Beetle 5-Year Review: Summary and Evaluation February 2009</i>	USFWS	USFWS (2009a)
<i>Piping Plover 5-Year Review: Summary and Evaluation September 2009</i>	USFWS	USFWS (2009b)
<i>Bog Turtle Spotlight Species Action Plan December 2009</i>	USFWS	USFWS (2009c)
<i>Recovery Plan for the Kemp's Ridley Sea Turtle (Lepidochelys kempii)</i>	USFWS and NMFS	USFWS and NMFS (1992)
<i>Wood-Pawcatuck Watershed Action Plan 2008</i>	Wood-Pawcatuck Watershed Association	Wood-Pawcatuck Watershed Association (2008)

All Citations and Sources

- Abell et.al. 2000. Freshwater Ecoregions of North America: A Conservation Assessment. Washington, D.C. Island Press.
- Alexander L.V, X. Zhang T. C. Peterson J. Caesar B. Gleason A. M. G. Klein Tank M. Haylock D. Collins B. Trewin F. Rahimzadeh A. Tagipour K. Rupa Kumar J. Revadekar G. Griffiths L. Vincent D. B. Stephenson J. Burn¹ E. Aguilar M. Brunet M. Taylor M. New P. Zhai M. Rusticucci and J. L. Vazquez-Aguirre 2006. Global observed changes in daily climate extremes of temperature and precipitation. March 5, 2006. Journal of Geophysical Research Atmospheres 11(D5): 16
- Anderson, M. G., & Ferree, C. E. 2010. Conserving the Stage: Climate Change and the Geophysical Underpinnings of Species Diversity. PLoS ONE, 5(7), e11554.
- Anderson, M.G., M. Clark, C.E. Ferree, A. Jospe, and A. Olivero Sheldon. 2013. Condition of the Northeast Terrestrial and Aquatic Habitats: a geospatial analysis and tool set. Submitted to the Regional Conservation Needs Grants Program of the Northeast Association of Fish and Wildlife Agencies. The Nature Conservancy, Eastern Conservation Science.
<http://easterndivision.s3.amazonaws.com/Geospatial/ConditionoftheNortheastTerrestrialandAquaticHabitats.pdf>
- Anderson, J. R., E. E. Hardy, J. T. Roach, and R. E. Witmer. 1976. A land use and land cover classification system for use with remote sensor data. U.S. Geological Survey Professional Paper 964.
- Anderson, M. G., K. Lombard, J. Lundgren, B. Allen, S. Antenen, D. Bechtel, A. Bowden, M. Carabetta, C. Ferree, M. Jordan, S. Khanna, D. Morse, A. Olivero, N. Sferra, M. Upmeyer. 2006. The North Atlantic Coast Ecoregional Assessment.
<https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/reportsdata/terrestrial/ecoregional/nac/Pages/default.aspx>
- Anderson, M.G. and A. Olivero Sheldon. 2011. Conservation Status of Fish, Wildlife, and Natural Habitats in the Northeast Landscape: Implementation of the Northeast Monitoring Framework. The Nature Conservancy, Eastern Conservation Science. 289 pp.
- Anderson, M.G., M. Clark, C.E. Ferree, A. Jospe, A. Olivero Sheldon, and K.J. Weaver. 2013. Northeast Habitat Guides: A companion to the terrestrial and aquatic habitat maps. Submitted to the Regional Conservation Needs Grants Program of the Northeast Association of Fish and Wildlife Agencies. The Nature Conservancy, Eastern Conservation Science, Eastern Regional Office. Boston, MA. 394 pp.
http://static.rcngrants.org/sites/default/files/news_files/Northeast%20Aquatic%20and%20Terrestrial%20Habitat%20Guide.pdf
- Anthes, R.A., R.W. Corell, G. Holland, J.W. Hurrell, M.C. MacCracken, and K.E. Trenberth, 2006: Hurricanes and Global Warming—Potential Linkages and Consequences. Bulletin of the American Meteorological Society, 87, 623–628

- Aquatic Nuisance Task Force. Rhode Island Aquatic Invasive Species Management Plan http://anstaskforce.gov/State%20Plans/RI_SMP_Approved.pdf
- Askins, R. A. 1997. History of grasslands in the northeastern United States: Implications for bird conservation. Pages 119-136 In Vickery, P. D. and P. W. Dunwiddie. Grasslands of Northeastern North America: ecology and conservation of native and agricultural landscapes. Massachusetts Audubon Society, Lincoln, MA.
- Askins, R.A. 2000. Restoring North America's birds. Yale University Press, New Haven. Association of Fish and Wildlife Agencies (AFWA). 2011.
- Association of Fish and Wildlife Agencies (AFWA). 2009. Voluntary guidance for states to incorporate climate change into state wildlife action plans and other management plans. A Collaboration of the AFWA Climate Change and Teaming With Wildlife Committees, Association of Fish and Wildlife Agencies 50 pp.
- AFWA. 2011. Measuring the Effectiveness of State Wildlife Grants Final Report. 186 pp.
- AFWA. Teaming With Wildlife Committee, State Wildlife Action Plan (SWAP) Best Practices Working Group. 2012. Best Practices for State Wildlife Action Plans—Voluntary Guidance to States for Revision and Implementation. Washington (DC): Association of Fish and Wildlife Agencies. 80 pp.
- Atlantic Coast Joint Venture (ACJV). 2005. Atlantic Coast Joint Venture Waterfowl Implementation Plan. Focus Areas. Rhode Island. http://www.acjv.org/maps/ri_waterfowl_web_map.pdf
- ACJV. 2008. ACJV New England/Mid-Atlantic Coast Bird Conservation Region (BCR 30) Implementation Plan http://www.acjv.org/BCR_30/BCR30_June_23_2008_final.pdf
- Aquatic Nuisance Task Force. 2007. Rhode Island Aquatic Invasive Species Management Plan http://anstaskforce.gov/State%20Plans/RI_SMP_Approved.pdf
- Atlantic States Fishery Management Council (ASFCM). Fishery Management Plans. 2014.: <http://www.asfmc.org/>
- August, P. V., R. W. Enser, and L. L. Gould, editors. 2001. Vertebrates of Rhode Island. Volume 2, Biota of Rhode Island Series. Rhode Island Natural History Survey, Kingston, Rhode Island
- Bailey. 1995. Descriptions of Ecoregions of the United States. March 1995. <http://www.fs.fed.us/land/ecosysmgmt/>
- Barbour, H., M.G. Anderson et al. 2003. Lower New England – Northern Piedmont Ecoregional Conservation Plan; First Iteration, Edited. The Nature Conservancy, Northeast & Caribbean Division, Boston, MA
- Barnes, J.S. 2012. The Rhode Island Forest Health Works Project, November 2009 – November 2011. RI Natural History Survey and RI Dept. Environmental Management, Division of Forest Environment and Division of Fish and Wildlife. 42 pp.
- Beardmore. T. and R. Winder. 2011. Review of science-based assessments of species vulnerability: contributions to decision-making for assisted migration. The Forestry Chronicle 87(6):745-754.
- Beers, A. & Davison, S. (1999) North Atlantic Coast Ecoregional Conservation Plan. The Nature Conservancy, Arlington VA
- Bird Conservation Research, Inc. 2011. Forest birds of the last green valley. Putnam, CT.
- Bleiker, A., and Bleiker, H. 2000. *Citizen Participation Handbook for Public Officials and Other Professionals Serving the Public* (13th ed.). Monterey, CA: Institute for Participatory Management and Planning.
- Boyd, J. and P. Rubinoff. 2014. Results of SLAMM modeling in Rhode Island. RI Sea Grant and RI Coastal Resources Management Council.
- Bradley, M., K. Raposa, and S. Tuxbury. 2007. Report on the Analysis of True-color Aerial Photography to Map and Inventory *Zostera marina* L. in Narragansett Bay and Block Island, Rhode Island. Page 1-16 and 9 Mapsheets. Rhode Island Natural History Survey.

- Bradley, M., R. Hudson, M. Cole Ekberg, K. Raposa, and A. MacLachlan. 2012. Mapping Submerged Aquatic Vegetation (SAV) in Rhode Island Coastal Waters.
http://www.savebay.org/file/2012_Mapping_Submerged_Aquatic_Vegetation_final_report_4_2013.pdf
- Brooks, R.P., D.H. Wardrop and J.A. Bishop. 2004. Assessing Wetland Condition on a Watershed Basis in the Mid-Atlantic Region Using Synoptic Land-Cover Maps Environmental Monitoring and Assessment. 94: 1-3, pp 9-22
- Brooks. 2004. Weather related effects on woodland vernal pool hydrology and hydroperiod. Wetlands 24(1): pp. 104-114.
- Brown, S., C. Hickey, B. Harrington, and R. Gill, eds. 2001. The United States Shorebird Conservation Plan. Manomet Center for Conservation Sciences. May 2001 2nd Edition. 64 pp.
- Brown, C. 2014. Personal communication of January 21, 2014.
- Buffum, B. 2011. Can forest management maintain the extent of shrubland habitat in Rhode Island? A spatial analysis. Kingston, Rhode Island: Department of Natural Resources Science, University of Rhode Island.
- Burgess, D. 2002. Wood-Pawcatuck Watershed Association 2002 aquatic benthic macroinvertebrate sampling project. Wood-Pawcatuck Watershed Association, Hope Valley, Rhode Island.
<http://www.wpwa.org/Reports/Aquatic%20Invertebrates%20Report%202002.pdf>.
- Burkey, T.V. 1989. Extinction in nature reserves: the effect of fragmentation and the importance of migration between reserve fragments. Oikos 55: 75-81.
- Burridge, M. and N. Mandrak. 2013. Freshwater Ecoregions of the World-118: Northeast US & Canada Atlantic Drainages. <http://www.feow.org/ecoregions/details/118>
- Butler, B. J. and E. H. Wharton, editors. 2002. The forests of Rhode Island. USDA, Forest Service, Northeastern Research Station, NE-INF-155-02.
- Butler, B.J. 2014. Forests of Rhode Island, 2013. Resources Update FS-18. Newtown Square, PA. U.S. Department of Agriculture, Forest Service, Northern Research Station. 4 p.
- Calhoun, A.J.K. and M.W. Klemens. 2002. Best development practices: Conserving post-breeding amphibians in residential and commercial developments in the northeastern United States. Metropolitan Alliance. Wildlife Conservation Society, New York.
- Chaffee, C. 2014. Using SLAMM to inform coastal wetland restoration and adaptation. Coastal Resources Management Council. Presentation at public stakeholder meeting of October 22, 2014. Available online at: <https://www.youtube.com/watch?v=C8xv2qIKJ8Q>
- Cheatwood, J.L., E.R. Jacobson, P.G. May, T.M. Farrell, B.L. Homer, D.A. Samuelson, and J.W. Kimbrough. 2003. An Outbreak of Fungal Dermatitis and Stomatitis in a Free-ranging Population of Pigmy Rattlesnakes (*Sistrurus Milliaris Barbouri*) in Florida. Journal of Wildlife Diseases: April 2003, Vol. 39 (3): pp. 329-337.
- Coastal Resources Management Council (CRMC). 2014. Draft Sea Level Affecting Marshes Model (SLAMM) Maps. http://www.crmc.ri.gov/maps/maps_slamm.html.
- Clark, K.E. and L.J. Niles. 2000. North Atlantic Regional Shorebird Plan. <http://www.fws.gov/shorebirdplan/RegionalShorebird/RegionalPlans.htm>
- Clement, R. and R. Woodruff. 1962. Summary of the nesting status of gulls and terns in Rhode Island. Narragansett Naturalist 5:68-73; 108-111
- Cole, B.J. 1981. Colonizing abilities, island size, and the number of species on archipelagoes. American Naturalist 117:629-38.
- Conway, R.A. 1992. Field-checklist of Rhode Island birds. Bulletin No. 1. Rhode Island Ornithological Club. 57pp.
- Costanza R. R. d'Arge, R. deGroot, S. Farber et al. 1997. The value of the world's ecosystem services and natural capital. Nature 387: 253-260.
- Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service Publication FWS/OBS-79/31, Washington, D.C.

- Crisfield, E and the Northeast Fish and Wildlife Diversity Technical Committee (NEFWDTDC). 2013. The Northeast Lexicon: Terminology Conventions and Data Framework for State Wildlife Action Plans in the Northeast Region. A report submitted to the Northeast Fish and Wildlife Diversity Technical Committee. Terwilliger Consulting, Inc., Locustville, VA.
- Dahl, T. E. 1990. Wetlands loss in the United States 1780's to 1980's. U.S. Department of Interior, U. S. Fish and Wildlife Service, Washington, D.C.
- De Groot, R. S. 1994. Environmental functions and the economic value of natural ecosystems in A. M. Jansson, M. Hammer and R. A. Costanza (eds.) Investing in Natural Capital: the Ecological Economics Approach to Sustainability. New York: Island Press.
- Dettmers, R. and K. V. Rosenberg. 2000. Draft partners in flight landbird conservation plan: physiographic area 09, southern New England, version 1. Partners in Flight, Northeast Region, Ithaca, New York.
- Diamond JM. 1976. Island biogeography and conservation: strategy and limitations. *Science* 193: 1027-1029.
- Diamond JM and May RM. 1981. Island Biogeography and the design of nature reserves. In May RM (ed.). *Theoretical Ecology*. Oxford: Blackwell.
- Dunn, R. R. 2005. Modern insect extinctions, the neglected majority. *Conservation Biology* 19(4): 1030-1036.
- Eastern Brook Trout Joint Venture. 2006. Eastern Brook Trout Status and Threats. Produced by Trout Unlimited for EBTJV.
- Eschtruth, A.K. and J.J. Battles. 2008. Acceleration of exotic plant invasion in a forested ecosystem by a generalist herbivore. *Conservation Biology*
- Edwards, P. 2012. American shad restoration. *Wild Rhode Island*. 5(3):1-2.
- Enser, Richard W. 1992. The Atlas of Breeding Birds in Rhode Island. R.I. Dept. of Environmental Management, Providence. 206 p.
- Enser, R. 1998. March, 1998. The tiger beetles of Rhode Island. 4th Annual Conference, RI Natural History Survey, University of Rhode Island, Kingston, RI.
- Enser, R. Personal Communication. March 5, 2104.
- Enser, R., D. Gregg, C. Sparks, P. August, P. Jordan, J. Coit, C. Raithel, B. Tefft, B. Payton, C. Brown, C. LaBash, S. Comings, and K. Ruddock. 2011. Rhode Island Ecological Communities Classification. Technical Report. Rhode Island Natural History Survey, Kingston, RI.
- Enser, R.W. and J. A. Lundgren. 2005. Natural communities of Rhode Island. Rhode Island Natural Heritage Program. Department of Environmental Management and The Nature Conservancy of Rhode Island, Providence, Rhode Island.
- Enser, S. 2006. Is *Carex kobomugi* (Asiatic Sand Sedge) in coastal Rhode Island a threat to the maritime/beach dune community? *The Naturalist* 13(1), Rhode Island Natural History Survey, Kingston, RI.
- FEMA. 2013. New England: One year after hurricane Sandy. News Release 14-03, October 29, 2013.
- Ferrin, R.L. Unpublished manuscript. The Birds of Rhode Island.
- Ferren, R.L. and J.E. Myers. 1998. Rhode Island's maritime nesting birds. R.I. Department of Environmental Management Final Report. Providence, R.I. 222pp.
- Fetzner Jr. J.W. 2011. SGCN Invertebrates: A database and associated website of museum specimen occurrence records for invertebrate species of greatest conservation need in the northeastern region. <http://iz.carnegiemnh.org/SGCNinverts/>
- Flinn, K.M. and M Vellend. 2005. Recovery of forest plant communities in post-agricultural landscapes. *Frontiers in Ecology and Environment*. 3(5):243-250.
- Forman, R.T.T., Deblinger R. 2000. The ecological road-effect zone of a Massachusetts (U.S.A.) suburban highway. *Conservation Biology* 14 (1): 36-46.
- Foster, D.R. and G. Motzkin. 2002. Grasslands, heathlands, shrublands in New England: historical interpretation and approaches to conservation. *Journal of Biogeography*. 29:1569-1590.

- Foster, D.R. and G. Motzkin. 2003. Interpreting and conserving the openland habitats of coastal New England: insights from landscape history. *Forest Ecology and Management*. 185:127-150.
- Freedman, J. 2012. As Cited in Living Shorelines. Non-Structural Erosion Control Practices. Rhode Island Land and Water Summit. 2014. PowerPoint created by D.S. Brown, K. Ruddock, R. Smith, The Nature Conservancy, and USFWS.
http://www.landandwaterpartnership.org/documents/Summit2014/2G_Erosion_Control.pdf
- Frumhoff, P.C., J.J. McCarthy, J.M. Melillo, S.C. Moser, and D.J. Wuebbles. 2007. Confronting Climate Change in the U.S. Northeast: Science, Impacts, and Solutions. Synthesis report of the Northeast Climate Impacts Assessment (NECIA). Cambridge, MA: Union of Concerned Scientists (UCS).
- Fuller, S. and A. Tur. 2012. Conservation strategy for the New England cottontail (*Sylvilagus transitionalis*). New England Cottontail Technical Committee. 143 pp.
- Gawler, S. C. 2008. Northeastern Terrestrial Wildlife Habitat Classification. Report to the Virginia Department of Game and Inland Fisheries on behalf of the Northeast Association of Fish and Wildlife Agencies and the National Fish and Wildlife Foundation. NatureServe, Boston, Massachusetts. 102 pp.
- Gibbons, J.W.; Scott, D.E.; Ryan, T.J.; Buhlmann, K.A.; Tuberville, T.D.; Metts, B.S.; Greene, J.L.; Mills, T.; Leiden, Y.; Poppy, S.; and Winne, C.T. 2000. The global decline of reptiles, déjà vu amphibians. *BioScience*. 50: 653-666.
- Gibbs, E. et al. 1995. A Guide to Rhode Island's Natural Places. Univ. of Rhode Island: RI Sea Grant
- Gibson M. and S. Olszewski. 2001. Stock status of horseshoe crabs in Rhode Island in 2000 with recommendations for management. Rhode Island Division of Fish and Wildlife Research Reference Document 01/01
- Glick, P.; Stein, B. A.; Edelson, N. A., editors. 2011. Scanning the conservation horizon: A guide to climate change vulnerability assessment. Washington, D.C.: National Wildlife Federation. 168 p.
- Gregory R., L. Failing, M. Harstone, G. Long, T. McDaniels, D. Ohlson . 2012. Structured Decision Making: A Practical Guide to Environmental Management Choices. Wiley-Blackwell 312 p.
- Griffiths, L. 1965. One hundred years of agriculture in Rhode Island. *University of Rhode Island Bulletin* 378.
- Groves, C.R., D.B. Jensen, L. L. Valutis, K. H. Redford, et al. 2002. Planning for Biodiversity Conservation: Putting Conservation Science into Practice. *Bioscience* 52(6): 499-512
- Grow Smart Rhode Island. 2000. The Costs of Suburban Sprawl and Urban Decay in Rhode Island. Prepared by H.C. Planning Consultants and Planimetrics LLC. December 1999. 18 pp.
- Gu, L., Hanson, P.J., Mac Post, W., Kaiser, D.P., Yang, B., Nemani, R., Pallardy, S.G., Meyers, T., 2008. The 2007 eastern US spring freezes: increased cold damage in a warming world? *Bioscience* 58, 253-262.
- Hayhoe, K., C. P. Wake, T. G. Huntington, L. Luo, M. D. Schwartz, J. Sheffield, E. Wood, B. Anderson, J. Bradbury, A. Degaetano, T. J. Troy, and D. Wolfe, 2007. Past and Future Changes in Climate and Hydrological Indicators in the U.S. Northeast. *Climate Dynamics* 28:381-407, DOI 10.1007.
www.northeastclimateimpacts.org/pdf/tech/hayhoe_et_al_climate_dynamics_2006.pdf
- Hobbs, R.J. 2000. Land use changes and invasions. Pages 55-64, In: Mooney, H.A. and R.J. Hobbs. *Invasive species in a changing world*. Island Press, Washington, D.C.
- Holling, C. S., editor. 1978. *Adaptive environmental assessment and management*. John Wiley, New York, New York.
- Hufkens, K., Friedl, M. A., Keenan, T. F., Sonnentag, O., Bailey, A., O'Keefe, J. and Richardson, A. D. (2012), Ecological impacts of a widespread frost event following early spring leaf-out. *Global Change Biology*, 18: 2365-2377. doi: 10.1111/j.1365-2486.2012.02712.x
- Intergovernmental Panel on Climate Change (IPCC). 2007: *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104pp.
- International Union for the Conservation of Nature (IUCN). 2008. *Red List: Species Susceptibility to Climate Change Impacts*.

- Pinkney, A.E., C.T. Driscoll, D.C. Evers, M.J. Hooper, J. Horan, J.W. Jones, R.S. Lazarus, H.G. Marshall, A. Milliken, B.A. Rattner, J. Schmerfeld, D. Sparling 2015. Interactive effects of climate change with nutrients, mercury, and freshwater acidification on key taxa in the North Atlantic Landscape Conservation Cooperative region. *Integrated Environmental Assessment and Management Magazine*. 2015;X:000–000. © 2014 SETAC
- Jessup D.A. and J.C. Seeley. 1981. **Zygomycete fungus infection in two captive snakes: Gopher snake (*Pituophis melanoleucos*) and copperhead (*Agkistrodon contortrix*)**. *Journal of Zoological Animal Medicine*. 12: 54–59
- Johnson, F. A., and D. J. Case. 2000. Adaptive regulation of waterfowl harvests: lessons learned and prospects for the future. *Transactions of the North American Wildlife and Natural Resource Conference* 65:94-108. <http://migratorybirds.fws.gov/reports/ahm02/johnson-case-2000.pdf>.
- Jones, G.A., P. A. Stott and N. Christidis. 2013. Attribution of observed historical near–surface temperature variations to anthropogenic and natural causes using CMIP5 simulations. *Journal of Geophysical Research: Atmospheres* 118 (10): pps. 4001–4024.
- Jones, M.T., L.L. Willey, T.S.B. Akre, and P.R. Sievert. 2014. Status and Conservation of the Wood Turtle in the Northeastern United States. Draft reported submitted to the Northeast Association of Fish and Wildlife Agencies for Regional Conservation Needs Grant 2011-02.
- Karl, T.R., J.M. Melill and J.M., Peterson, T.C., 2009. *Global Climate Change Impacts in the United States*. Cambridge University Press.
- Karraker N.E. 2008. Impacts of road deicing salts on amphibians and their habitats. Pp 211-23 In: J.C. Mitchell, R.E. Jung Brown and B. Bartholomew, (eds.). *Urban Herpetology*. Society for the Study of Amphibians and Reptiles.
- Kennedy, J. J., P. W. Thorne, T. C. Peterson, R. A. Reudy, P. A. Stott, D. E. Parker, S. A. Good, H. A. Titchner, and K. M. Willett, 2010: How do we know the world has warmed? [in “State of the Climate in 2009”]. *Bulletin of the American Meteorological Society*, 91, S26-27, doi:10.1175/BAMS-91-7-State of the Climate.
- Kenney, R.D. 2014. Personal Communication.
- Kenney, R.D. and K. Vigness-Raposa. 2010. Marine mammals and sea turtles of Narragansett Bay, Block Island Sound, Rhode Island Sound, and nearby waters: An analysis of existing data for the Rhode Island Special Area Management Plan. University of Rhode Island. 1-337.
- Klemens, M. W. 1993. Amphibians and reptiles of Connecticut and adjacent regions. *Bulletin* 112. State Geological and Natural History Survey of Connecticut. 1-318.
- Klopfers, S. 2012. Final Report: Identifying Relationships between Invasive Species and SGCN in the Northeast. Conservation Management Institute. 18 pp.
- Knisley, C. B. and T. D. Schultz. 1997. *The Biology of Tiger Beetles and a Guide to the Species of the South Atlantic States*. Virginia Museum of Natural History, Martinsville, Virginia, viii + 210 pp.
- Koch, S.L. and P.W.C. Paton. 2009. Shorebird migration chronology at a stopover site in Massachusetts. *Wader Study Group Bulletin* 116: 167-174.
- Kushlan, J. A., M. J. Steinkamp, K. C. Parsons, J. Capp, M. A. Cruz, M. Coulter, I. Davidson, L. Dickson, N. Edelson, R. Elliot, R. M. Erwin, S. Hatch, S. Kress, R. Milko, S. Miller, K. Mills, R. Paul, R. Phillips, J. E. Saliva, B. Sydeman, J. Trapp, J. Wheeler, and K. Wohl. 2002. *Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version 1*. Waterbird Conservation for the Americas, Washington, DC, U.S.A., 78pp. <http://www.pwrc.usgs.gov/nacwcp/nawcp.html>
- Kutcher, T. E. 2011. Rapid Assessment of Freshwater Wetland Condition: Atlantic White Cedar Swamps, Bogs, and Fens. Development and Demonstration of a Rapid Assessment Method for Freshwater Wetlands in Rhode Island, Year 4. RI Natural History Survey and RIDEM, Office of Water Resources. 1-39.
- Kutcher, T. E. 2012. Integrating rapid assessment with biological and landscape indicators of freshwater wetland condition. RI Natural History Survey and RIDEM Office of Water Resources. 1-48.
- Kutcher, T. E. 2013. Developing floristic quality assessment methods for evaluating freshwater wetland condition. RI Natural History Survey and RIDEM Office of Water Resources. 1-32.

- Lagory K.E., Walston L.J., Goulet C., Van Lonkhuyzen R.A., Najjar S., Andrews C. 2009. An examination of scale-dependent resource use by Eastern Hognose Snakes in Southcentral New Hampshire. *Journal of Wildlife Management* 73(8): 1387-93.
- Lambeck, R. J. 1997. Focal species: A multi-species umbrella for nature conservation. *Conservation Biology* 11:849-856.
- Landres, P.B., Verner, J., Thomas, J.W., 1988. Critique of vertebrate indicator species. *Conservation Biology* 2, 316-328.
- Land Trust Alliance. 2010. Rhode Island State Fact Sheet. 2010 National Land Trust Census Report. <http://www.landtrustalliance.org/land-trusts/land-trust-census/state-factsheets/rhode-island-fact-sheet>
- Land Trust Alliance. 2014. About the Northeast. <http://www.landtrustalliance.org/about/regional-programs/ne/about-the-northeast-region>.
- LaRoe, E.T., G.S. Farris, C.E. Puckett, P.D. Doran and M.J. Mac. eds. 1995. . Our living resources: a report to the nation on the distribution, abundance, and health of U.S. plants, animals, and ecosystems. Washington, D.C.: U.S. Dept. of the Interior, National Biological Service 530 pp.
- Leopold, L. B.**, ed., 1953. *Round River: From the Journals of Aldo Leopold*. Oxford University Press, New York.
- Libby, A. D. 2013. Inland fishes of Rhode Island. RI Div. Fish and Wildlife. 1-287.
- Litvaitis, J. A. 2003. Are pre-Columbian conditions relevant baselines for managed forests in the northeastern United States? *Forest Ecology and Management*.183:113-126.
- Loss, S.R., T. Will and P. P. Marra. 2013. The impact of free-ranging cats on wildlife of the United States. *Nature Communications*. Article No. 1346.
- Loss, S.R., T. Will, S. S. Loss, and P. P. Marra. 2014. Bird-building collisions in the United States: Estimates of annual mortality and species vulnerability. *The Condor*. 116(1):8-23.
- Lovejoy, T. E., and D. C. Oren. 1981. The minimum critical size of ecosystems. In *Forest Island Dynamics in Man-Dominated Landscapes*, ed. R. L. Burgess and D. M. Sharpe. Springer-Verlag, New York.
- Manomet Center for Conservation Sciences (MCCS). 2010. Massachusetts Biomass Sustainability and Carbon Policy Study. A Report to the Commonwealth of Massachusetts Department of Energy Resources. Walker, T. ed. Contributors: Cardellichio, P., Colnes, A., Gunn, J., Kittler, B., Perschel, R., Recchia, C., Saah, D., and Walker, T. Natural Capital Initiative Report NCI-2010-03. Brunswick, Maine.
- MCCS and Massachusetts Division of Fisheries and Wildlife (MADFW). 2010a. Climate Change and Massachusetts Fish and Wildlife: Introduction and Background. Massachusetts Division of Fisheries and Wildlife, Westborough, Mass.21 pp. with attachments.
- MCCS and MADFW. 2010b. Climate Change and Massachusetts Fish and Wildlife: Volume 2, Habitat and Species Vulnerability. Massachusetts Division of Fisheries and Wildlife, Westborough, Mass 21 pp. with attachments.
- MCCS and MADFW. 2010c. Climate Change and Massachusetts Fish and Wildlife: Volume 3, Habitat Management. Massachusetts Division of Fisheries and Wildlife, Westborough, Mass 23 pp.
- MCCS and the National Wildlife Federation (NWF). 2012. The Vulnerabilities of Northeastern Fish and Wildlife Habitats to Sea Level Rise. A report to the Northeastern Association of Fish and Wildlife Agencies and the North Atlantic Landscape Conservation Cooperative Manomet, Plymouth, MA. <http://rcngrants.org/content/assessing-likely-impacts-climate-change-northeastern-fish-and-wildlife-habitats-and-species>
- MCCS and NWF. 2012. The Vulnerabilities of Fish and Wildlife Habitats in the Northeast to Climate Change. A report to the Northeastern Association of Fish and Wildlife Agencies and the North Atlantic Landscape Conservation Cooperative. Manomet, Plymouth, MA.
- Margolius, R.A., and Salafsky, N. 1998. *Measures of Success: Designing, Managing, and Monitoring Conservation and Development Projects*. Island Press, Washington, DC, USA.
- McDowell, B. 2011. Restoration of Shrubland Bird Habitat in the Northern Appalachian Mountain Bird Conservation Region. *Wildlife Management Institute*. 5 pp.

- McNab, W. H., and P. E. Avers. 1994. Ecological subregions of the United States: section descriptions. U.S. Department of Agriculture Forest Service, WO-WSA-5, Washington, DC.
- Mid-Atlantic Fishery Management Council (MAFMC). Fishery Management Plans: <http://www.mafmc.org/mid-atlantic/fmp/fmp.htm>
- Monahan, E. and Daphne Payne, URI. 2014. RI Ecological Communities Photo Atlas. <http://www.edc.uri.edu/rieccatlas/>.
- Murphy, Carol. 2014. Personal Communication of February 26, 2014.
- National Audubon Society. 2009. State of the Birds 2009 United States of American. http://www.stateofthebirds.org/2009/pdf_files/State_of_the_Birds_2009.pdf
- National Audubon Society. 2014. Important bird areas in Rhode Island. <http://netapp.audubon.org/iba/state/US-RI>
- National Fish, Wildlife and Plants Climate Adaptation Partnership (NFWPCAP). 2014. National Fish, Wildlife and Plants Climate Adaptation Strategy. Association of Fish and Wildlife agencies, Council on Environmental Quality, Great Lakes Indian Fish and Wildlife Commission, National Oceanic and Atmospheric Administration, and U.S. Fish and Wildlife Service. Washington, DC.
- National Oceanic Atmospheric Administration (NOAA) 1975 and The National Atlas of the United States, Coastline and Shoreline, http://nationalatlas.gov/articles/mapping/a_general.html taken from: <http://www.census.gov/compendia/statab/2012/tables/12s0364.pdf>.
- National Wildlife Federation (NWF) and Manomet Center for Conservation Sciences (MCCS). 2014. The vulnerabilities of northeastern fish and wildlife habitats to sea level rise. A report to the Northeastern Association of Fish and Wildlife Agencies and the North Atlantic Landscape Conservation Cooperative, Manomet, Plymouth, MA
- Natural Resources Conservation Service (NRCS). 2007. Pollinators. Fish and Wildlife Habitat Management Leaflet. No. 34. 1-10.
- NRCS. 2014. RI Soil Survey - Prime and Important Farmland. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ri/soils/?cid=nrcs144p2_016661.
- National Wildlife Federation (NWF) and Manomet Center for Conservation Studies. 2013. Implementing climate-smart conservation in Northeastern upland forests. Northeastern Upland Forest Expert Panel. 9pp.
- NatureServe. 2014. Climate Change Vulnerability for Northeast Species. Online at: [http://www.northeastatlanticlcc.org/projects/completing-northeast-regional-vulnerability-assessment-incorporating-the-natureserve-climate-change-vulnerability-index](http://www.northeastatlanticlcc.org/projects/completing-northeast-regional-vulnerability-assessment-incorporating-the-natureserve-climate-change-vulnerability-index/completing-northeast-regional-vulnerability-assessment-incorporating-the-natureserve-climate-change-vulnerability-index)
- New England Fishery Management Council (NEFMC). 2007. Northeast Multispecies Plan. Amendment 15. <http://www.nefmc.org/library/amendment-15-2>
- New England Plant Conservation Program (NEPCoP). 2012. Flora Conservanda: New England 2012 The New England Plant Conservation Program (NEPCoP) List of Plants in Need of Conservation, 2012 edition. <http://www.newfs.org/conserves/Flora%20Conservanda%202012%20NEWFS.pdf>
- Niles, L., H. Sitters, A. Dey, and the Red Knot Assessment Group. 2010. Red knot conservation plan for the Western Hemisphere. Version 1.1.
- North American Bird Conservation Initiative (NABCI), U.S. Committee, 2009. The State of the Birds, United States of America, 2009. U.S. Department of Interior: Washington, DC. 36 pages.
- Northeast Association of Fish and Wildlife Agencies (NEAFWA). 2008. Monitoring the Conservation of Fish and Wildlife in the Northeast: A Report on the Monitoring and Performance Reporting Framework for the Northeast Association of Fish and Wildlife Agencies.
- Northeast Coordinated Bird Monitoring Partnership. 2007. A Framework for Coordinated Bird Monitoring in the Northeast. Northeast Coordinated Bird Monitoring Partnership Report. 62 pp. <http://www.nebirdmonitor.org/framework>
- Northeast Fish and Wildlife Diversity Technical Committee (NEFWDTC). 2013. Taking Action Together: Northeast Regional Conservation Synthesis for State Wildlife Action Plan Revisions. Prepared by Terwilliger Consulting Inc. December 2013 Revised April 2014. <http://rcngrants.org/project-final-reports>

- Northeast Partners for Amphibian and Reptile Conservation (NEPARC). 2004. Model state herpetofauna regulatory guidelines. 6pp. Available online at: <http://www.northeastparc.org/products/pdfs/HERPETOFAUNARegulatoryGuidelines.pdf>
- NEPARC. 2009. Northeast habitat management guidelines. Available online at: <http://www.northeastparc.org/products/hmg.htm>
- Northeast Organic Farming Association (NOFA). 2014. <http://www.nofa.org/>.
- Northeast Partners for Amphibian and Reptile Conservation (NEPARC). 2009. Northeast habitat management guidelines. Available online at: <http://www.northeastparc.org/products/hmg.htm>
- Oakley, K. L, L. P. Thomas, and S. G. Fancy. 2003. Guidelines for long-term monitoring protocols. *Wildlife Society Bulletin* 31:1000-1003.
- Olivero, A. and M. Anderson. 2008. Northeast Aquatic Habitat Classification System. Submitted to the Regional Conservation Needs Grants Program of the Northeast Association of Fish and Wildlife Agencies. The Nature Conservancy, Eastern Conservation Science. 88 pp. <http://rcngrants.org/content/northeastern-aquatic-habitat-classification-project>
- Omernik, J.M. 1995. Ecoregions: A spatial framework for environmental management. In: *Biological Assessment and Criteria: Tools for Water Resource Planning and Decision Making*. Davis, W.S. and T.P. Simon (eds.) Lewis Publishers, Boca Raton, FL. Pp. 49-62.
- Osenkowski. 2011. Sea Ducks and Satellites. *Wild Rhode Island* 4(4) Autumn 2011. Quarterly Publication from RI DEM DFW <http://www.dem.ri.gov/programs/bnatres/fishwild/pdf/wrifl11.pdf>
- Paton, P., K. Winiarski, C. Trocki, and S. McWilliams. 2010. Appendix 11a. Spatial Distribution, Abundance, and Flight Ecology of Birds in Nearshore and Offshore Waters of Rhode Island Interim Technical Report for the Rhode Island Ocean Special Area Management Plan 2010. Department of Natural Resource Science. University of Rhode Island. June 17, 2010. 239 pp.
- Pavulaan and Greg. 2007. Checklist of Rhode Island Butterflies. Rhode Island Natural History Survey (RINHS). <http://rinhs.org/wp-content/uploads/2012/05/RINHS-butterflies-proof.pdf>
- PARC. 1999. Proceedings of the Partners in Amphibian and Reptile Conservation (PARC) Conference, Atlanta, Georgia. June 1999: Conserving Amphibians and Reptiles in the New Millennium. University of Georgia, Savannah River Ecology Laboratory
- Pew Oceans Commission. 2003. America's living oceans: charting a course for sea change. A report to the nation, recommendations for a new ocean policy. Pew Oceans Commission, Arlington, Virginia. <http://www.pewoceans.org>.
- Photoscience. 2014. Distribution of Palustrine Wetlands in Rhode Island. GIS Map.
- Photoscience. 2014. Wetland Distribution in Rhode Island. GIS Map.
- Pimentel, D. C. Wilson; C. McCullum, R.Huang; P. Dwen, J. Flack, Q. Tran, T.Saltman, and B.Cliff. 1997. Economic and Environmental Benefits of Biodiversity. *BioScience* 47 (11). pp. 747-757
- Plummer, M.V. and N.E. Mills. 2000. Spatial ecology and survivorship of resident and translocated hognose snakes (*Heterodon platirhinos*). *Journal of Herpetology* 34:565-575.
- Quinn, A.W. 1997. Rhode Island Geology for the Non-geologist. Kingston, Rhode Island: Rhode Island Natural History Survey, Inc.
- Raposa, K.B. and R.M.Dapp. 2009. A protocol for long-term monitoring of harbor seals (*Phoca vitulina concolor*) in Narragansett Bay, Rhode Island. Narragansett Bay Estuarine Research Reserve Technical Report Series 2009:2. 1-48.
- Raposa, K.B. and Durant, D. 2011. Long-term monitoring program, Narragansett Bay National Estuarine Research Reserve. 1-21.
- Raithel, C. 2014. Personal communication of January 10, 2014.
- Raithel, C. and Hartenstine. 2006. The status of freshwater mussel in Rhode Island. *Northeastern Naturalist*. 13(1): pp. 103-116.
- Reh, W. and A. Seitz. 1990. The influence of land use on the genetic structure of populations of the Common Frog *Rana temporaria*. *Biological Conservation* 54: 239-249.

- Rhode Island Agricultural Partnership. 2011. A Vision for Rhode Island Agriculture: Five-Year Strategic Plan. May 2011. http://www.farmland.org/documents/RI_agriculture_5yr_strategicplan.pdf
- Rhode Island Coastal Resources Management Council (RI CRMC). 2007. Rhode Island Aquatic Invasive Species Management Plan. Federal Review Draft. Submitted September 28, 2007. http://www.anstaskforce.gov/State%20Plans/RI_SMP_Draft.pdf
- RI CRMC and University of Rhode Island (URI). 2014. Invasive Plant Management Certification Program (IPMCP). http://www.uri.edu/cels/ceoc/LR_IPMCP.html
- RI Dept. of Administration. 2004. Rivers Policy and Classification Plan. State Guide Plan Element 162. Originally adopted 1998, amended 2004.
- Rhode Island Department of Administration Division of Planning Statewide Planning Program. 2014. Land Use 2025 State Land Use Policies and Plan <http://www.planning.ri.gov/documents/121/landuse2025.pdf> 156 pp.
- RI Dept. Administration and RI Dept. Environmental Management. 2005. Rhode Island Forest Resources Management Plan. State Guide Plan Element 161
- RI Dept. of Administration and RI Dept. of Environmental Management. 2009. State Outdoor Comprehensive Recreation Plan. RI State Guide Plan Element 152. Adopted 2003, Amended 2009
- Rhode Island Department of Environmental Management (RIDEM). 2001. Rare native animals of Rhode Island. Rhode Island Department of Environmental Management, Natural Heritage Program, Providence, Rhode Island. Available online at <http://www.dem.ri.gov/pubs/index.htm>.
- RI DEM. 2003a. Rhode Island state parks and beaches. Rhode Island Department of Environmental Management, Division of Parks and Recreation, Providence, Rhode Island. Available online at <http://www.riparks.com/listing.htm#RHODE%20ISLAND%20STATE%20PARKS>. Accessed on April 8, 2014.
- RI DEM. 2003b. Ocean state outdoors: Rhode Island's comprehensive outdoor recreation plan. Rhode Island Department of Environmental Management, Statewide Planning Program, Statewide Planning Council Report 105, Providence, Rhode Island.
Available online at <http://www.dem.ri.gov/pubs/index.htm>. Accessed on April 8, 2014.
- RI DEM. 2006. Mute Swan Management Plan. <http://www.dem.ri.gov/programs/bnatres/fishwild/pdf/muswan07.pdf>
- RI DEM. 2006. Rhode Island Freshwater Wetland Monitoring and Assessment Plan. Prepared by New England Interstate Water Pollution Control Commission and Rhode Island Department of Environmental Management Office of Water Resources. December 2006. 66pp.
- RI DEM. 2014a. DEM Announces Availability of up to \$% Million in Open Space Grants for Land Preservation Projects. Press release. March 11, 2014.
- RI DEM. 2014b Mapping and LIDAR
- RI DEM Division of Agriculture. 2013a. 2014 Sector Management Plan for the Finfish Fishery. Division of Fish and Wildlife, Marine Fisheries Section. December 19, 2013.
- RI DEM Division of Agriculture. 2013b. 2014 Sector Management Plan for the Shellfish Fishery. Division of Fish and Wildlife, Marine Fisheries Section.
- RI DEM Division of Agriculture. 2013c. 2014 Sector Management Plan for the Crustacean Fishery. Division of Fish and Wildlife, Marine Fisheries Section.
- RI DEM Division of Agriculture. 2014. Directory of Rhode Island Farmer's Markets. <http://www.dem.ri.gov/programs/bnatres/agricult/pdf/rimarkets.pdf>
- RI DEM Division of Forest Environment (DFE). 2010. Rhode Island forest resources assessment and strategies: "A path to tomorrow's forests." 1-59. <http://www.dem.ri.gov/programs/bnatres/forest/index.htm>.
- RI DEM DFE. 2014. <http://www.dem.ri.gov/programs/bnatres/forest/>. Accessed December 10, 2014.
- RI DEM DFW. 2003a. Native snakes of Rhode Island. Rhode Island Department of Environmental Management, Division of Fish and Wildlife, Providence, Rhode Island. Available online at <http://www.dem.ri.gov/pubs/index.htm>. Accessed on April 6, 2014.

- RI DEM DFW. 2003b. Turtles in Rhode Island. Rhode Island Department of Environmental Management, Division of Fish and Wildlife, Providence, Rhode Island. Available online at <http://www.dem.ri.gov/pubs/index.htm>
- RI DEM DFW. Unpublished. Monitoring data for Rhode Island Fisheries.
- RI DEM DFW. SGCN Annual Reports unpublished.
- RI DEM DFW. 2013a. 2014 Sector Management Plan for the Finfish Fishery. Division of Fish and Wildlife, Marine Fisheries Section. December 19, 2013.
- RI DEM DFW. 2013b. 2014 Sector Management Plan for the Shellfish Fishery. Division of Fish and Wildlife, Marine Fisheries Section.
- RI DEM DFW. 2013c. 2014 Sector Management Plan for the Crustacean Fishery. Division of Fish and Wildlife, Marine Fisheries Section.
- RI DEM DFW. 2014. Division of Fish and Wildlife Home Page –Mission Statement. Available online at: <http://www.dem.ri.gov/programs/bnatres/fishwild/>
- RI DEM Division of Planning and Development (RI DEM DPD). 2012. Land Conservation and Acquisition Program Annual Report Fiscal Year 2012. 1-22.
- RI DEM Office of Compliance and Inspection. 2012. Annual report on the activities of the Dam Safety Program. 1-34.
- RI DEM Office of Water Resources (OWR). 2006. State of the State’s Waters Report - 305 (b) Report. 243pp.
- RI DEM OWR. 2012a. 2012 Integrated water quality monitoring and assessment report. 66pp. Available online at: <http://www.dem.ri.gov/programs/benviron/water/quality/pdf/iwqmon12.pdf>
- RI DEM OWR. 2012b. State of Rhode Island 2012 303(d) list of impaired waters. Available online at: <http://www.dem.ri.gov/pubs/303d/303d12.pdf>
- RI DEM OWR. 2012c. Nonpoint Source Water Pollution Management Program Report of Activities October 1, 2011 – September 30, 2012 (FY2012). 27pp. Available online at: <http://www.dem.ri.gov/programs/benviron/water/quality/nonpoint/pdfs/acts12.pdf>
- RI DEM OWR .2013. <http://www.dem.ri.gov/programs/benviron/water/wetlands/pdfs/invasive.pdf>. Accessed December 10, 2014.
- RI DEM OWR. 2014. <http://www.dem.ri.gov/programs/benviron/water/quality/surfwq/lakeindx.htm>. Accessed December 10, 2014.
- RI DEM OWR and Rhode Island Natural History Survey (RINHS). 2014. Rhode Island DEM Freshwater Wetland Monitoring and Assessment, Years 1 through 6. Developing and Applying a Rapid Assessment Protocol for Wetland Condition in Rhode Island.
- RI DEM and U.S. Environmental Protection Agency (U.S. EPA; EPA). 2004. Rhode Island Resource Protection Project
- Rhode Island Geographic Information System (RIGIS). Data Distribution System. Environmental Data Center, University of Rhode Island, Kingston, Rhode Island. <http://www.edc.uri.edu/rigis>.
- RhodeMapRI. 2014. Building a Better Rhode Island. <http://rhodemapri.org/>
- Rhode Island Ornithological Club. 2014. List of Rare Bird Species.
- Rich, T. D., C. J. Beardmore, H. Berlanga, P. J. Blancher, M. S. W. Bradstreet, G. S. Butcher, D. W. Demarest, E. H. Dunn, W. C. Hunter, E. E. Iñigo-Elias, J. A. Kennedy, A. M. Martell, A. O. Panjabi, D. N. Pashley, K. V. Rosenberg, C. M. Rustay, J. S. Wendt, T. C. Will. 2004. Partners in Flight North American Landbird Conservation Plan. Cornell Lab of Ornithology. Ithaca, NY. Partners in Flight website. http://www.partnersinflight.org/cont_plan/ (VERSION: March 2005).
- Rosenberg, K. V. 2004. Association of Fish and Wildlife Agencies Partners in Flight Landbird Reports. http://fishwildlife.org/allbird_landbird.html
- Rosenberg, K.W. and J. V. Wells. 2005. Conservation priorities for terrestrial birds in the Northeastern United States. USDA Forest Service Gen. Tech. Rep. PSW-GTR-191.

- Rouse J.D., Willson R.J., Black R., Brooks R.J. 2011. Movement and spatial dispersion of *Sistrurus catenatus* and *Heterodon platirhinos*: Implications for interactions with roads. *Copeia* 2011(3): 443-456.
- Rout, T.M., E. McDonald-Madden, T.G. Martin, N.J. Mitchell, H.P. Possingham, and D.P. Armstrong. 2013. How to decide whether to move species threatened by climate change. *PLOS one*. 8(10). 1-7.
- Rowland, E. L., M. S. Cross, and H. Hartmann. 2014. Considering Multiple Futures: Scenario Planning To Address Uncertainty in Natural Resource Conservation. USFWS Report for the National LCC Network. http://www.fws.gov/home/feature/2014/pdf/Final_Scenario_Planning_Document.pdf
- Rubinoff, P, C. Rubin, D. Robadue, J. Riccitelli, C. Collins, D. Robadue, C. Damon, K. Ruddock, P. August, C. Chaffee, E. Horton-Hall, and A. Ryan. 2013. Building Capacity to Adapt to Climate Change through Local Conservation Efforts: A South Kingstown Land Trust Pilot Project. Technical Report. Rhode Island Sea Grant, Narragansett, RI.
- Ruddock, K. 2011. Modeling Likely Paths for Salt Marsh Migration in Response to Sea Level Rise: A Pilot Project Using Sea Level Affecting Marsh Migration Model 6.0.1 in North Kingstown, Rhode Island. The Nature Conservancy, RI Sea Grant, RI Coastal Resources Center, University of RI, RI Coastal Resources Management Council.
- Rudis, V. A. 1999. Ecological subregion codes by county, coterminous United States. General Technical Report SRS-36. U.S. Department of Agriculture, Forest Service, Southern Research Station, Asheville, NC.
- Saila, S., M. Cheeseman and D. Poyer. 2004. Maximum Stream temperature estimation from air temperature data and its relationship to Brook Trout (*Salvelinus fontinalis*) Habitat requirements in Rhode Island, Wood Pawcatuck watershed association (WPWA)
- Salafsky, N., R. Margoluis, and K. Redford. 2001. Adaptive management: a tool for conservation practitioners. The Biodiversity Support Program, World Wildlife Fund, Inc. <http://www.bsponline.org/bsp/publications/aam/112/titlepage.htm>
- Salafsky, N., R. Margoluis, K. H. Redford, and J. G. Robinson. 2002. Improving the practice of conservation: a conceptual framework and research agenda for conservation science. *Conservation Biology* 16:1469-1479.
- Salafsky, N., D. Salzer, J. Ervin, T. Boucher, and W Ostlie. 2003. Conventions for defining, naming, measuring, combining, and mapping threats in conservation: an initial proposal for a standard system. Foundations of Success, The Nature Conservancy Measures and Audit Team and Global Priorities Group, Bethesda, Maryland.
- Salafsky, N. D. Salzer, A. J. Stattersfield, C.Hilton-Taylor, et al. 2008. A Standard Lexicon for Biodiversity Conservation: Unified Classifications of Threats and Actions. *Conservation Biology* 22 (4): 897-911
- Salit, R. 2014. Block Island culling deer herd with hunting-by-lottery, bait and shoot effort. *Providence Journal*, January 24, 2014
- Saltmarsh Habitat & Avian Research Program (SHARP), 2012. Compiled overview for the 2012 field season. The Conservation of Tidal Marsh Birds: guiding action at the intersection of our changing land and seascapes. Online at: <http://www.tidalmarshbirds.net>
- Schlesinger, M. D., P. N. Manley, and M. Holvoak. 2008. Distinguishing stressors acting on land bird communities in an urbanizing environment. *Ecology* 89:2302-2314.
- Schulte, S., S. Brown, D. Reynolds, and the American Oystercatcher Working Group. 2007. A conservation action plan for the American oystercatcher (*Haematopus palliatus*) for the Atlantic and Gulf Coasts. Version 2.0.
- Seavey, J.R. 2009. Piping Plover (*Charadrius Melodius*) Conservation on the Barrier Islands of New York: Habitat Quality and Implications in a Changing Climate. Open Access Dissertations. Paper 120. http://scholarworks.umass.edu/open_access_dissertations/120
- Seavey J.R, Gilmer B, McGarigal K.M. 2011. Effect of sea-level rise on piping plover (*Charadrius melodus*) breeding habitat. *Biological Conservation* 144: 393-401.
- Sikes, D. 2004. *The Beetle Fauna of Rhode Island: An Annotated Checklist*, Rhode Island Natural History Survey.

- Sims, S.A. 2012. Effects of Projected Sea Level Rise on Piping Plover (*Charadrius melodus*) Nesting Habitat in Rhode Island. MSc. Thesis to the Department of Environmental Studies, Antioch University New England. July 2012.
- Simmons, T. 2006. Using prescribed fire to manage habitats in the Northeast. Pages In: Managing grasslands, shrublands, and young forests for wildlife: A guide for the Northeast. Massachusetts Division of Fisheries and Wildlife.
- Smith, A.F. 2012. A geospatial analysis of Mystic Aquarium's marine animal stranding data. MS Thesis, Nicholas School of the Environment, Duke University. 1-37.
- Sneddon, L., M. Anderson, and J. Lundgren. 1998. International classification of ecological communities: terrestrial vegetation of the northeastern United States. January 1999 Working Draft. Unpublished Report. Association for Biodiversity Information / The Nature Conservancy, Eastern Resource Office, and Natural Heritage Programs of the Northeastern U.S, Boston, Massachusetts.
- Sornborger, C. 2013. Diamondback terrapin population study 2013, Barrington, RI. Barrington Land Conservation Trust
- Soulé and Simberloff. 1986. What do genetics and ecology tell us about the design of nature reserves? *Biological Conservation* 35 (1986) 19-40
- Staudinger, M.D., Carter, S., Cross, M., Dubois, N., Duffv, E., Enquist, C., Griffis, R., Hellmann, J., Lawler, J., Morrison, S., O'Leary, J., Stein, B., and W. Turner. 2013. Biodiversity in a changing climate: A synthesis of current and projected trends in the United States. *Frontiers in Ecology and the Environment*, 11(9): 465-473.
- Staudinger, Michelle D. 2015. (Science Coordinator, DOI Northeast Climate Science Center) Personal communication of March 24, 2015.
- Stein B.A., L.S. Kutner and J.S. Adams, eds. 2000. *Precious Heritage: The Status of Biodiversity in the United States*. New York: Oxford University Press
- Stein, B. A., A. Staudt, M.S. Cross, N.S. Dubois, C. Enquist, R. Griffis, L.J. Hansen, J.J. Hellmann, J.J. Lawler, E.J. Nelson, and A. Paris. 2013. Preparing for and managing change: climate adaptation for biodiversity and ecosystems. *Frontiers in Ecology and the Environment*. 11(9):502-510.
- Tefft, B. 2011. Deer Management in Rhode Island: Crossroads of Issues. *Wild Rhode Island* 4(1):pages 1 and 4.
- Tefft, B. 2013. New England cottontail rabbits – a rare species returns to Narragansett Bay islands. *Wild Rhode Island* 6(3): 1-2.
- The H. John Heinz III Center for Science, Economics and the Environment (The Heinz Center). 2002. *State of the nation's ecosystems*. Cambridge University Press, Cambridge, UK.
- The Heinz Center. 2008. *State of the nation's ecosystems*. Cambridge University Press, Cambridge, UK.
- The Heinz Center. 2013. *Pollinators and the State Wildlife Action Plans Voluntary Guidance for State Wildlife Agencies*. Washington, DC, 20 pp.
- The Nature Conservancy (TNC). 1996. *Priorities for conservation: 1996 annual report card for U.S. plant and animal species*. The Nature Conservancy, Arlington, Virginia.
- TNC. 2000. *The five-S framework for site conservation: a practitioner's handbook for site conservation planning and measuring conservation success*. The Nature Conservancy, Arlington, Virginia.
- TNC. 2010. Benthic Model from Northwest Atlantic Marine Assessment Online at: <http://www.nature.ly/namera>
- TNC. 2014. Block Island-One of the Last Great Places. Rhode Island Chapter. *The Places We Protect*. <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/rhodeisland/placesweprotect/block-island.xml>
- TNC. 2014. Living shorelines. Fact Sheet. 2pp. Available online at: <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/rhodeisland/rhode-island-living-shoreline-fact-sheet.pdf>
- The Wildlife Society. 2007. Impacts of wind energy facilities on wildlife and wildlife habitat. *Technical Review 07-2*. 1-50.

- Timberdoodle. The Woodcock Management Plan. Available online at: http://timberdoodle.org/sites/default/files/woodcockPlan_0.pdf
- Trombulak, S.C. and C.A. Frissell. 2000. Review of ecological effects of roads on terrestrial and aquatic communities. *Conservation Biology* 14(1): 18-30.
- Tucker, G. 1979. Flora of the South Kingstown pine barrens. MS Thesis, Cornell University.
- University of Rhode Island (URI). 2004. Rhode Island critical resources atlas. URI Environmental Data Center, Kingston, Rhode Island. Available online at: <http://www.edc.uri.edu/riatlas/>
- URI. 2013. Impervious Surface Dataset <http://www.edc.uri.edu/rigis/data/data.aspx?ISO=environment>
- URI Environmental Data Center. 2014. Biodiversity, Land Protection, and Climate Change: Conserving the Stage. *Conserving Biodiversity in the Face of Climate Change*. <http://www.edc.uri.edu/elu/>
- U.S. Census Bureau (US Census). 2010. <http://www.census.gov/2010census/>
- U.S. Department of Agriculture (USDA). 2014. 2012 Census of Agriculture. National Agricultural Statistics Service.
- U.S. Department of Transportation (US DOT) Federal Highway Administration. 2013. State Statistical Abstracts 2012. <http://www.fhwa.dot.gov/policyinformation/statistics/abstracts/2012/ri.cfm>.
- U.S. Environmental Protection Agency (U.S. EPA, EPA). 2002. Index of Watershed Indicators. <http://yosemite.epa.gov/water/owrccatalog.nsf/065ca07e299b464685256ce50075c11a/74cc02b72597630785256b0600723d41!OpenDocument>
- U.S. EPA. 2014. Memorandum of Understanding on the Migratory Bird Treaty Act. February 5, 2104. http://www.epa.gov/oppfead1/cb/csb_page/updates/2014/birdtreaty.html
- United States Fish and Wildlife Service (USFWS). 1996. Piping Plover (*Charadrius melodus*) Revised Recovery Plan. Prepared by the Atlantic Coast Piping Plover Recovery Team. 15 pp.
- USFWS. 1998. Roseate Tern (*Sterna dougallii*) Northeast Population Recovery Plan. Prepared by the Northeast Roseate Tern Recovery Team 75 pp. http://ecos.fws.gov/docs/recovery_plan/981105.pdf
- USFWS. 2002. Rhode Island NWR Comprehensive Conservation Plan. http://www.fws.gov/refuge/Ninigret/what_we_do/finalccp.html
- USFWS. 2004. Writing refuge management goals and objectives: a handbook. U.S. Department of the Interior, Washington, D.C. Available online at <http://library.fws.gov/pubs3.html>
- USFWS. 2011. 2011 National Survey of Fishing, Hunting, and Wildlife Associated Recreation. 143 pp.
- USFWS. 2013. Rhode Island National Wildlife Refuge Complex. http://www.fws.gov/refuge/Ninigret/About_the_Complex/.
- USFWS. 2014a. Draft environmental assessment: Narrow River estuary resiliency restoration program. Rhode Island National Wildlife Refuge Complex and Center for Ecosystem Restoration. 57pp.
- USFWS. 2014b. Northern Long-Eared Bat Interim Conference and Planning Guidance. USFWS Regions 2,3,4,5 &6. January 6, 2014, 67 pp.
- USFWS. 2014. Species Profile. Northern long-eared bat (*Myotis septentrionalis*) <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=A0JE>
- USFWS. 2014d. Rufa Red Knot (*Calidris canutus rufa*) Red knot listing <http://www.fws.gov/northeast/redknot/>
- USFWS. 2014e. USFWS Rhode Island NWR Complex. About the Complex http://www.fws.gov/refuge/Ninigret/About_the_Complex/
- U.S. Geological Survey. 1995. Status and trends of the nation's biological resources. U.S. Geological Survey, Washington, D.C. <http://biology.usgs.gov/s+t/SNT/index.htm>
- Vellend, M., K. Verheyen, K. M. Flinn, H. Jacquemyn, A. Kolb, H. Van Calster, G., Peterken, B. Jessen Graae, J. Bellemare, O. Honnay, J. Brunet, M. Wulf, F. Gerhard and M. Hermy. 2007. Homogenization of forest plant communities and weakening of species–environment relationships via agricultural land use. *J. Ecology*. 95:565-573.

- Vickery, P. D. and P. W. Dunwiddie (eds.). 1997. Grasslands of Northeastern North America: ecology and conservation of native and agricultural landscapes. Massachusetts Audubon Society, Lincoln, MA.
- Walsh, S.J., H.L. Jelks, and N.M. Burkehead. 2009. The decline of North American Freshwater Fishes. Action Bioscience June 2009. www.actionbioscience.org/biodiversity/walsh.html.
- Watershed Counts. 2014. Narragansett Bay watershed report with a spotlight on marine and freshwater beaches. U.R.I. Coastal Institute and Narragansett Bay Estuary Program. 33pp. http://www.watershedcounts.org/documents/Watershed_Counts_Report_2014.pdf
- Wheeler, R. L., N. K. Trevor, A. C. Tarr, and A. J. Crone. 2000. Earthquakes in and near the northeastern United States, 1638-1998, Version 1.1. U.S. Geological Survey Geologic Investigations Series I-2737, Denver, Colorado. http://neic.usgs.gov/neis/states/rhode_island/
- Whitlock, A. 2006. Northeast States' Wildlife Action Plans (NES WAPs) Comprehensive List of Species of Greatest Conservation Need (SGCN). Unpublished Report for the Northeast Wildlife Diversity Technical Committee of the Northeastern Association of Fish and Wildlife Agencies.
- Widmann, R. H. 2002. Trends in Rhode Island forests: a half century of change. USDA, Forest Service, Northeastern Research Station, NE-INF-144-02, Newton Square, Pennsylvania.
- Williams, J.D., M.L. Warren, Jr., K.S. Cummings, J.L. Harris, and R.J. Neves. 1993. Conservation status of freshwater mussels of the United States and Canada. Fisheries 18(9): 9-22.
- Wilson, M.A. and S.R. Carpenter. 1999. Economic Valuation of Freshwater Ecosystem Services in the United States. Ecological Applications 9(3): 772-783
- Wootten, L. 2006. Invasive Asiatic sand sedge (*Carex kobomugi*): New Jersey. Minutes of Mid-Atlantic Panel on Aquatic Invasive Species, meeting of Sept. 13-14, 2006. p. 2-3.
- World Bank. 1995. The World Bank develops new system to measure wealth of nations. Press release. September 17, 1995. World Bank. Washington, D.C
- Xerces Society for Invertebrate Conservation (Xerces Society). 2014. Red List of Bees: Native Bees in Decline. <http://www.xerces.org/pollinator-redlist/>

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

Appendix 1b. Rhode Island Species of Greatest Conservation Need

This appendix lists Rhode Island’s wildlife species determined to be in greatest need of conservation. Reasons for designating a species as in greatest conservation need include low and declining populations, endemism, imperilment, vulnerability, global rarity, etc. (see Table 1.12). For each species, the best available status information is listed. This appendix directly addresses Element 1.

<u>KEY</u>	
FEDSTAT	U.S. Endangered Species Act: federally endangered (FE), federally threatened (FT), federal species of concern (SC), proposed endangered (PE), proposed threatened (PT)
STSTAT	RI Endangered Species Act: state endangered (SE), state threatened (ST), state concern (C), state historical (SH)
OSTAT	Other Status – state abbreviation (e.g. ME for Maine) E - endangered. T- threatened. C - concern, P – protected, K/D – knowledge deficient
SRANK	State Rank from NatureServe
GRANK	Global Rank from NatureServe
Other:	
	GrassBrd: RI DEM, PIF
	IUCN: International Union for Conservation of Nature and Natural Resources, Red List of Threatened Species
	Mussels: AFS Conservation Status
	NABats: BCI
	NALCP: North American Landbird Conservation Plan Species of Continental Importance or a Priority Species for BCR 9 (Southern New England)
	NAWCA: North American Wetland Conservation Act Priority Species for BCR 30 (New England/Mid-Atlantic Coast)
	NATerns: RI DEM, MANEM
	PARC: Partners for Amphibian and Reptile Conservation
	USSCP: U.S. Shorebird Conservation Plan Conservation Status

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
MAMMALS	American Water Shrew	<i>Sorex (Otisorex) palustris</i>		C		S1	G5	IUCN Rank
MAMMALS	Big Brown Bat	<i>Eptesicus fuscus</i>				S5	G5	
MAMMALS	Black Bear	<i>Ursus americanus</i>				SNR	G5	IUCN Rank
MAMMALS	Block Island Meadow Vole	<i>Microtus pennsylvanicus provectus</i>				S2	G5T2Q	
MAMMALS	Bobcat	<i>Lynx rufus</i>		ST		SU	G5	IUCN Rank
MAMMALS	Eastern Mole	<i>Scalopus aquaticus</i>				SNR	G5	
MAMMALS	Eastern Red Bat	<i>Lasiurus borealis</i>				S?	G5	IUCN Rank, NABats
MAMMALS	Eastern Small-Footed Myotis	<i>Myotis leibii</i>				SP	G3	IUCN Rank, NABats
MAMMALS	Fin Whale	<i>Balaenoptera physalus</i>	FE	SE		SNRN	G3G4	IUCN Rank
MAMMALS	Harbor Porpoise	<i>Phocoena phocoena</i>				SNR	G4G5	
MAMMALS	Harbor Seal	<i>Phoca vitulina</i>				SNR	G5	IUCN Rank
MAMMALS	Hoary Bat	<i>Lasiurus cinereus</i>				S1	G5	IUCN Rank, NABats
MAMMALS	Humpback Whale	<i>Megaptera novaeangliae</i>	FE	SE		SNRN	G3	IUCN Rank
MAMMALS	Little Brown Myotis	<i>Myotis lucifugus</i>				S5	G5	IUCN Rank, NABats
MAMMALS	New England Cottontail	<i>Sylvilagus transitionalis</i>	C	C		S2	G4	IUCN Rank
MAMMALS	North Atlantic Right Whale	<i>Eubalaena glacialis</i>	FE	SE		SU	G1	IUCN Rank
MAMMALS	Northern Long -Eared Bat	<i>Myotis septentrionalis</i>	PE			S2	G4	IUCN Rank, NABats
MAMMALS	Silver-haired Bat	<i>Lasionycteris noctivagans</i>				SU	G5	IUCN Rank, NABats
MAMMALS	Smoky Shrew	<i>Sorex (Otisorex) fumeus</i>		C		S2	G5	IUCN Rank
MAMMALS	Southern Bog Lemming	<i>Synaptomys cooperi</i>				S1	G5	IUCN Rank
MAMMALS	Tri-colored Bat	<i>Perimyotis subflavus</i>				S4	G5	IUCN Rank, NABats
BIRDS	Acadian Flycatcher	<i>Empidonax vireescens</i>		C		S1B,S1N	G5	IUCN Rank, PIF NALCP
BIRDS	American Black Duck	<i>Anas rubripes</i>				S4B,S4N	G5	IUCN Rank
BIRDS	American Kestrel	<i>Falco sparverius</i>				S4B,SZN	G5	IUCN Rank

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
BIRDS	American Oystercatcher	<i>Haematopus palliatus</i>		C		S2B,S2N	G5	IUCN Rank, USSCP
BIRDS	American Redstart	<i>Setophaga ruticilla</i>				S5B	G5	IUCN Rank
BIRDS	American Wigeon	<i>Anas americana</i>				SNA	G5	
BIRDS	American Woodcock	<i>Scolopax minor</i>				S4B,S4N	G5	IUCN Rank, USSCP
BIRDS	Atlantic Brant	<i>Branta bernicla</i>				SNA	G5	IUCN Rank
BIRDS	Bald Eagle	<i>Haliaeetus leucocephalus</i>		SE		S1B,S1N	G5	
BIRDS	Bank Wwallow	<i>Riparia riparia</i>				S3B,SZN	G5	IUCN Rank
BIRDS	Barn Owl	<i>Tyto alba</i>		SE		S1B,S1N	G5	IUCN Rank, GrassBrd
BIRDS	Black Scoter	<i>Melanitta americana</i>				SNA	G5	IUCN Rank
BIRDS	Black-and-White Warbler	<i>Mniotilta varia</i>				S5B,SZN	G5	IUCN Rank, PIF NALCP
BIRDS	Black-bellied Plover	<i>Pluvialis squatarola</i>				SZN	G5	IUCN Rank, USSCP
BIRDS	Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>				S5B,S5N	G5	IUCN Rank, PIF NALCP
BIRDS	Blackburnian Warbler	<i>Setophaga fusca</i>		ST		S1B,S1N	G5	PIF NALCP
BIRDS	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>		C		S2B,SZN	G5	IUCN Rank
BIRDS	Blackpoll Warbler	<i>Setophaga striata</i>				SNA	G5	IUCN Rank
BIRDS	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>		ST		S1B,S3N	G5	
BIRDS	Blue-headed Vireo	<i>Vireo solitarius</i>				S3B,SZN	G5	IUCN Rank
BIRDS	Blue-winged Warbler	<i>Vermivora cyanoptera</i>				S5B,SZN	G5	PIF NALCP
BIRDS	Bobolink	<i>Dolichonyx oryzivorus</i>				S3B,SZN	G5	IUCN Rank, PIF NALCP
BIRDS	BrownThrasher	<i>Toxostoma rufum</i>				S4B,SZN	G5	IUCN Rank, PIF NALCP
BIRDS	Bufflehead	<i>Bucephala albeola</i>				SNA	G5	
BIRDS	Canada Goose - Atlantic Population	<i>Branta canadensis</i>				S4B	G5	
BIRDS	Canada Goose - North Atlantic Population	<i>Branta canadensis</i>				S4B	G5	
BIRDS	Canada Warbler	<i>Cardellina canadensis</i>				S4B,SZN	G5	IUCN Rank, PIF NALCP

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
BIRDS	Canvasback	<i>Aythya valisineria</i>				SNA	G5	
BIRDS	Cerulean Warbler	<i>Setophaga cerulea</i>		SE		S1B,S2N	G4	
BIRDS	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>				S5B,SZN	G5	
BIRDS	Chimney Wwift	<i>Chaetura pelagica</i>				S5B,SZN	G5	IUCN Rank, PIF NALCP
BIRDS	Clapper Rail	<i>Rallus longirostris</i>		C		S1B,S2N	G5	IUCN Rank, PIF NALCP
BIRDS	Common Eider	<i>Somateria mollissima</i>				SNA	G5	
BIRDS	Common Goldeneye	<i>Bucephala clangula</i>				SNA	G5	
BIRDS	Common Loon	<i>Gavia immer</i>				SNA	G5	IUCN Rank
BIRDS	Common Tern	<i>Sterna hirundo</i>				S3B,SZN	G5	IUCN Rank, NATerns
BIRDS	Cory's Shearwater	<i>Calonectris diomedea</i>				SNA	G5	
BIRDS	Dunlin	<i>Calidris alpina</i>				SZN	G5	IUCN Rank
BIRDS	Eastern Bluebird	<i>Sialia sialis</i>				S3B	G5	IUCN Rank
BIRDS	Eastern Kingbird	<i>Tyrannus tyrannus</i>				S5B,S5N	G5	IUCN Rank, PIF NALCP
BIRDS	Eastern Meadowlark	<i>Sturnella magna</i>				S3B,SZN	G5	IUCN Rank, GrassBrd
BIRDS	Eastern Towhee	<i>Pipilo erythrophthalmus</i>				S5B,SZN	G5	IUCN Rank, PIF NALCP
BIRDS	Eastern Whip-poor-will	<i>Antrostomus vociferous</i>				S4B,SZN	G5	IUCN Rank, PIF NALCP
BIRDS	Field Sparrow	<i>Spizella pusilla</i>				S4B,SZN	G5	IUCN Rank, PIF NALCP
BIRDS	Glossy Ibis	<i>Plegadis falcinellus</i>		C		S1B,SZN	G5	IUCN Rank
BIRDS	Grasshopper Sparrow	<i>Ammodramus savannarum</i>		ST		S1B,S1N	G5	IUCN Rank, PIF NALCP, GrassBrd
BIRDS	Gray Catbird	<i>Dumetella carolinensis</i>				S5B	G5	IUCN Rank
BIRDS	Great crested Flycatcher	<i>Myiarchus crinitus</i>				S5B,SZN	G5	IUCN Rank, PIF NALCP
BIRDS	Great Egret	<i>Ardea alba</i>		C		S1B,SZN	G5	
BIRDS	Great Shearwater	<i>Puffinus gravis</i>				SNA	G5	

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
BIRDS	Greater Scaup	<i>Aythya marila</i>				SNA	G5	IUCN Rank
BIRDS	Greater Yellowlegs	<i>Tringa melanoleuca</i>				SZN	G5	IUCN Rank, USSCP
BIRDS	Hairy Woodpecker	<i>Picooides villosus</i>				S4B,S4N	G5	IUCN Rank
BIRDS	Harlequin Duck	<i>Histrionicus histrionicus</i>				S1N	G4	IUCN Rank
BIRDS	Herring Gull	<i>Larus argentatus</i>				S3B,SZN	G5	IUCN Rank
BIRDS	Hooded Merganser	<i>Lophodytes cucullatus</i>		C		S1B	G5	
BIRDS	Hooded Warbler	<i>Setophaga citrina</i>				S3B,SZN	G5	IUCN Rank
BIRDS	Horned Grebe	<i>Podiceps auritus</i>				SNA	G5	
BIRDS	Horned Lark	<i>Eremophila alpestris</i>		C		S1B,SZN	G5	IUCN Rank
BIRDS	Indigo Bunting	<i>Passerina cyanea</i>				S4B,SZN	G5	IUCN Rank
BIRDS	King Rail	<i>Rallus elegans</i>		C		S1B,S1N	G4G5	IUCN Rank, PIF NALCP
BIRDS	Least Bittern	<i>Ixobrychus exilis</i> (<i>hesperis</i>)		ST		S2B,S2N	G5	IUCN Rank
BIRDS	Least Flycatcher	<i>Empidonax minimus</i>				S3B,SZN	G5	IUCN Rank
BIRDS	Least Sandpiper	<i>Calidris minutilla</i>				SZN	G5	IUCN Rank, USSCP
BIRDS	Least Tern	<i>Sternula antillarum</i>		ST		S2B,S2N	G4	IUCN Rank, NATerns
BIRDS	Lesser Scaup	<i>Aythya affinis</i>				SNA	G5	IUCN Rank
BIRDS	Marsh Wren	<i>Cistothorus palustris</i>		C		S2B,S3N	G5	IUCN Rank, PIF NALCP
BIRDS	Nashville Warbler	<i>Oreothlypis ruficapilla</i>				S3B,SZN	G5	IUCN Rank
BIRDS	Nelson's Sparrow	<i>Ammadramus nelsoni</i>				SNA	G5	
BIRDS	Northern Flicker	<i>Colaptes auratus</i>				S5B,S5N	G5	IUCN Rank, PIF NALCP
BIRDS	Northern Gannet	<i>Morus bassanus</i>				SNA	G5	
BIRDS	Northern Goshawk	<i>Accipiter gentilis</i>		C		S1B,S1N	G5	IUCN Rank
BIRDS	Northern Harrier	<i>Circus cyaneus</i>		SE		S1B,S3N	G5	IUCN Rank, GrassBrd

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
BIRDS	Northern Parula	<i>Setophaga americana</i>		ST		S1B,S1N	G5	IUCN Rank
BIRDS	Northern Pintail	<i>Anas acuta</i>				SNA	G5	
BIRDS	Northern Waterthrush	<i>Parkesia noveboracensis</i>				S4B,SZN	G5	
BIRDS	Osprey	<i>Pandion haliaetus</i>		C		S2B,S2N	G5	IUCN Rank
BIRDS	Peregrine Falcon	<i>Falco peregrinus</i>		SE		SZN	G4	IUCN Rank
BIRDS	Pied-billed Grebe	<i>Podilymbus podiceps</i>		SE		S1B	G5	
BIRDS	Pileated Woodpecker	<i>Dryocopus pileatus</i>		C		S1B,S1N	G5	IUCN Rank
BIRDS	Piping Plover	<i>Charadrius melodus</i>	FE	SE		S1B,S1N	G3	IUCN Rank, USSCP
BIRDS	Prairie Warbler	<i>Setophaga discolor</i>				S5B,SZN	G5	PIF NALCP
BIRDS	Prothonotary Warbler	<i>Protonotaria citrea</i>		C		S1B,S1N	G5	IUCN Rank
BIRDS	Purple Finch	<i>Haemorhous purpureus</i>				S3B,SZN	G5	IUCN Rank
BIRDS	Purple Sandpiper	<i>Calidris maritima</i>				SZN	G5	IUCN Rank, USSCP
BIRDS	Razorbill	<i>Alca torda</i>				SNA	G5	
BIRDS	Red Knot	<i>Calidris canutus</i>	PT			S3N	G5	IUCN Rank,USSCP
BIRDS	Red-breasted Merganser	<i>Mergus serrator</i>				SNA	G5	
BIRDS	Red-throated Loon	<i>Gavia stellata</i>				SNA	G5	
BIRDS	Roseate Tern	<i>Sterna dougallii</i>	FE	SH		SHB,S1N	G4	IUCN Rank, NATerns
BIRDS	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>				S4B,SZN	G5	IUCN Rank, PIF NALCP
BIRDS	Ruddy Duck	<i>Oxyura jamaicensis</i>				SNA	G5	
BIRDS	Ruddy Turnstone	<i>Arenaria interpres</i>				S4N	G5	IUCN Rank, USSCP
BIRDS	Ruffed Grouse	<i>Bonasa umbellus</i>				S5B,S5N	G5	IUCN Rank
BIRDS	Rusty Blackbird	<i>Euphagus carolinus</i>				SNA	G4	IUCN Rank
BIRDS	Saltmarsh Sparrow	<i>Ammodramus caudacutus</i>				S3B,SZN	G4	IUCN Rank, PIF NALCP
BIRDS	Sanderling	<i>Calidris alba</i>				SZN	G5	IUCN Rank, USSCP
BIRDS	Savannah Sparrow	<i>Passerculus sandwichensis</i>				S2S3B,SZN	G5	IUCN Rank, GrassBrd
BIRDS	Scarlet Tanager	<i>Piranga olivacea</i>				S5B,SZN	G5	IUCN Rank, PIF NALCP

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
BIRDS	Seaside Sparrow	<i>Ammodramus maritimus</i>		C		S2B,SZN	G4	IUCN Rank, PIF NALCP
BIRDS	Semipalmated Plover	<i>Charadrius semipalmatus</i>				SZN	G5	IUCN Rank, USSCP
BIRDS	Semipalmated Sandpiper	<i>Calidris pusilla</i>				SZN	G5	IUCN Rank, USSCP
BIRDS	Short-billed SOWITCHER	<i>Limnodromus griseus</i>				SZN	G5	IUCN Rank, USSCP
BIRDS	Short-eared Owl	<i>Asio flammeus</i>				S1N	G5	IUCN Rank, PIF NALCP, GrassBrd
BIRDS	Snowy Egret	<i>Egretta thula</i>		C		S1B,SZN	G5	IUCN Rank
BIRDS	Sora	<i>Porzana carolina</i>		C		S1B,S1N	G5	IUCN Rank
BIRDS	Spotted Sandpiper	<i>Actitis macularia</i>				S4B,S4N	G5	USSCP
BIRDS	Surf Scoter	<i>Melanitta perspicillata</i>				SNA	G5	IUCN Rank
BIRDS	Tree Swallow	<i>Tachycineta bicolor</i>				S5B	G5	IUCN Rank
BIRDS	Veery	<i>Catharus fuscescens</i>				S5B	G5	IUCN Rank
BIRDS	Virginia Rail	<i>Rallus limicola</i>				S2B,S2N	G5	IUCN Rank
BIRDS	White-rumped Sandpiper	<i>Calidris fuscicollis</i>				S3N	G5	IUCN Rank, USSCP
BIRDS	White-winged Scoter	<i>Melanitta deglandi</i>				SNA	G5	IUCN Rank
BIRDS	Willet	<i>Tringa semipalmata</i>		C		S1B,S3N	G5	IUCN Rank, USSCP
BIRDS	Willow Flycatcher	<i>Empidonax traillii</i>				S3B,S3N	G5	IUCN Rank, PIF NALCP
BIRDS	Wilson's Snipe	<i>Gallinago delicata</i>				SZN	G5	USSCP
BIRDS	Wood Duck	<i>Aix sponsa</i>				S4B,S4N	G5	IUCN Rank
BIRDS	Wood Thrush	<i>Hylocichla mustelina</i>				S5B,SZN	G5	IUCN Rank, PIF NALCP
BIRDS	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>				S5B,S5N	G5	IUCN Rank
BIRDS	Yellow-breasted Chat	<i>Icteria virens</i>		SE		SHB,S1N	G5	IUCN Rank
BIRDS	Yellow-crowned Night Heron	<i>Nyctanassa violacea</i>		C		S1B,S1N	G5	IUCN Rank
BIRDS	Yellow-rumped Warbler	<i>Setophaga coronata</i>				S2B,SZN	G5	
BIRDS	Yellow-throated Vireo	<i>Vireo flavifrons</i>				S4B,SZN	G5	IUCN Rank, PIF NALCP
AMPHIBIANS	Eastern Spadefoot	<i>Scaphiopus holbrookii</i>		SE		S1	G5	IUCN Rank, PARC

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
AMPHIBIANS	Four-toed Salamander	<i>Hemidactylum scutatum</i>				S3	G5	IUCN Rank, PARC
AMPHIBIANS	Fowler's Toad	<i>Anaxyrus fowleri</i>				S3	G5	IUCN Rank, PARC
AMPHIBIANS	Marbled Salamander	<i>Ambystoma opacum</i>				S2	G5	IUCN Rank, PARC
AMPHIBIANS	Northern Dusky Salamander	<i>Desmognathus fuscus</i>				S4	G5	IUCN Rank, PARC
AMPHIBIANS	Northern Leopard Frog	<i>Lithobates pipiens</i>		C		S2	G5	IUCN Rank, PARC
AMPHIBIANS	Northern Spring Salamander	<i>Gyrinophilus porphyriticus porphyriticus</i>		C		S1	G5	PARC
AMPHIBIANS	Red-spotted Newt	<i>Notophthalmus viridescens viridescens</i>				S5	G5	PARC
AMPHIBIANS	Spotted Salamander	<i>Ambystoma maculatum</i>				S4	G5	
AMPHIBIANS	Wood Frog	<i>Lithobates sylvaticus</i>				S5	G5	IUCN Rank, PARC
REPTILES	Atlantic Green Turtle	<i>Chelonia mydas mydas</i>	FT	SE		SNR	G3T3	
REPTILES	Commonr ibbonsnake	<i>Thamnophis sauritus sauritus</i>		C		S3	G5	PARC
REPTILES	Eastern Hog-nosed snake	<i>Heterodon platirhinus</i>		C		S2	G5	IUCN Rank, PARC
REPTILES	Eastern Ratsnake	<i>Pantherophis alleghaniensis</i>		C		S2	G5	PARC
REPTILES	Kemp's Ridley Turtle	<i>Lepidochelys kempii</i>	FE	SE		SNR	G1	IUCN Rank
REPTILES	Leatherback Turtle	<i>Dermochelys coriacea</i>	FE	SE		SNR	G2	IUCN Rank
REPTILES	Loggerhead Turtle	<i>Caretta caretta</i>	FT	SE		SNR	G3	IUCN Rank
REPTILES	Northern Black Racer	<i>Coluber constrictor constrictor</i>				S5	G5T5	
REPTILES	Northern Diamond-backed Terrapin	<i>Malaclemys terrapin terrapin</i>				S1	G4	IUCN Rank, PARC
REPTILES	Spotted Turtle	<i>Clemmys guttata</i>			P	S5	G5	IUCN Rank, PARC
REPTILES	Timber Rattlesnake	<i>Crotalus horridus</i>				SX	G4	
REPTILES	Wood Turtle	<i>Glyptemys insculpta</i>		C	P	S2	G3	IUCN Rank, PARC
REPTILES	Woodland Box Turtle	<i>Terrapene carolina carolina</i>			P	S4	G5T5	PARC
FISH FRESH	American Brook Lamprey	<i>Lampetra appendix</i>		C		S1	G4	
FISH FRESH	Blacknose Dace	<i>Rhinichthys atratulus</i>				S4	G5	

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
FISH FRESH	Bridle Shiner	<i>Notropis bifrenatus</i>				S5	G3	IUCN Rank
FISH FRESH	Common Shiner	<i>Luxilus cornutus</i>				S5	G5	
FISH FRESH	Redbreast Sunfish*	<i>Lepomis auritus</i>				S3	G5	IUCN Rank
FISH FRESH	Spotfin Killifish	<i>Fundulus luciae</i>				SNR	G4	
FISH FRESH & SALT	Alewife	<i>Alosa pseudoharengus</i>				S3	G5	USSCP
FISH FRESH & SALT	American Eel	<i>Anguilla rostrata</i>				S5	G4	NAWCA, USSCP
FISH FRESH & SALT	American Shad	<i>Alosa sapidissima</i>				S1	G5	NAWCA, USSCP
FISH FRESH & SALT	Atlantic Menhaden	<i>Brevoortia tyrannus</i>				SNR	G5	NATerns
FISH FRESH & SALT	Atlantic Salmon	<i>Salmo salar</i>	FE			S1	G5	IUCN Rank, NAWCA, USSCP
FISH FRESH & SALT	Atlantic Sturgeon	<i>Acipenser oxyrinchus</i>		SH		SH	G3	IUCN Rank
FISH FRESH & SALT	Atlantic Tomcod	<i>Microgadus tomcod</i>				SNR	G5	USSCP
FISH FRESH & SALT	Blueback Herring	<i>Alosa aestivalis</i>				S1	G3G4	NAWCA, USSCP
FISH FRESH & SALT	Brook Trout	<i>Salvelinus fontinalis</i>				S5	G5	
FISH FRESH & SALT	Inland Silverside	<i>Menidia beryllina</i>				SNR	G5	
FISH FRESH & SALT	Rainbow Smelt	<i>Osmerus mordax</i>				S1	G5	NAWCAUSSCP
FISH FRESH & SALT	Rainwater Killifish	<i>Lucania parva</i>				SNR	G5	
FISH FRESH & SALT	Sheepshead Minnow	<i>Cyprinodon variegatus</i>				SNR	G5	
FISH FRESH & SALT	Sticklebacks	<i>Gasterosteus spp</i>						
FISH FRESH & SALT	Striped Killifish	<i>Fundulus majalis</i>				SNRN	G5	
FISH FRESH & SALT	White Perch	<i>Morone americana</i>				S5	G5	
FISH SALT	American Sand Lance	<i>Ammodytes americanus</i>				SNR	G5	NATerns
FISH SALT	Atlantic Cod	<i>Gadus morhua</i>				SNR	G5	
FISH SALT	Atlantic Herring	<i>Clupea harengus</i>				SNR	GNR	IUCN Rank
FISH SALT	Atlantic Silverside	<i>Menidia menidia</i>				SNR	G5	
FISH SALT	Bay Anchovy	<i>Anchoa mitchilli</i>				SNR	G5	
FISH SALT	Black Sea Bass	<i>Centropristis striata</i>				SNR	GNR	
FISH SALT	Bluefish	<i>Pomatomus saltatrix</i>				SNR	G5	
FISH SALT	Butterfish	<i>Peprilus triacanthus</i>				SNR	GNR	

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
FISH SALT	Little Tunny	<i>Euthynnus alletteratus</i>				SNR	GNR	
FISH SALT	Grubby Sculpin	<i>Myoxocephalus aeneus</i>						
FISH SALT	Hogchoker	<i>Trinectes maculatus</i>				SNR	G5	NAWCA
FISH SALT	Lined Seahorse	<i>Hippocampus erectus</i>				SNR	GNR	IUCN Rank, NATerns
FISH SALT	Mummichog	<i>Fundulus heteroclitus</i>				SNR	GNR	
FISH SALT	Northern Sea Robin	<i>Prionotus carolinus</i>				SNR	G5	
FISH SALT	Oyster Toadfish	<i>Opsanus tau</i>				SNR	GNR	
FISH SALT	Pollock	<i>Pollachius virens</i>				SNR	GNR	
FISH SALT	Sand Tiger	<i>Carcharias taurus</i>				SNR	G3G4	
FISH SALT	Skates (sp)	<i>Raja spp.</i>						IUCN Rank, NATerns
FISH SALT	Spiny Dogfish	<i>Squalus acanthias</i>				SNR	GNR	
FISH SALT	Tautog	<i>Tautoga onitis</i>				SNR	GNR	IUCN Rank
FISH SALT	Weakfish	<i>Cynoscion regalis</i>				SNR	GNR	NATerns
FISH SALT	Windowpane	<i>Scophthalmus aquosus</i>				SNR	G5	NAWCA
FISH SALT	Winter Flounder	<i>Pseudopleuronectes americanus</i>				SNR	G5	NAWCA
ANEMONES AND CORALS	American Tube Dwelling Anemone	<i>Ceriantheopsis americana</i>						
ANEMONES AND CORALS	Burrowing Anemone	<i>Actinothoe modesta</i>						
ANEMONES AND CORALS	Burrowing Anemone	<i>Edwardsia elegans</i>						
ANEMONES AND CORALS	Northern Star Coral	<i>Astrangia poculata</i>						IUCN Rank
ANNELIDS	Bamboo Worm	<i>Clymenella torquata</i>						
ANNELIDS	Blood Worm	<i>Glycera dibranchiata</i>						
ANNELIDS	Clam Worm	<i>Alitta virens</i>						
ANNELIDS	Cone Worm	<i>Pectinaria gouldii</i>						
ANNELIDS	Coral Worm	<i>Dodecaceria coralii</i>						
ANNELIDS	Parchment Tube Worm	<i>Spiochaetopterus costarum oculatus</i>						

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
ANNELIDS	Parchment Worm	<i>Chaetopterus variopedatus</i>						
ANNELIDS	Red Gilled Worm	<i>Marphysa belli</i>						
ANNELIDS	Tube Worm	<i>Diopatra cuprea</i>						
BEES	Rusty-patched Bumblebee	<i>Bombus affinis</i>				SNR	G1	
BEES	Yellowbanded Bumblebee	<i>Bombus terricola</i>				SNR	G2G4	
BEETLES	9-spotted Lady Beetle/Ladybug (bugguide.net) (kd)	<i>Coccinella novemnotata</i>				SNR	G2	
BEETLES	American Burying Beetle	<i>Nicrophorus americanus</i>	FE	SE		S1	G2G3	IUCN Rank
BEETLES	Bambardier Beetle	<i>Brachinus cyanipennis</i>				SNR	GNR	
BEETLES	Big Sand Tiger Beetle	<i>Cicindela formosa generosa</i>		C		S1	G5T5	
BEETLES	Caterpillar Hunter	<i>Calosoma wilcoxi</i>				SNR	GNR	
BEETLES	Common Claybank Tiger Beetle	<i>Cicindela limbalis</i>		C		S1	G5	
BEETLES	Cow path Tiger Beetle	<i>Cicindela purpurea purpurea</i>		C		S1	G5	
BEETLES	Dung Beetle	<i>Copris fricator</i>				SNR	GNR	
BEETLES	Dung Beetle	<i>Dichotomius carolinus</i>				SNR	GNR	
BEETLES	Eastern Red-Bellied Tiger Beetle	<i>Cicindela rufiventris rufiventris</i>		C		S1	G5	
BEETLES	Eastern Snail eater	<i>Scaphinotus elevatus</i>				SNR	GNR	
BEETLES	Elderberry Borer	<i>Desmocerus palliatus</i>				SNR	GNR	
BEETLES	False Mealworm Beetle	<i>Alobates morio</i>				SNR	GNR	
BEETLES	Festive Tiger Beetle	<i>Cicindela scutellaris rugifrons</i>				S5	G5	
BEETLES	Flea Beetle	<i>Phyllotreta chalybeipennis</i>				SNR	GNR	
BEETLES	Goldsmith Beetle (bugguide.net/iowa state) (kd)	<i>Cotalpa lanigera</i>				SNR	GNR	
BEETLES	Ground Beetle	<i>Agonum darlingtoni</i>			CT-C (KD)	SNR	GNR	

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
BEETLES	Ground Beetle	<i>Bembidion confusum</i>				SNR	GNR	
BEETLES	Ground Beetle	<i>Bembidion semicinctum</i>				SNR	GNR	
BEETLES	Ground Beetle	<i>Calathus ingratus</i>				SNR	GNR	
BEETLES	Ground Beetle	<i>Geopinus incrassatus</i>				SNR	GNR	
BEETLES	Ground Beetle	<i>Omopron tessellatum</i>				SNR	GNR	
BEETLES	Hairy-necked Tiger Beetle	<i>Cicindela hirticollis rhodensis</i>		C		S4	G5	
BEETLES	Hister Beetle	<i>Spilodiscus arcuatus</i>				SNR	GNR	
BEETLES	Lagriid Beetle	<i>Anaedes brunneus</i>				SNR	GNR	
BEETLES	Margined Tiger Beetle	<i>Cicindela marginata</i>		C		S1	G5	
BEETLES	Northeast Beach Tiger Beetle	<i>Cicindela dorsalis dorsalis</i>	FT					
BEETLES	Oblique-lined Tiger Beetle	<i>Cicindela tranquebarica tranquebarica</i>				S1	G5	
BEETLES	Predaceous Diving Beetle	<i>Cybister fimbriolatus</i>				SNR	GNR	
BEETLES	Round Worm & Slug Hunter	<i>Carabus vinctus</i>				SNR	GNR	
BEETLES	Seed-eating Ground Beetle	<i>Amara chalcea</i>				SNR	GNR	
BEETLES	Serrate Shoulder Slug Hunter	<i>Carabus serratus</i>				SNR	GNR	
BEETLES	Sylvan Worm & Slug Hunter	<i>Carabus sylvosus</i>				SNR	GNR	
BEETLES	Tumblebugs	<i>Canthon pilularius</i>				SNR	GNR	
BEETLES	Tumblebugs	<i>Canthon vigilans</i>				SNR	GNR	
BUTTERFLIES	Acadian Hairstreak	<i>Satyrrium acadicum</i>		C		S2S3	G5	
BUTTERFLIES	Aphrodite Fritillary	<i>Speyeria aphrodite</i>				S4	G5	
BUTTERFLIES	Black Dash	<i>Euphyes conspicua</i>				S2?	G4	
BUTTERFLIES	Bog Copper	<i>Lycaena epixanthe</i>		C		S3	G4G5	
BUTTERFLIES	Bronze Copper	<i>Lycaena hyllus</i>				SU	G5	
BUTTERFLIES	Cobweb Skipper	<i>Hesperia metea</i>				S4	G4	
BUTTERFLIES	Dusted Skipper	<i>Atrytonopsis hianna</i>		C		S3	G4G5	

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
BUTTERFLIES	Edwards' Hairstreak	<i>Satyrium edwardsii</i>				S5	G4	
BUTTERFLIES	Frosted Elfin	<i>Callophrys (Decid.) irus (Baptisia type) AND Callophrys (Decid.) irus (Lupine type)</i>		C		S1	G3	
BUTTERFLIES	Henry's Elfin	<i>Callophrys henrici</i>		C		S1S2	G5	
BUTTERFLIES	Hessel's Hairstreak	<i>Callophrys hesseli</i>		C		S2S3	G3G4	
BUTTERFLIES	Hickory Hairstreak	<i>Satyrium caryaevorum</i>		C		S1	G4	
BUTTERFLIES	Hoary Elfin	<i>Callophrys polios</i>		C		S1	G5	
BUTTERFLIES	Meadow Fritillary	<i>Boloria bellona</i>		C		SNR	G5	
BUTTERFLIES	Monarch Butterfly	<i>danaus plexippus</i>						
BUTTERFLIES	Olive Hairstreak	<i>Callophrys gryneus</i>				S3	G5	
BUTTERFLIES	Persius Duskywing	<i>Erynnis persius</i>		SH	MA-E (KD)	SH	G5	
BUTTERFLIES	Silver-bordered Fritillary	<i>Boloria selene</i>				SNR	G5	
BUTTERFLIES	Sleepy Duskywing	<i>Erynnis brizo</i>		C		S2	G5	
CHELICERATES	Atlantic Horseshore Crab	<i>Limulus polyphemus</i>				SNR	G5	IUCN Rank
CRUSTACEANS	American Lobster	<i>Homarus americanus</i>				SNR	GNR	IUCN Rank
CRUSTACEANS	American Marsh Hopper	<i>Ochestia grillus</i>						
CRUSTACEANS	Amphipod	<i>Gammarus faciatius</i>						
CRUSTACEANS	Amphipod	<i>Gammarus lawrencianus</i>						
CRUSTACEANS	Amphipod	<i>Gammarus tigrinus</i>						
CRUSTACEANS	Amphipod	<i>Hyale plumulosa</i>						
CRUSTACEANS	Atlantic Marsh Fiddler Crab	<i>Uca pugnax</i>				SNR	GNR	
CRUSTACEANS	Atlantic Mud Crab	<i>Panopeus herbstii</i>						
CRUSTACEANS	Atlantic Sand Fiddler Crab	<i>Uca pugilator</i>				SNR	GNR	
CRUSTACEANS	Banded Marsh Hopper	<i>Uholorchestia uhleri</i>						
CRUSTACEANS	Blue Crab	<i>Callinectes sapidus</i>				SNR	GNR	
CRUSTACEANS	Coastal Mud Shrimp	<i>Upogebia affinis</i>						

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
CRUSTACEANS	Digging Amphipod	<i>Haustorius canadensis</i>						
CRUSTACEANS	Flatback Mud Crab	<i>Eurypanopeus depressus</i>				SNR	GNR	
CRUSTACEANS	Harris Mud Crab	<i>Rhithropanopeus harrisii</i>						
CRUSTACEANS	Jonah Crab	<i>Cancer borealis</i>				SNR	GNR	
CRUSTACEANS	Lady Crab	<i>Ovalipes ocellatus</i>						
CRUSTACEANS	Long nose Spider Crab	<i>Libinia dubia</i>						
CRUSTACEANS	Mantis Shrimp	<i>Squilla empusa</i>						
CRUSTACEANS	Portly Spider Crab	<i>Libinia emarginata</i>						
CRUSTACEANS	Purple Marsh Crab	<i>Sesarma reticulatum</i>						
CRUSTACEANS	Red-jointed Fiddler Crab	<i>Uca minax</i>				SNR	GNR	
CRUSTACEANS	Rock Crab	<i>Cancer irroiatius</i>				SNR	GNR	
CRUSTACEANS	Sand Burrower	<i>Amphiporeia virginiana</i>						
CRUSTACEANS	Sevenspine Bay Shrimp	<i>Crangon septemspinosa</i>						
CRUSTACEANS	Tube dwelling Amphipod	<i>Ampelisca spp.</i>						
DAMSELFLIES	American RubySpot	<i>Hetaerina americana</i>			CT-T (KD)	SNR	G5	
DAMSELFLIES	Blackwater Bluet	<i>Enallagma weewa</i>		C		SNR	G5	
DAMSELFLIES	Lyre-tipped Spreadwing	<i>Lestes unguiculatus</i>				S1	G5	
DAMSELFLIES	Pine Barrens Bluet	<i>Enallagma recurvatum</i>		C	MA/NY-T; CT-C (KD)	S2	G3	IUCN Rank
DAMSELFLIES	Scarlet Bluet	<i>Enallagma pictum</i>		C	MA/NY-T (KD)	S2	G3	IUCN Rank
DAMSELFLIES	Southern Sprite	<i>Nehalennia integricollis</i>			NY-C (KD)	S1	G5	
DRAGONFLIES	Arrow Clubtail	<i>Stylurus spiniceps</i>				S1	G5	IUCN Rank
DRAGONFLIES	Arrowhead Spiketail	<i>Cordulegaster obliqua</i>		C		SNR	G4	IUCN Rank
DRAGONFLIES	Brook Snaketail	<i>Ophiogomphus aspersus</i>		ST	MA-C (KD)	S1	G3G4	IUCN Rank
DRAGONFLIES	Comet Darner	<i>Anax longipes</i>			MA-C (KD)	S2	G5	IUCN Rank
DRAGONFLIES	Common Sanddragon	<i>Progomphus obscurus</i>				SNR	G5	
DRAGONFLIES	Coppery Emerald	<i>Somatochlora georgiana</i>		C	MA-E (KD)	SU	G3G4	IUCN Rank
DRAGONFLIES	Crimson-ringed Whiteface	<i>Leucorrhinia glacialis</i>			CT-T (KD)	S1	G5	IUCN Rank

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
DRAGONFLIES	Delta-spotted Spiketail	<i>Cordulegaster diastatops</i>				SNR	G5	
DRAGONFLIES	Maine Snaketail	<i>Ophiogomphus mainensis</i>				SU	G4	
DRAGONFLIES	Mustached Clubtail	<i>Gomphus adelphus</i>			CT-T (KD)	SNR	G4	
DRAGONFLIES	Ringed Boghaunter	<i>Williamsonia lintneri</i>		C	CT-E; MA/ME-T (KD)	S2	G3	IUCN Rank
DRAGONFLIES	Southern Pygmy Clubtail	<i>Lanthus vernalis</i>				SNR	G4	
DRAGONFLIES	Spine-crowned Clubtail	<i>Gomphus abbreviatus</i>			MA-C (KD)	S1	G3G4	IUCN Rank
DRAGONFLIES	Taper-tailed Darner	<i>Gomphaeschna antilope</i>				S1	G4	
DRAGONFLIES	Twin-spotted Spiketail	<i>Cordulegaster maculata</i>				SNR	G5	
DRAGONFLIES	Umber Shadowdragon (itis)	<i>Neurocordulia obsoleta</i>				S1	G5	IUCN Rank
DRAGONFLIES	Zebra Clubtail	<i>Stylurus scudderi</i>		ST		S1	G4	
FLIES	Bee-like Robber Fly	<i>Laphria champlainii</i>						
FLIES	Giant Stonefly	<i>Attaneuria ruralis</i>				SNR	G4	
FLIES	Golden Stoneflies	<i>Paragnetina sp.</i>						
FLIES	Robber Fly	<i>Pogonosoma dorsatum</i>						
FLIES	Robber Fly	<i>Stichopogon argenteus</i>						
FLIES	Sallflies	<i>Haploperla sp.</i>						
FLIES	Watersnipe Flies	<i>Atherix spp.</i>						
FLIES	Yellow Stonefly	<i>Eccoptura xanthenes</i>				SNR	G5	
MAYFLIES	Mayflies (Little Maryatts)	<i>Epeorus sp.</i>						
MAYFLIES	Small Minnow Mayflies	<i>Heterocloeon sp.</i>						
MOLLUSCS	Alewife Floater	<i>Anodonta implicata</i>				SNR	G5	IUCN Rank
MOLLUSCS	Atlantic Mud Piddock	<i>Barnea truncata</i>				SNR	G5	
MOLLUSCS	Atlantic Surf Clam	<i>Spisula solida</i>						
MOLLUSCS	Bay Quahog	<i>Mercenaria mercenaria</i>				SNR	G5	
MOLLUSCS	Bay Scallop	<i>Argopecten irradians</i>				SNR	G5	
MOLLUSCS	Blue Mussel	<i>Mytilus edulis</i>				SNR	GNR	
MOLLUSCS	Channeled Whelk	<i>Busycon canaliculatus</i>				SNR	GNR	

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
MOLLUSCS	Eastern Oyster	<i>Crassostrea virginica</i>				SNR	G5	
MOLLUSCS	Eastern Pearlshell	<i>Margaritifera margaritifera</i>		C		S2	G4	IUCN Rank
MOLLUSCS	Eastern Pond Mussel	<i>Ligumia nasuta</i>		C		S1	G4G5	IUCN Rank
MOLLUSCS	False Angelwing	<i>Petricolaria pholadiformis</i>				SNR	GNR	
MOLLUSCS	Golden Ambersnail	<i>Succinea wilsoni</i>						
MOLLUSCS	Knobbed Whelk	<i>Busycon carica</i>				SNR	GNR	
MOLLUSCS	Lampmussel	<i>Lampsilis radiata</i>		C		S1	G5	
MOLLUSCS	Long Fin Inshore Squid	<i>Loligo pealeii</i>						
MOLLUSCS	Marsh Snail	<i>Melampus bidentatus</i>				SNR	G5	
MOLLUSCS	Morton's Eggcockle	<i>Laevicardium mortoni</i>						
MOLLUSCS	Mouse Ear Marsh Snail	<i>Ovatella myosotis</i>				SNR	GNR	
MOLLUSCS	Northern Horse Mussel	<i>Modiolus modiolus</i>						
MOLLUSCS	Northern Lacuna	<i>Lacuna vincta</i>						
MOLLUSCS	Ocean (Black) Quahog	<i>Arctica islandica</i>						
MOLLUSCS	Razor Clam (Atlantic Jackknife)	<i>Ensis directus</i>						
MOLLUSCS	Ribbed Mussel	<i>Geukensia demissa</i>				SNR	GNR	
MOLLUSCS	Sea Scallop	<i>Placopecten magellanicus</i>						
MOLLUSCS	Soft-shell Clam	<i>Mya arenaria</i>				SNR	GNR	
MOLLUSCS	Squawfoot	<i>Strophitus undulatus</i>		C		S1	G5	
MOLLUSCS	Triangle Floater	<i>Alasmidonta undulata</i>				SNR	G4	IUCN Rank
MOTHS	A Moth	<i>Capis curvata</i>				SNR	G4	
MOTHS	A Moth	<i>Derrima stellata</i>				SNR	G4	
MOTHS	Achemon Sphinx	<i>Eumorpha achemon</i>				SNR	G4G5	
MOTHS	American Brindle Moth	<i>Lithomoia germana</i>				SNR	G5	
MOTHS	Angus's Datana	<i>Datana angusii</i>				SNR	G5	
MOTHS	Barrens Chaetagnaea	<i>Chaetagnaea tremula</i>				S4	G5	
MOTHS	Barrens Xylotype	<i>Xylotype capax</i>				S2S4	G4	
MOTHS	Bay Underwing	<i>Catocala badia</i>				SNR	G4	

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
MOTHS	Benjamin's Abagrotis	<i>Abagrotis nefascia benjamini</i>		C		S1S2	G4T3	
MOTHS	Big Poplar Sphinx	<i>Pachysphinx modesta</i>				SNR	G5	
MOTHS	Black-Dotted Ruddy Moth	<i>Ilexia intractata</i>				SNR	GNR	
MOTHS	Blueberry Sallow	<i>Sympistis dentata</i>		C		S1S2	G4	
MOTHS	Bog Oligia	<i>Oligia minuscula</i>				SNR	G4	
MOTHS	Bog Tiger Moth	<i>Grammia speciosa</i>		C		S1	G4G5	
MOTHS	Cecropia Moth	<i>Hyalophora cecropia</i>				SNR	G5	
MOTHS	Chain Fern Borer Moth	<i>Papaipema stenocelis</i>				SNR	G4	
MOTHS	Chalky Wave Moth	<i>Scopula purata</i>				SNR	G4	
MOTHS	Charming Underwing	<i>Catocala blandula</i>				SNR	G5	
MOTHS	Chokeberry Underwing	<i>Catocala crataegi</i>				SNR	G5	
MOTHS	Coastal Swamp Metarranthis	<i>Metarranthis pilosaria</i>		C		S1S3	G3G4	
MOTHS	Contracted Datana	<i>Datana contracta</i>				SNR	G5	
MOTHS	Dart Moth	<i>Leucania extincta</i>				SNR	G4	
MOTHS	Eastern Buck Moth	<i>Hemileuca maia</i>				SNR	G5	
MOTHS	Four-spotted Speraza Moth	<i>Speranza coortaria</i>				SNR	G4	
MOTHS	Fragile Dagger Moth	<i>Acronicta fragilis</i>				SNR	G5	
MOTHS	Geometrid Moth	<i>Speranza sulphurea</i>				SNR	G4	
MOTHS	Hanham's Owlet	<i>Phalaenostola hanhami</i>				SNR	G4	
MOTHS	Hermit Sphinx	<i>Sphinx eremitus</i>				SNR	G4G5	
MOTHS	Holly Sallow	<i>Metaxaglaea violacea</i>				S2S4	G5	
MOTHS	Hydrangea Sphinx	<i>Darapsa versicolor</i>				SNR	G4	
MOTHS	Included Cordgrass Borer Moth	<i>Photodes includens</i>				SNR	G4	
MOTHS	Joyful Holomelina Moth	<i>Virbia laeta</i>				SU	G4	
MOTHS	Laurel Sphinx	<i>Sphinx kalmiae</i>				SNR	G5	
MOTHS	Little Virgin Tiger Moth	<i>Grammia virguncula</i>				SNR	G5	

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
MOTHS	Lost Sallow Moth	<i>Eupsilia devia</i>				SNR	GNR	
MOTHS	Louisiana Owlet Moth	<i>Macrochilo louisiana</i>				SNR	G4	
MOTHS	Marooning Moth	<i>Sideridis maryx</i>				SNR	G4	
MOTHS	Noctuid Moth	<i>Apamea inebriata</i>				SNR	G3G4	
MOTHS	Noctuid Moth	<i>Eucoptocnemis fimbriaris</i>				SNR	G4	
MOTHS	Noctuid Moth	<i>Hyperstrotia flaviguttata</i>				SNR	G4	
MOTHS	Noctuid Moth	<i>Oligia bridghami</i>				SU	G4	
MOTHS	Noctuid Moth	<i>Psaphida thaxterianus</i>				SNR	G4	
MOTHS	Noctuid Moth	<i>Sideridis congermana</i>				SNR	GNR	
MOTHS	Noctuid Moth	<i>Sympistis riparia</i>				SNR	G4	
MOTHS	Noctuid Moth	<i>Zale curema</i>				S?	G3G4	
MOTHS	Noctuid Moth	<i>Zale submediana</i>		C		S2	G4	
MOTHS	Pale Green Pinion Moth	<i>Lithophane viridipallens</i>		C		S2S3	G4	
MOTHS	Pine Barrens Zale	<i>Zale lunifera (sp name change)</i>		C		S1	G3Q	
MOTHS	Pine Barrens Zanclognatha	<i>Zanclognatha martha</i>				S?	G4	
MOTHS	Pink Streak Moth	<i>Dargida rubripennis (faronata former genus name)</i>				SNR	G3G4	
MOTHS	Pink-border Yellow	<i>Phytometra rhodarialis</i>				SNR	G5	
MOTHS	Pitcher Plant Borer	<i>Papaipema appassionata</i>		C		S1	G4	
MOTHS	Pitcher Plant Moth	<i>Exyra fax</i>				SNR	G4	
MOTHS	Polished Dart Moth	<i>Euxoa perpolita</i>				SNR	GNR	
MOTHS	Promethia Silkmoth	<i>Callosamia promethea</i>				SNR	G5	
MOTHS	Purple Plagodis Moth	<i>Plagodis kuetzingi</i>				SNR	G5	
MOTHS	Scarlet-winged Lichen Moth	<i>Hypoprepia miniata</i>				SNR	G5	
MOTHS	Scrub Euchlaena Moth	<i>Euchlaena madusaria</i>				SNR	G4	
MOTHS	Sharp Angle Shades Moth	<i>Conservula anodonta</i>				SNR	G4	
MOTHS	Sharp-lined Powder	<i>Eufidonia discospilata</i>				S3	G5	

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
	Moth							
MOTHS	Short-lined Chocolate	<i>Argyrostroma anilis</i>				SNR	G5	
MOTHS	Spotted Dart Moth	<i>Agrotis stigmata</i>				SNR	G4	
MOTHS	Spotted Datana	<i>Datana perspicua</i>				SNR	G5	
MOTHS	Thaxter's Piñon Moth	<i>Lithophane thaxteri</i>				SU	G4	
MOTHS	Triton Daggermoth	<i>Acronicta tritona</i>				SNR	G5	
MOTHS	Tufted Sedge Moth	<i>Hypocoena inquinata</i>				SNR	GNR	
MOTHS	Tulip Tree Silkworm	<i>Callosamia angulifera</i>				SNR	G5	
MOTHS	Twin-dotted Macrochilo Moth	<i>Macrochilo hypocritalis</i>				SNR	G4	
MOTHS	Underwing Moth	<i>Catocala n. sp.</i>				SNR	GNR	
MOTHS	Unexpected Cycnia	<i>Cycnia inopinatus</i>				SNR	G4	
MOTHS	Venus Flytrap Cutworm	<i>Hemipachnobia subporphyrea</i>				SNR	G1	
MOTHS	Violet Dart Moth	<i>Euxoa violaris</i>				SNR	G4	
MOTHS	Waved Sphinx	<i>Ceratonia undulosa</i>				SNR	G5	
MOTHS	Wild Cherry Sphinx	<i>Sphinx drupiferarum</i>				SNR	G4	
SEA SLUGS	Dwarf Balloon Aeolis	<i>Eubrancheus exigus</i>						
SEA SLUGS	Eastern Emerald Elysia	<i>Elysia chlorotica</i>						
SEA SLUGS	Modest Alderia	<i>Alderia modesta</i>						
SEA SLUGS	Nudibranch	<i>Elysia catulus</i>						
SEA SLUGS	Nudibranch	<i>Tergipes tergipes</i>						
SEA SLUGS	Painted Balloon Worm	<i>Eubrancheus pallidus</i>						
SEA SLUGS	Striped Nudibranch	<i>Cratena pilata</i>						
SEA URCHINS, STARS AND CUCUMBERS	Common Sand Dollar	<i>Echinarachnius parma</i>				SNR	GNR	
SEA URCHINS, STARS AND CUCUMBERS	Common Sea Star	<i>Asterias forbesi</i>						
SEA URCHINS, STARS AND	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>						

APPENDIX 1b: RHODE ISLAND SPECIES OF GREATEST CONSERVATION NEED

GROUP	Common name	Scientific name	FEDSTAT	STSTAT	OTSTAT	SRANK	GRANK	Other
CUCUMBERS								
SEA URCHINS, STARS AND CUCUMBERS	Hairy Sea Cucumber	<i>Sclerodactyla briareus</i>						
SEA URCHINS, STARS AND CUCUMBERS	Short spined Brittle Star	<i>Ophioderma brevispinum</i>						

Appendix 1c. Regional Conservation Needs-Species of Greatest Conservation Need

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
RSGCN List : Mammals							
<i>Microtus chrotorrhinus carolinensis</i>	Southern Rock Vole	High	V. High	3	100%	53%	—
<i>Myotis leibii</i>	Eastern Small-footed Myotis	High	V. High	11	91%	78%	—
<i>Neotoma magister</i>	Allegheny Woodrat	High	V. High	8	75%	80%	—
<i>Sciurus niger cinereus</i>	Delmarva Fox Squirrel	High	V. High	4	75%	74%	EE (PDL)
<i>Sorex dispar</i>	Long-tailed Shrew	High	V. High	10	70%	52%	—
<i>Sorex palustris punctulatus</i>	Southern Water Shrew	High	V. High	4	100%	50%	—
<i>Sylvilagus transitionalis</i>	New England Cottontail	High	V. High	8	75%	81%	C
<i>Sorex palustris albibarbis</i>	American Water Shrew (Eastern)	High	High	9	0%	0%	—
<i>Sorex cinereus fontinalis</i>	Maryland Shrew	High	Mod.	3	0%	0%	—
<i>Sorex fumeus</i>	Smoky Shrew	High	Mod.	12	17%	64%	—
<i>Condylura cristata</i>	Star-nosed Mole	High	Low	14	7%	71%	—
<i>Napaeozapus insignis</i>	Woodland Jumping Mouse	High	Low	12	8%	75%	—
<i>Parascalops breweri</i>	Hairy-tailed Mole	High	Low	11	9%	70%	—
<i>Corynorhinus townsendii virginianus</i>	Virginia Big-eared Bat	High	Limited	2	100%	67%	E
<i>Glaucomys sabrinus fuscus</i>	Virginia Northern Flying Squirrel	High	Limited	2	100%	58%	DL
<i>Microtus breweri</i>	Beach Vole	High	Limited	1	100%	44%	—
<i>Microtus pennsylvanicus provectus</i>	Block Island Meadow Vole	High	Limited	1	0%	0%	—
<i>Microtus pennsylvanicus shattucki</i>	Penobscot Meadow Vole	High	Limited	1	0%	0%	—
<i>Peromyscus leucopus easti</i>	Pungo White-footed Deermouse	High	Limited	1	0%	0%	—
<i>Sorex longirostris fisheri</i>	Dismal Swamp Southeastern Shrew	High	Limited	1	100%	56%	—
<i>Eptesicus fuscus</i>	Big Brown Bat	Low	High	14	29%	71%	—
<i>Lynx rufus</i>	Bobcat	Low	High	14	21%	50%	—
<i>Martes americana</i>	American Marten	Low	High	8	38%	50%	R
<i>Phocoena phocoena</i>	Harbor Porpoise	Low	High	5	40%	53%	—
<i>Glaucomys sabrinus coloratus</i>	Carolina Northern Flying Squirrel	Low	Limited	1	100%	44%	E
<i>Myotis grisescens</i>	Gray Myotis	Low	Limited	1	100%	56%	E
<i>Balaenoptera borealis</i>	Sei Whale	Low	V. High	4	0%	0%	E
<i>Balaenoptera musculus</i>	Blue Whale	Low	V. High	3	0%	0%	E
<i>Balaenoptera physalus</i>	Fin Whale	Low	V. High	6	33%	59%	E

APPENDIX 1c: REGIONAL CONSERVATION NEEDS SGCN

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
<i>Cryptotis parva</i>	North American Least Shrew	Low	V. High	9	44%	68%	—
<i>Eubalaena glacialis</i>	North Atlantic Right Whale	Low	V. High	5	60%	67%	E
<i>Lasionycteris noctivagans</i>	Silver-haired Bat	Low	V. High	13	23%	70%	—
<i>Lasiurus borealis</i>	Eastern Red Bat	Low	V. High	14	21%	68%	R
<i>Lasiurus cinereus</i>	Hoary Bat	Low	V. High	13	38%	67%	—
<i>Lynx canadensis</i>	Canadian Lynx	Low	V. High	6	33%	73%	—
<i>Megaptera novaeangliae</i>	Humpback Whale	Low	V. High	5	40%	64%	E
<i>Mustela nivalis</i>	Least Weasel	Low	V. High	5	80%	56%	—
<i>Myotis lucifugus</i>	Little Brown Myotis	Low	V. High	14	36%	61%	R
<i>Myotis septentrionalis</i>	Northern Myotis	Low	V. High	14	43%	67%	—
<i>Myotis sodalis</i>	Indiana Myotis	Low	V. High	9	78%	76%	E
<i>Perimyotis subflavus</i>	Tricolored Bat	Low	V. High	14	36%	53%	R
<i>Physeter macrocephalus</i>	Sperm Whale	Low	V. High	2	0%	0%	E
<i>Spilogale putorius</i>	Eastern Spotted Skunk	Low	V. High	4	100%	71%	—
<i>Sylvilagus obscurus</i>	Appalachian Cottontail	Low	V. High	4	100%	65%	—
<i>Synaptomys cooperi</i>	Southern Bog Lemming	Low	V. High	13	46%	63%	—
RSGCN List: Birds							
<i>Ammodramus caudacutus</i>	Saltmarsh Sparrow	High	V. High	10	60%	85%	R
<i>Calidris canutus [M]</i>	Red Knot	High	V. High	8	38%	82%	PT,R
<i>Catharus bicknelli</i>	Bicknell's Thrush	High	V. High	6	83%	93%	PE,R
<i>Charadrius melodus [A]</i>	Piping Plover	High	V. High	11	82%	91%	ET,R
<i>Falco peregrinus [E]</i>	Peregrine Falcon	High	V. High	14	71%	100%	—
<i>Hylocichla mustelina</i>	Wood Thrush	High	V. High	14	50%	91%	R
<i>Laterallus jamaicensis</i>	Black Rail	High	V. High	7	86%	85%	—
<i>Setophaga cerulea</i>	Cerulean Warbler	High	V. High	13	54%	78%	—
<i>Sterna dougallii</i>	Roseate Tern	High	V. High	9	67%	86%	ET
<i>Vermivora cyanoptera</i>	Blue-winged Warbler	High	V. High	14	50%	77%	R
<i>Aquila chrysaetos [B,W]</i>	Golden Eagle	High	High	12	83%	87%	—
<i>Piranga olivacea</i>	Scarlet Tanager	High	High	14	36%	92%	—
<i>Passerculus sandwichensis princeps [M,W]</i>	Ipswich Sparrow	High	Low	2	100%	55%	—
<i>Melospiza georgiana nigrescens</i>	Coastal Plain Swamp Sparrow	High	Limited	3	0%	0%	—
<i>Accipiter gentilis</i>	Northern Goshawk	Low	V. High	11	55%	79%	—
<i>Ammodramus henslowii</i>	Henslow's Sparrow	Low	V. High	13	69%	71%	—
<i>Ammodramus maritimus</i>	Seaside Sparrow	Low	V. High	10	40%	92%	—
<i>Ammodramus savannarum</i>	Grasshopper Sparrow	Low	V. High	14	71%	93%	R

APPENDIX 1c: REGIONAL CONSERVATION NEEDS SGCN

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
<i>Anas rubripes</i> [B,W]	American Black Duck	Low	V. High	14	21%	93%	R
<i>Antrostomus vociferus</i>	Eastern Whip-poor-will	Low	V. High	14	36%	81%	R
<i>Arenaria interpres</i> [M,W]	Ruddy Turnstone	Low	V. High	10	10%	91%	—
<i>Asio flammeus</i>	Short-eared Owl	Low	V. High	13	77%	79%	—
<i>Asio otus</i>	Long-eared Owl	Low	V. High	14	50%	90%	—
<i>Bartramia longicauda</i>	Upland Sandpiper	Low	V. High	14	93%	86%	R
<i>Botaurus lentiginosus</i>	American Bittern	Low	V. High	14	71%	85%	R
<i>Bubulcus ibis</i>	Cattle Egret	Low	V. High	—	—	—	—
<i>Calidris maritima</i> [M,W]	Purple Sandpiper	Low	V. High	8	25%	89%	R
<i>Cardellina canadensis</i>	Canada Warbler	Low	V. High	13	23%	88%	—
<i>Chlidonias niger</i>	Black Tern	Low	V. High	—	—	—	—
<i>Chordeiles minor</i>	Common Nighthawk	Low	V. High	14	64%	83%	R
<i>Circus cyaneus</i>	Northern Harrier	Low	V. High	14	86%	95%	—
<i>Cistothorus platensis</i>	Sedge Wren	Low	V. High	13	85%	77%	R
<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo	Low	V. High	14	36%	90%	—
<i>Colinus virginianus</i>	Northern Bobwhite	Low	V. High	12	25%	87%	—
<i>Contopus cooperi</i>	Olive-sided Flycatcher	Low	V. High	12	33%	62%	—
<i>Dolichonyx oryzivorus</i>	Bobolink	Low	V. High	14	50%	83%	R
<i>Egretta caerulea</i>	Little Blue Heron	Low	V. High	10	70%	84%	—
<i>Egretta thula</i>	Snowy Egret	Low	V. High	12	67%	82%	R
<i>Egretta tricolor</i>	Tricolored Heron	Low	V. High	—	—	—	—
<i>Euphagus carolinus</i> [B,W]	Rusty Blackbird	Low	V. High	11	45%	80%	—
<i>Falcipectus canadensis</i>	Spruce Grouse	Low	V. High	—	—	—	R
<i>Gavia immer</i>	Common Loon	Low	V. High	—	—	—	R
<i>Gelochelidon nilotica</i>	Gull-billed Tern	Low	V. High	—	—	—	—
<i>Geothlypis formosa</i>	Kentucky Warbler	Low	V. High	10	50%	70%	R
<i>Haematopus palliatus</i>	American Oystercatcher	Low	V. High	9	44%	86%	R
<i>Helmitheros vermivorum</i>	Worm-eating Warbler	Low	V. High	11	45%	89%	R
<i>Histrionicus histrionicus</i> [E,W]	Harlequin Duck	Low	V. High	—	—	—	—
<i>Ixobrychus exilis</i>	Least Bittern	Low	V. High	14	86%	89%	R
<i>Lanius ludovicianus</i>	Loggerhead Shrike	Low	V. High	12	58%	65%	—
<i>Limnithlypis swainsonii</i>	Swainson's Warbler	Low	V. High	—	—	—	—
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	Low	V. High	—	—	—	—
<i>Numenius phaeopus</i> [M]	Whimbrel	Low	V. High	—	—	—	—
<i>Nyctanassa violacea</i>	Yellow-crowned Night-Heron	Low	V. High	11	64%	93%	—
<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron	Low	V. High	14	57%	88%	—

APPENDIX 1c: REGIONAL CONSERVATION NEEDS SGCN

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
<i>Parkesia motacilla</i>	Louisiana Waterthrush	Low	V. High	14	14%	87%	R
<i>Picoides dorsalis</i>	American Three-toed Woodpecker	Low	V. High	—	—	—	—
<i>Pipilo erythrophthalmus</i>	Eastern Towhee	Low	V. High	14	14%	93%	R
<i>Podilymbus podiceps</i>	Pied-billed Grebe	Low	V. High	14	79%	87%	—
<i>Poocetes gramineus</i>	Vesper Sparrow	Low	V. High	14	57%	80%	—
<i>Porzana carolina</i>	Sora	Low	V. High	14	64%	72%	—
<i>Protonotaria citrea</i>	Prothonotary Warbler	Low	V. High	10	50%	82%	R
<i>Rallus elegans</i>	King Rail	Low	V. High	13	54%	84%	R
<i>Rynchops niger</i>	Black Skimmer	Low	V. High	—	—	—	R
<i>Scolopax minor</i>	American Woodcock	Low	V. High	—	—	—	R
<i>Setophaga castanea</i>	Bay-breasted Warbler	Low	V. High	—	—	—	—
<i>Setophaga discolor</i>	Prairie Warbler	Low	V. High	14	21%	88%	R
<i>Spizella pusilla</i>	Field Sparrow	Low	V. High	14	36%	83%	R
<i>Sterna fosteri</i>	Forster's Tern	Low	V. High	—	—	—	—
<i>Sterna hirundo</i>	Common Tern	Low	V. High	13	62%	90%	R
<i>Sterna paradisaea</i>	Arctic Tern	Low	V. High	—	—	—	—
<i>Sternula antillarum</i>	Least Tern	Low	V. High	11	82%	90%	R
<i>Sturnella magna</i>	Eastern Meadowlark	Low	V. High	14	43%	86%	R
<i>Thryomanes bewickii</i>	Bewick's Wren	Low	V. High	5	20%	100%	—
<i>Toxostoma rufum</i>	Brown Thrasher	Low	V. High	14	43%	92%	R
<i>Tringa semipalmata</i>	Willet	Low	V. High	11	18%	83%	R
<i>Tyto alba</i>	Barn Owl	Low	V. High	12	67%	88%	—
<i>Vermivora chrysoptera</i>	Golden-winged Warbler	Low	V. High	12	75%	83%	PE
<i>Antrostomus carolinensis</i>	Chuck-will's-widow	Low	High	—	—	—	—
<i>Bonasa umbellus</i>	Ruffed Grouse	Low	High	14	14%	92%	R
<i>Buteo lineatus</i>	Red-shouldered Hawk	Low	High	14	50%	83%	R
<i>Buteo platypterus</i>	Broad-winged Hawk	Low	High	14	43%	88%	—
<i>Calidris alba [M,W]</i>	Sanderling	Low	High	9	33%	88%	R
<i>Calidris pusilla [M]</i>	Semipalmated Sandpiper	Low	High	8	25%	85%	R
<i>Catharus fuscescens</i>	Veery	Low	High	—	—	—	—
<i>Certhia familiaris</i>	Brown Creeper	Low	High	—	—	—	—
<i>Chaetura pelagica</i>	Chimney Swift	Low	High	14	21%	88%	—
<i>Cistothorus palustris</i>	Marsh Wren	Low	High	14	36%	81%	R
<i>Coturnicops noeboracensis [M]</i>	Yellow Rail	Low	High	—	—	—	—
<i>Empidonax traillii</i>	Willow Flycatcher	Low	High	13	8%	93%	R
<i>Empidonax virescens</i>	Acadian Flycatcher	Low	High	—	—	—	—

APPENDIX 1c: REGIONAL CONSERVATION NEEDS SGCN

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
<i>Eremophila alpestris</i>	Horned Lark	Low	High	—	—	—	—
<i>Falco sparverius</i>	American Kestrel	Low	High	14	36%	86%	—
<i>Gallinago delicata</i>	Wilson's Snipe	Low	High	—	—	—	—
<i>Gallinula galeata</i>	Common Gallinule	Low	High	14	50%	92%	—
<i>Icteria virens</i>	Yellow-breasted Chat	Low	High	—	—	—	—
<i>Limosa fedua [M]</i>	Marbled Godwit	Low	High	—	—	—	—
<i>Mniotilta varia</i>	Black-and-white Warbler	Low	High	—	—	—	R
<i>Phalaropus tricolor</i>	Wilson's Phalarope	Low	High	—	—	—	—
<i>Piranga rubra</i>	Summer Tanager	Low	High	—	—	—	—
<i>Rallus longirostris</i>	Clapper Rail	Low	High	—	—	—	R
<i>Riparia riparia</i>	Bank Swallow	Low	High	14	29%	76%	R
<i>Setophaga americana</i>	Northern Parula	Low	High	14	36%	91%	—
<i>Setophaga caeruleascens</i>	Black-throated Blue Warbler	Low	High	13	31%	88%	—
<i>Setophaga citrina</i>	Hooded Warbler	Low	High	—	—	—	—
<i>Setophaga fusca</i>	Blackburnian Warbler	Low	High	—	—	—	R
<i>Setophaga tigrina</i>	Cape May Warbler	Low	High	—	—	—	—
<i>Setophaga virens</i>	Black-throated Green Warbler	Low	High	—	—	—	—
<i>Somateria mollissima</i>	Common Eider	Low	High	—	—	—	R
<i>Spiza americana</i>	Dickcissel	Low	High	—	—	—	—
<i>Vireo flavifrons</i>	Yellow-throated Vireo	Low	High	14	21%	92%	—
RSGCN List: Reptiles and Amphibians							
<i>Glyptemys insculpta</i>	Wood Turtle	High	V. High	13	92%	78%	R
<i>Glyptemys muhlenbergii</i>	Bog Turtle	High	V. High	9	67%	84%	TS,R
<i>Malaclemys terrapin terrapin</i>	Northern Diamondback Terrapin	High	V. High	7	14%	0%	E,R
<i>Plestiodon anthracinus anthracinus</i>	Northern Coal Skink	High	V. High	4	75%	50%	—
<i>Coluber constrictor constrictor</i>	Northern Black Racer	High	High	6	17%	0%	—
<i>Eurycea longicauda</i>	Longtail Salamander	High	High	8	38%	79%	—
<i>Pseudacris kalmi</i>	New Jersey Chorus Frog	High	High	5	40%	61%	—
<i>Pseudemys rubriventris</i>	Northern Red-bellied Cooter	High	High	9	44%	68%	—
<i>Pseudotriton ruber</i>	Red Salamander	High	High	8	38%	74%	—
<i>Desmognathus monticola</i>	Seal Salamander	High	Mod.	4	25%	69%	—
<i>Gyrinophilus porphyriticus porphyriticus</i>	Northern Spring Salamander	High	Mod.	6	33%	67%	—
<i>Plethodon hoffmani</i>	Valley and Ridge Salamander	High	Mod.	4	25%	60%	—
<i>Desmognathus fuscus</i>	Northern Dusky	High	Low	14	14%	64%	—

APPENDIX 1c: REGIONAL CONSERVATION NEEDS SGCN

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
	Salamander						
<i>Desmognathus ochrophaeus</i>	Allegheny Mountain Dusky Salamander	High	Low	7	57%	50%	—
<i>Diadophis punctatus edwardsii</i>	Northern Ring-necked Snake	High	Low	6	33%	69%	—
<i>Eurycea bislineata</i>	Northern Two-lined Salamander	High	Low	14	21%	81%	—
<i>Gyrinophilus porphyriticus</i>	Spring Salamander	High	low	12	25%	100%	R
<i>Gyrinophilus porphyriticus duryi</i>	Kentucky Spring Salamander	High	Low	2	0%	0%	—
<i>Plethodon cylindraceus</i>	White-spotted Slimy Salamander	High	low	2	50%	70%	—
<i>Plethodon glutinosus</i>	Slimy Salamander	High	Low	8	50%	56%	—
<i>Plethodon punctatus</i>	White-spotted Salamander	High	Low	2	100%	58%	—
<i>Plethodon wehrlei</i>	Wehrle's Salamander	High	Low	5	40%	64%	—
<i>Storeria dekayi dekayi</i>	Brownsnake	High	Low	14	21%	64%	—
<i>Thamnophis brachystoma</i>	Short-headed Gartersnake	High	Low	2	50%	58%	—
<i>Desmognathus orestes</i>	Blue Ridge Dusky Salamander	High	Limited	1	100%	56%	—
<i>Gyrinophilus subterraneus</i>	West Virginia Spring Salamander	High	Limited	1	100%	64%	—
<i>Plethodon hubrichti</i>	Peaks of Otter Salamander	High	Limited	1	100%	56%	—
<i>Plethodon kentucki</i>	Cumberland Plateau Salamander	High	Limited	2	50%	56%	—
<i>Plethodon nettingi</i>	Cheat Mountain Salamander	High	Limited	1	100%	64%	T
<i>Plethodon shenandoah</i>	Shenandoah Salamander	High	Limited	1	100%	56%	E
<i>Plethodon virginia</i>	Shenandoah Mountain Salamander	High	Limited	2	0%	0%	—
<i>Virginia pulchra</i>	Mountain Earthsnake	High	Limited	4	100%	68%	—
<i>Ambystoma laterale & jeffersonianum</i>	Blue-spotted Salamander complex	Low	V. High	8	88%	79%	—
<i>Ambystoma tigrinum</i>	Tiger Salamander	Low	V. High	6	67%	70%	—
<i>Aneides aeneus</i>	Green Salamander	Low	V. High	4	100%	61%	—
<i>Caretta caretta</i>	Loggerhead	Low	V. High	9	67%	81%	ET,R
<i>Cemophora coccinea copei</i>	Northern Scarletsnake	Low	V. High	5	40%	67%	—
<i>Chelonia mydas</i>	Green Turtle	Low	V. High	9	56%	64%	ET
<i>Clemmys guttata</i>	Spotted Turtle	Low	V. High	14	79%	77%	R
<i>Crotalus horridus</i>	Timber Rattlesnake	Low	V. High	13	54%	80%	—
<i>Cryptobranchus alleganiensis</i>	Eastern Hellbender	Low	V. High	5	100%	78%	—
<i>Dermochelys coriacea</i>	Leatherback	Low	V. High	9	44%	65%	E
<i>Emydoidea blandingii</i>	Blanding's Turtle	Low	V. High	5	100%	77%	—
<i>Eretmochelys imbricata</i>	Atlantic Hawksbill	Low	V. High	4	0%	0%	E

APPENDIX 1c: REGIONAL CONSERVATION NEEDS SGCN

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
<i>imbricata</i>							
<i>Heterodon platirhinos</i>	Eastern Hog-nosed Snake	Low	V. High	12	50%	72%	R
<i>Lepidochelys kempii</i>	Kemp's Ridley Sea Turtle	Low	V. High	10	50%	64%	E
<i>Lithobates virgatipes</i>	Carpenter Frog	Low	V. High	4	100%	71%	—
<i>Pantherophis guttatus</i>	Red Cornsnake	Low	V. High	5	60%	67%	—
<i>Pseudacris brachyphona</i>	Mountain Chorus Frog	Low	V. High	4	75%	73%	—
<i>Pseudotriton montanus montanus</i>	Eastern Mud Salamander	Low	V. High	3	100%	55%	—
<i>Regina septemvittata</i>	Queen Snake	Low	V. High	8	63%	68%	—
<i>Scaphiopus holbrookii</i>	Eastern Spadefoot	Low	V. High	11	55%	83%	—
<i>Terrapene carolina carolina</i>	Eastern Box Turtle	Low	V. High	6	83%	72%	R
<i>Thamnophis sauritus</i>	Eastern Ribbonsnake	Low	V. High	14	50%	100%	—
<i>Acris crepitans</i>	Northern Cricket Frog	Low	High	8	50%	74%	—
<i>Agkistrodon contortrix</i>	Copperhead	Low	High	10	70%	70%	—
<i>Ambystoma opacum</i>	Marbled Salamander	Low	High	12	58%	70%	R
<i>Anaxyrus fowleri</i>	Fowler's Toad	Low	High	13	54%	70%	—
<i>Apalone spinifera spinifera</i>	Spiny Softshell	Low	High	7	57%	67%	—
<i>Graptemys geographica</i>	Common Map Turtle	Low	High	7	100%	60%	—
<i>Liochlorophis vernalis</i>	Smooth Greensnake	Low	High	12	58%	71%	—
<i>Lithobates pipiens</i>	Northern Leopard Frog	Low	High	11	45%	70%	—
<i>Necturus maculosus</i>	Mudpuppy	Low	High	8	75%	60%	—
<i>Opheodrys aestivus</i>	Rough Greensnake	Low	High	7	71%	76%	—
<i>Plestiodon laticeps</i>	Broad-headed Skink	Low	High	6	33%	64%	—
RSGCN List: Fishes							
<i>Acipenser brevirostrum</i>	Shortnose Sturgeon	High	V. High	12	58%	84%	E,R
<i>Acipenser oxyrinchus</i>	Atlantic Sturgeon	High	V. High	12	67%	71%	—
<i>Ammodytes americanus</i>	American Sand Lance	High	V. High	2	0%	0%	—
<i>Enneacanthus obesus</i>	Banded Sunfish	High	V. High	11	64%	78%	—
<i>Fundulus luciae</i>	Spotfin Killifish	High	V. High	6	50%	70%	—
<i>Ichthyomyzon greeleyi</i>	Mountain Brook Lamprey	High	V. High	4	75%	88%	—
<i>Notropis bifrenatus</i>	Bridle Shiner	High	V. High	13	54%	95%	—
<i>Percina macrocephala</i>	Longhead Darter	High	V. High	3	67%	87%	—
<i>Alosa aestivalis</i>	Blueback Herring	High	High	13	23%	90%	SC
<i>Alosa mediocris</i>	Hickory Shad	High	High	10	30%	67%	—
<i>Alosa pseudoharengus</i>	Alewife	High	High	12	42%	95%	SC,R
<i>Etheostoma vitreum</i>	Glassy Darter	High	High	4	75%	92%	—
<i>Exoglossum laurae</i>	Tonguetied Minnow	High	High	4	50%	83%	—

APPENDIX 1c: REGIONAL CONSERVATION NEEDS SGCN

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
<i>Notropis amoenus</i>	Comely Shiner	High	High	8	38%	93%	—
<i>Percina notogramma</i>	Stripeback Darter	High	High	4	50%	92%	—
<i>Percina peltata</i>	Shield Darter	High	High	8	25%	93%	—
<i>Apeltes quadracus</i>	Fourspine Stickleback	High	Mod.	12	42%	64%	—
<i>Cottus girardi</i>	Potomac Sculpin	High	Mod.	4	50%	94%	—
<i>Dasyatis centroura</i>	Roughtail Stingray	High	Mod.	0	0%	0%	—
<i>Etheostoma variatum</i>	Variagate Darter	High	Mod.	4	50%	83%	—
<i>Leucoraja garmani</i>	Rosette Skate	High	Mod.	0	0%	0%	—
<i>Microgadus tomcod</i>	Atlantic Tomcod	High	Mod.	6	0%	0%	—
<i>Notropis procne</i>	Swallowtail Shiner	High	Mod.	8	25%	95%	—
<i>Noturus flavus</i>	Stonecat	High	Mod.	8	25%	93%	—
<i>Opsanus tau</i>	Oyster Toadfish	High	Mod.	1	0%	0%	—
<i>Percina oxyrhynchus</i>	Sharpnose Darter	High	Mod.	3	33%	89%	—
<i>Pseudopleuronectes americanus</i>	Winter Flounder	High	Mod.	2	0%	0%	—
<i>Tautoglabrus adspersus</i>	Cunner	High	Mod.	2	0%	0%	—
<i>Alopias vulpinus</i>	Common Thresher Shark	High	Low	0	0%	0%	—
<i>Amblyraja radiata</i>	Thorny Skate	High	Low	0	0%	0%	SC
<i>Clupea harengus</i>	Atlantic Herring	High	Low	2	0%	0%	—
<i>Cottus caeruleomentum</i>	Blue Ridge Sculpin	High	Low	5	40%	87%	—
<i>Cottus cognatus</i>	Slimy Sculpin	High	Low	3	33%	83%	—
<i>Cyprinella analostana</i>	Satinfin Shiner	High	Low	8	25%	94%	—
<i>Exoglossum maxillingua</i>	Cutlip Minnow	High	Low	10	30%	95%	—
<i>Fundulus heteroclitus</i>	Mummichog	High	Low	12	8%	94%	—
<i>Fundulus majalis</i>	Striped Killifish	High	Low	4	25%	86%	—
<i>Hemirhamphus americanus</i>	Sea Raven	High	Low	1	0%	0%	—
<i>Hybognathus regius</i>	Eastern Silvery Minnow	High	Low	11	45%	94%	—
<i>Isurus oxyrinchus</i>	Shortfin Mako	High	Low	0	0%	0%	—
<i>Lamna nasus</i>	Porbeagle	High	Low	0	0%	0%	SC
<i>Lepomis auritus</i>	Redbreast Sunfish	High	Low	14	14%	96%	—
<i>Leucoraja erinacea</i>	Little Skate	High	Low	1	0%	0%	—
<i>Leucoraja ocellata</i>	Winter Skate	High	Low	1	0%	0%	—
<i>Lophius americanus</i>	Goosefish	High	Low	2	0%	0%	—
<i>Malacoraja senta</i>	Smooth Skate	High	Low	0	0%	0%	—
<i>Menidia menidia</i>	Atlantic Silverside	High	Low	5	40%	67%	—
<i>Merluccius bilinearis</i>	Silver Hake	High	Low	2	0%	0%	—
<i>Paralichthys oblongus</i>	Fourspot Flounder	High	Low	1	0%	0%	—

APPENDIX 1c: REGIONAL CONSERVATION NEEDS SGCN

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
<i>Peprilus triacanthus</i>	Butterfish	High	Low	2	0%	0%	—
<i>Prionace glauca</i>	Blue Shark	High	Low	0	0%	0%	—
<i>Prionotus carolinus</i>	Northern Searobin	High	Low	2	0%	0%	—
<i>Prionotus evolans</i>	Striped Searobin	High	Low	2	0%	0%	—
<i>Scomber scombrus</i>	Atlantic Mackerel	High	Low	2	0%	0%	—
<i>Scophthalmus aquosus</i>	Windowpane	High	Low	2	0%	0%	—
<i>Semotilus corporalis</i>	Fallfish	High	Low	14	29%	96%	—
<i>Sphyrna zygaena</i>	Smooth Hammerhead	High	Low	0	0%	0%	—
<i>Squalus acanthias</i>	Spiny Dogfish	High	Low	2	0%	0%	—
<i>Tautoga onitis</i>	Tautog	High	Low	3	0%	0%	—
<i>Umbra pygmaea</i>	Eastern Mudminnow	High	Low	7	29%	88%	—
<i>Urophycis chuss</i>	Red Hake	High	Low	2	0%	0%	—
<i>Zoarces americanus</i>	Ocean Pout	High	Low	1	0%	0%	—
<i>Dipturus laevis</i>	Barndoor Skate	High	Limited	1	0%	0%	—
<i>Myoxocephalus octodecemspinosus</i>	Longhorn Sculpin	High	Limited	2	0%	0%	—
<i>Sphoeroides maculatus</i>	Northern Puffer	High	Limited	2	0%	0%	—
<i>Squatina dumeril</i>	Atlantic Angel Shark	High	Limited	2	0%	0%	—
<i>Acipenser fulvescens</i>	Lake Sturgeon	Low	V. High	4	75%	94%	—
<i>Alosa sapidissima</i>	American Shad	Low	V. High	13	23%	88%	R
<i>Ammocrypta pellucida</i>	Eastern Sand Darter	Low	V. High	4	75%	81%	—
<i>Anguilla rostrata</i>	American Eel	Low	V. High	14	36%	96%	R
<i>Enneacanthus chaetodon</i>	Blackbanded Sunfish	Low	V. High	5	80%	80%	—
<i>Erimystax dissimilis</i>	Streamline Chub	Low	V. High	4	75%	73%	—
<i>Etheostoma camurum</i>	Bluebreast Darter	Low	V. High	4	75%	94%	—
<i>Etheostoma maculatum</i>	Spotted Darter	Low	V. High	3	67%	93%	—
<i>Etheostoma tippecanoe</i>	Tippecanoe Darter	Low	V. High	3	67%	91%	—
<i>Hiodon tergisus</i>	Mooneye	Low	V. High	4	50%	73%	—
<i>Ichthyomyzon bdellium</i>	Ohio Lamprey	Low	V. High	4	75%	88%	—
<i>Ichthyomyzon fossor</i>	Northern Brook Lamprey	Low	V. High	4	75%	81%	—
<i>Lampetra aepyptera</i>	Least Brook Lamprey	Low	V. High	5	60%	94%	—
<i>Lepomis gulosus</i>	Warmouth	Low	V. High	4	50%	95%	—
<i>Lethenteron appendix</i>	American Brook Lamprey	Low	V. High	13	54%	92%	—
<i>Moxostoma carinatum</i>	River Redhorse	Low	V. High	4	75%	81%	—
<i>Notropis chalybaeus</i>	Ironcolor Shiner	Low	V. High	6	100%	75%	—
<i>Noturus insignis</i>	Margined Madtom	Low	V. High	9	11%	92%	R
<i>Percina copelandi</i>	Channel Darter	Low	V. High	5	80%	82%	—

APPENDIX 1c: REGIONAL CONSERVATION NEEDS SGCN

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
<i>Percina evides</i>	Gilt Darter	Low	V. High	4	75%	81%	—
<i>Polyodon spathula</i>	Paddlefish	Low	V. High	4	50%	70%	—
<i>Prosopium cylindraceum</i>	Round Whitefish	Low	V. High	5	80%	84%	—
<i>Salmo salar</i>	Atlantic Salmon	Low	V. High	7	14%	93%	R
<i>Salvelinus fontinalis</i>	Brook Trout	Low	V. High	12	33%	96%	R
<i>Acantharchus pomotis</i>	Mud Sunfish	Low	High	6	67%	68%	—
<i>Salvelinus alpinus oquassa</i>	Arctic Char			3	NA	NA	—
<i>Ameiurus melas</i>	Black Bullhead	Low	High	5	40%	75%	—
<i>Amia calva</i>	Bowfin	Low	High	5	40%	91%	—
<i>Catostomus catostomus</i>	Longnose Sucker	Low	High	9	67%	86%	—
<i>Coregonus clupeaformis</i>	Lake Whitefish	Low	High	5	40%	60%	—
<i>Cottus cognatus</i>	Slimy Sculpin	Low	High	10	30%	83%	R
<i>Etheostoma fusiforme</i>	Swamp Darter	Low	High	12	50%	79%	—
<i>Ichthyomyzon unicuspis</i>	Silver Lamprey	Low	High	4	50%	75%	—
<i>Lota lota</i>	Burbot	Low	High	7	71%	94%	—
<i>Salvelinus namaycush</i>	Lake Trout	Low	High	5	0%	0%	—
<i>Sander canadensis</i>	Sauger	Low	High	5	40%	92%	—
RSGCN List: Tiger Beetles							
<i>Cicindela ancocisconensis</i>	Appalachian Tiger Beetle	High	High	9	78%	76%	—
<i>Cicindela marginipennis</i>	Cobblestone Tiger Beetle	High	High	8	88%	83%	—
<i>Cicindela patruela consentanea</i>	Northern Barrens Tiger Beetle	High	High	2	100%	81%	—
<i>Cicindela dorsalis dorsalis</i>	Northeastern Beach Tiger Beetle	High	Very High	7	86%	82%	T
<i>Cicindela puritana</i>	Puritan Tiger Beetle	High	Very High	5	80%	86%	T,R
<i>Cicindela rufiventris hentzi</i>	Hentz's Red-bellied Tiger Beetle	High	Very High	1	100%	88%	—
<i>Cicindela abdominalis</i>	Eastern Pinebarrens Tiger Beetle	Low	High	4	75%	80%	—
<i>Cicindela dorsalis media</i>	White Tiger Beetle	Low	High	4	50%	73%	—
<i>Cicindela lepida</i>	Ghost Tiger Beetle	Low	High	8	63%	79%	—
<i>Cicindela patruela</i>	Barrens Tiger Beetle	Low	High	13	46%	73%	—
<i>Cicindela unipunctata</i>	One-spotted Tiger Beetle	Low	High	8	13%	0%	—
RSGCN List: Freshwater Mussels							
<i>Alasmidonta heterodon</i>	Dwarf Wedgemussel	High	V. High	11	91%	90%	E,R
<i>Alasmidonta varicosa</i>	Brook Floater	High	V. High	14	86%	82%	—
<i>Elliptio fisheriana</i>	Northern Lance	High	V. High	5	60%	82%	—
<i>Lampsilis cariosa</i>	Yellow Lampmussel	High	V. High	12	83%	86%	—
<i>Lasmigona subviridis</i>	Green Floater	High	V. High	7	100%	78%	—

APPENDIX 1c: REGIONAL CONSERVATION NEEDS SGCN

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
<i>Leptodea ochracea</i>	Tidewater Mucket	High	V. High	11	91%	79%	—
<i>Ligumia nasuta</i>	Eastern Pondmussel	High	V. High	11	91%	84%	—
<i>Alasmidonta undulata</i>	Triangle Floater	High	High	14	57%	82%	—
<i>Anodonta implicata</i>	Alewife Floater	High	High	13	46%	95%	—
<i>Lampsilis radiata</i>	Eastern Lampmussel	High	Mod.	14	57%	76%	—
<i>Epioblasma torulosa gubernaculum</i>	Green Blossom	High	Limited	1	100%	0%	E
<i>Pleurobema collina</i>	James Spiny mussel	High	Limited	2	100%	89%	E
<i>Villosa perpurpurea</i>	Purple Bean	High	Limited	1	100%	83%	E
<i>Alasmidonta marginata</i>	Elktoe	Low	V. High	6	67%	85%	—
<i>Ligumia recta</i>	Black Sandshell	Low	V. High	6	83%	94%	—
<i>Truncilla truncata</i>	Deertoe	Low	V. High	4	100%	69%	—
<i>Anodontoides ferussacianus</i>	Cylindrical Papershell	Low	High	5	100%	73%	—
<i>Lampsilis fasciola</i>	Wavyrayed Lampmussel	Low	High	4	100%	94%	—
<i>Lampsilis ovata</i>	Pocketbook	Low	High	6	100%	94%	—
<i>Lasmigona compressa</i>	Creek Heelsplitter	Low	High	5	80%	67%	—
<i>Leptodea fragilis</i>	Fragile Papershell	Low	High	6	100%	76%	—
<i>Margaritifera margaritifera</i>	Eastern Pearlshell	Low	High	9	67%	81%	—
<i>Villosa iris</i>	Rainbow	Low	High	4	100%	73%	—
RSGCN List: Other Federally Listed Invertebrate Taxa							
<i>Nicrophorus americanus</i>	American burying beetles	N/A	N/A	N/A	N/A	N/A	E
<i>Lycaeides melissa samuelis</i>	Karner blue butterfly	N/A	N/A	N/A	N/A	N/A	E
<i>Neonympha mitchellii mitchellii</i>	Mitchell's satyr butterfly	N/A	N/A	N/A	N/A	N/A	E
<i>Microhexura montivaga</i>	Spruce-fir moss spider	N/A	N/A	N/A	N/A	N/A	E
<i>Succinea chittenangoensis</i>	Chittenango ovate amber snail	N/A	N/A	N/A	N/A	N/A	T
<i>Triodopsis platysayoides</i>	Flat-spined three- toothed snail	N/A	N/A	N/A	N/A	N/A	T
<i>Polygyriscus virginianus</i>	Virginia fringed mountain snail	N/A	N/A	N/A	N/A	N/A	E
<i>Stygobromus hayi</i>	Hay's spring amphipod	N/A	N/A	N/A	N/A	N/A	E
<i>Stygobromus kenki</i>	Kenk's amphipod	N/A	N/A	N/A	N/A	N/A	C
<i>Lirceus usdagalun</i>	Lee County Cave Isopod	N/A	N/A	N/A	N/A	N/A	E
<i>Antrolana lira</i>	Madison Cave isopod	N/A	N/A	N/A	N/A	N/A	T

Scientific Name [B,M,W,A,E]=[Breeding, Migratory, Wintering, Atlantic, Eastern population]	Common Name	RSGCN Responsibility	RSGCN Concern	Expected States	State Data Coverage	Data QC Survey %Confident	Federal Status
--	-------------	-------------------------	------------------	--------------------	------------------------	---------------------------------	----------------

RSGCN Concern: Northeast conservation concern ranking. For Very High, High, Moderate, Low, >75%, >50%, >25%, and <25% of occupied states met criteria for conservation concern. Limited indicates 3 or fewer states occupied in the Northeast.

RSGCN Responsibility: Northeast conservation responsibility ranking, where High indicates the region harbors >50% of species distribution, Low is <50%.

Expected States: Northeast with species presence expected due to tracking or documentation by NatureServe, Natural Heritage member programs, or NALCC. Expected states may not agree with known species ranges due to gaps in data or tracking.

State Data Coverage: Proportion of Northeast states represented by presence data compiled by NALCC from many sources. 100% coverage means data were acquired for all expected states.

Data QC %Confident: Northeast states and NatureServe completed a data quality control survey for all RSGCN. %Confident is the proportion of survey responses, across all questions and respondents, where responses met data quality standards.

Federal Status: C-Candidate; E-Listed endangered; ET-Listed endangered & listed threatened; EE-Listed endangered, nonessential experimental population; T-Listed threatened; TS-Listed threatened due to similar appearance; DL-Delisted; PDL-Proposed delisted; PE-Proposed endangered; SC-Species of concern; R-NALCC Representative Species.

Source:

Crisfield, E and the Northeast Fish and Wildlife Diversity Technical Committee (NEFWDTC). 2013. The Northeast Lexicon: Terminology Conventions and Data Framework for State Wildlife Action Plans in the Northeast Region. A report submitted to the Northeast Fish and Wildlife Diversity Technical Committee. Terwilliger Consulting, Inc., Locustville, VA.

Appendix 1d. List of Rare Plants in Rhode Island

This table represents Rhode Island plants in 2015 Edition of The New England Plant Conservation Program, Rhode Island Task Force list including those in *Flora Conservanda: New England. The New England Plant Conservation Program List of Plants in Need of Conservation* (NEPCoP FLOCON).

KEY	
State Status	FE- Federally Endangered FT- Federally Threatened SE- State Endangered SE*- Proposed State Endangered ST- State Threatened C- Concern C*- Insufficient information SH- State Historic
State Rank	State Rank from NatureServe
Global Rank	Global Rank from NatureServe
NEPCoP FLOCON	Div 1- Globally rare taxa occurring in New England. Taxa in this division have been ranked globally rare (G1 through G3, or T1 through T3) based on criteria described above. Div 2- Regionally rare taxa with fewer than 20 current occurrences within New England. Div 3- Locally rare taxa that may be common in parts of New England, but have one or more occurrences of biological, ecological, or possible genetic significance. Div 4- Historic taxa that once existed in New England, but not seen since 1970. IND- Indeterminate, taxa under review for inclusion in one of the above divisions, but issues of taxonomy, nomenclature, or status in the wild are not clearly understood.

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
PTERIDOPHYTES					
Aspleniaceae (Spleenwort Family)					
<i>Asplenium montanum</i>	Mountain Spleenwort	SE	S1	G5	Div 2
<i>Asplenium rhizophyllum</i>	Walking Spleenwort	SE	S1	G5	
<i>Asplenium trichomanes</i>	Maidenhair Spleenwort	C	S2	G5	
Equisetaceae (Horsetail Family)					
<i>Equisetum fluviatile</i>	River Horsetail	C	S1	G5	
<i>Equisetum hyemale</i> ssp. <i>affine</i>	Rough Horsetail	C	S2	G5T5	
<i>Equisetum variegatum</i>	Variiegated Scouring Rush	SE*	S1	G5	
<i>Equisetum sylvaticum</i>	Wood Horsetail	C	S2	G5	
Isoetaceae (Quillwort Family)					
<i>Isoetes echinospora</i> ssp. <i>muricata</i>	Spiny Quillwort	C	S1	G5	
<i>Isoetes engelmannii</i>	Engelmann's Quillwort	C	S1	G4	
<i>Isoetes riparia</i> var. <i>canadensis</i>	River Quillwort	C	S1	G5	Div 2
<i>Isoetes x eatonii</i>	Eaton's Quillwort	SH	SH	G2	IND
Lycopodiaceae (Clubmoss Family)					
<i>Lycopodiella alopecuroides</i>	Foxtail Bog-clubmoss	SE*	S1	G5	Div 2
<i>Lycopodium lagopus</i>	One-cone Clubmoss	SE*	S1	G5	
<i>Spinulum annotinum</i>	Common Interrupted-clubmoss	SE	S1	G5	
Lygodiaceae (Climbing Fern Family)					
<i>Lygodium palmatum</i>	American Climbing Fern	C	S1	G4	Div 3
Onocleaceae (Sensitive Fern Family)					

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
<i>Matteuccia struthiopteris</i> ssp. <i>pennsylvanica</i>	Fiddlehead Fern	C	S2	G5	
Ophioglossaceae (Adder's-tongue Family)					
<i>Botrychium. angustisegmentum</i>	Narrow Triangle Moonwort	C	S1	G5	
<i>Botrychium matricariifolium</i>	Daisy-leaved Moonwort	C	S1	G5	
<i>Botrychium oneidense</i>	Blunt-lobed Grape-fern	SE*	S1	G5	Div 2
<i>Botrychium tenebrosum</i>	Swamp Moonwort	C*	SU	G	IND
<i>Botrychium virginianum</i>	Rattlesnake Fern	C	S2	G5	
<i>Ophioglossum pusillum</i>	Northern Adder's-tongue Fern	SE	S1	G5	Div 3
Pteridaceae (Maidenhair Fern Family)					
<i>Pellaea atropurpurea</i>	Purple Cliff-brake	SE	S1	G5	
Selaginellaceae (Spikemoss Family)					
<i>Selaginella rupestris</i>	Ledge Spikemoss	C*	SU	G5	
Thelypteridaceae (Marsh Fern Family)					
<i>Phegopteris connectilis</i>	Long Beech Fern	C	S2	G5	
Woodsiaceae (Wood-fern Family)					
<i>Athyrium asplenoides</i>	Southern Lady Fern	C*	S1	G	Div 2
<i>Gymnocarpium dryopteris</i>	Oak Fern	ST	S1	G5	
<i>Woodsia ilvensis</i>	Rusty Woodsia	SH	SH	G5	
<u>GYMNOSPERMS</u>					
Pinaceae (Pine Family)					
<i>Larix laricina</i>	American Larch	ST	S1	G5	
<i>Picea mariana</i>	Black Spruce	C	S1	G5	
Taxaceae (Yew Family)					
<i>Taxus canadensis</i>	Ground Hemlock	C	S1	G5	
<u>ANGIOSPERMS</u>					
Adoxaceae (Elderberry Family)					
<i>Sambucus racemosa</i>	Red Elderberry	SH	SH	G5	
<i>Viburnum lantanoides</i>	Hobblebush	C	S1	G5	
<i>Viburnum nudum</i> var. <i>nudum</i>	Withe-rod	SH	SH	G5	Div 4
Aizoaceae (Iceplant Family)					
<i>Sesuvium maritimum</i>	Annual Sea-purslane	C*	S2	G5	Div 2
Alismataceae (Water-Plantain Family)					
<i>Helanthium tenellum</i>	Dwarf Burhead	SH	SH	G	Div 2
<i>Sagittaria graminea</i> var. <i>graminea</i>	Grass-leaved Arrowhead	C	S2	G5	
<i>Sagittaria subulata</i>	River Arrowhead	SH	SH	G4	Div 2
<i>Sagittaria teres</i>	Quill-leaved Arrowhead	SE	S1	G3	Div 1
Alliaceae (Onion Family)					
<i>Allium tricoccum</i> var. <i>tricoccum</i>	Wild Leek	C	S2	G5	
Amaranthaceae (Amaranth Family)					
<i>Amaranthus pumilus</i>	Seabeach Amaranth	FT/SH	SH	G2	Div 4
<i>Atriplex glabriuscula</i>	Bracted Orache	C	S1	G4	
<i>Atriplex subspicata</i>	Saline Orache	C*	SU	G5	IND
<i>Chenopodium berlandieri</i> var. <i>bushianum</i>	Pit-seeded Goosefoot	C*	SU	G5T4	Div 2
<i>Chenopodium leptophyllum</i>	Narrow-leaved Goosefoot	C	S1	G5	
<i>Suaeda calceoliformis</i>	American Sea-blite	C*	SU	G5	Div 2
<i>Suaeda maritima</i> ssp. <i>richii</i>	Herbaceous Sea-blite	C*	SU	G5T3	Div 1

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
Apiaceae (Parsley Family)					
<i>Angelica atropurpurea</i>	Purple-stemmed Angelica	SE	S1	G5	
<i>Angelica lucida</i>	Seaside Angelica	ST	S1	G5	
<i>Aralia racemosa</i>	American Spikenard	C	S1	G5	
<i>Cryptotaenia canadensis</i>	Canada Honewort	C	S1	G5	
<i>Hydrocotyle verticillata</i>	Whorled Marsh-pennywort	SH	SH	G5	Div 2
<i>Ligusticum scoticum</i>	Scotch Wild Lovage	C	S1	G5	
<i>Lilaeopsis chinensis</i>	Eastern Grasswort	SE*	S1	G5	
<i>Osmorhiza longistylis</i>	Long-styled Sweet-cicely	ST	S2	G5	
<i>Panax quinquefolius</i>	American Ginseng	SE	S1	G3G4	Div 1
<i>Ptilimnium capillaceum</i>	Atlantic Mock Bishop's-weed	C	S2	G5	
<i>Sanicula canadensis</i> var. <i>canadensis</i>	Canada Sanicle	C*	S1	G5T5	
<i>Taenidia integerrima</i>	Yellow Pimpernel	SH	SH	G5	Div 2
<i>Zizia aptera</i>	Heart-leaved Golden Alexanders	SH	SH	G5	Div 2
Apocynaceae (Dogbane Family)					
<i>Asclepias amplexicaulis</i>	Clasping Milkweed	C	S2	G5	
<i>Asclepias exaltata</i>	Poke Milkweed	C	S2	G5	
<i>Asclepias purpurascens</i>	Purple Milkweed	SE*	S1	G5	Div 2
<i>Asclepias quadrifolia</i>	Four-leaved Milkweed	ST	S1	G5	
<i>Asclepias tuberosa</i>	Butterfly Milkweed	C	S1	G5	
<i>Asclepias verticillata</i>	Whorled Milkweed	C	S1	G5	
Araceae (Arum Family)					
<i>Calla palustris</i>	Wild Calla	C	S2	G5	
<i>Lemna perpusilla</i>	Minute Duckweed	C*	SU	G5	IND
<i>Lemna turionifera</i>	Turion Duckweed	C*	SU	G5	IND
<i>Lemna valdiviana</i>	Pale Duckweed	C*	SU	G5	IND
<i>Orontium aquaticum</i>	Golden Club	SE	S1	G5	Div 2
Aristolocaceae (Birthwort Family)					
<i>Asarum canadense</i>	Wild Ginger	C*	S1	G5	
Asteraceae (Aster Family)					
<i>Ageratina aromatica</i>	Lesser Snakeroot	SH	SH	G5	Div 2
<i>Artemisia campestris</i> ssp. <i>caudata</i>	Field Wormwood	C	S1	G5T5	Div 3
<i>Bidens connata</i>	Purple-stemmed Beggar-ticks	C	S1	G5	
<i>Bidens tricosperma</i>	Crowned Beggar-ticks	C	S1	G5	
<i>Chrysopsis mariana</i>	Maryland Golden-aster	SE	S1	G5	Div 2
<i>Cirsium horridulum</i> var. <i>horridulum</i>	Yellow Thistle	ST	S1	G5	Div 2
<i>Coreopsis rosea</i>	Pink Tickseed	C	S2	G3	Div 1
<i>Doellingeria infirma</i>	Appalachian White-aster	SH	S1	G5	Div 2
<i>Eupatorium. novae-angliae</i>	New England Thoroughwort	SE	S1	G2	Div 1
<i>Eurybia macrophylla</i>	Large-leaved Aster	C	S2	G5	
<i>Gamochaeta purpurea</i>	Purple Cudweed	SH	SH	G5	Div 4
<i>Helianthus divaricatus</i>	Woodland Sunflower	C	S2	G5	
<i>Helianthus strumosus</i>	Pale-leaved Sunflower	C*	S1	G5	
<i>Liatris novae-angliae</i> var. <i>novae-angliae</i>	Northern Blazing Star	SE	S1	G5T3	Div 1
<i>Nabulus serpentarius</i>	Lion's-foot Rattlesnake-root	C	S1	G5	Div 2
<i>Oligoneuron rigidum</i> var. <i>rigidum</i>	Stiff Flat-topped-	SH	S1	G5	Div 2

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
	goldenrod				
<i>Packera obovata</i>	Running Groundsel	C*	S1	G5	
<i>Petasites frigidus</i> var. <i>palmatum</i>	Northern Sweet-coltsfoot	SE*	S1	G5T5	
<i>Pityopsis falcata</i>	Sickle-leaved Silk-grass	C	S2	G3G4	Div 1
<i>Rudbeckia laciniata</i> var. <i>laciniata</i>	Green-headed Coneflower	ST	S1	G5	
<i>Sclerolepis uniflora</i>	Sclerolepis	SE	S1	G4	Div 2
<i>Senecio suaveolens</i>	False Indian-plantain	SH	SH	G3G4	Div 2
<i>Solidago flexicaulis</i>	Zig-zag Goldenrod	ST	S1	G5	
<i>Solidago latissimifolia</i>	Elliott's Goldenrod	ST	S1	G5	
<i>Symphyotrichum concolor</i> ssp. <i>concolor</i>	Eastern Silver American-aster	SH	SH	G4	Div 2
<i>Symphyotrichum leave</i>	Smooth American-aster	C	S1	G5	
Berberidaceae (Barberry Family)					
<i>Caulophyllum thalictroides</i>	Blue Cohosh	ST	S1	G5	
Boraginaceae (Borage Family)					
<i>Hackelia virginiana</i>	Virginia Stickseed	C*	S1	G5	
<i>Onosmodium virginianum</i>	Eastern False Gromwell	SH	SH	G4	Div 2
Brassicaceae (Mustard Family)					
<i>Borodinia canadensis</i>	Sticklepod Rockcress	C*	S1	G5	
<i>Borodinia laevigata</i>	Smooth Rockcress	C*	SU	G5	Div 3
<i>Borodinia missouriensis</i>	Green Rockcress	C*	SU	G4	Div 2
<i>Boechera stricta</i>	Canada Rockcress	C*	SU	G5	
<i>Draba reptans</i>	Carolina Whitlow-Grass	SH	SH	G5	Div 2
Cactaceae (Cactus Family)					
<i>Opuntia humifusa</i>	Eastern Prickly-pear	SE*	S1	G5	
Campanulaceae (Bluebell Family)					
<i>Lobelia dortmanna</i>	Water Lobelia	C	S2	G4	
Caprifoliaceae (Honeysuckle Family)					
<i>Linnaea borealis</i> ssp. <i>americana</i>	American Twinflower	SH	SH	G5	
<i>Lonicera dioica</i>	Wild Honeysuckle	C	S1	G5	
<i>Lonicera sempervirens</i> var. <i>sempervirens</i>	Trumpet Honeysuckle	C*	S1	G5	Div 2
<i>Lonicera villosa</i>	Mountain Honeysuckle	C	S1	G5	
<i>Triosteum aurantiacum</i> var. <i>aurantiacum</i>	Orange-fruited Horse-gentian	C	S1	G5	Div 3
<i>Triosteum perfoliatum</i>	Perfoliate-leaved Horse-gentian	C	S1	G5	Div 2
Caryophyllaceae (Pink Family)					
<i>Honckenya peploides</i> ssp. <i>robusta</i>	Sea-side Sandwort	C	S1	G5T4	
<i>Minuartia caroliniana</i>	Pine Barren Sandwort	SH	SH	G5	Div 4
<i>Minuartia glabra</i>	Appalachian Sandwort	ST	S1	G4	Div 3
<i>Minuartia michauxii</i> var. <i>michauxii</i>	Michaux's Sandwort	SE*	S1	G5	
<i>Paronychia canadensis</i>	Smooth Forked Whitlow-wort	C*	S1	G5	Div 3
<i>Silene stellata</i>	Starry Campion	SH	SH	G5	Div 2
<i>Spergularia canadensis</i>	Canada Sand-spurry	C*	S1	G5	
Celastraceae (Staff-tree Family)					
<i>Celastrus scandens</i>	American Bittersweet	SE	S1	G5	Div 3
Cistaceae (Rock-rose Family)					
<i>Crocanthemum dumosum</i>	Bushy Frostweed	SE	S1	G3	Div 1
<i>Crocanthemum propinquum</i>	Low Frostweed	C	S1	G4	

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
<i>Hudsonia ericoides</i>	Pine-barren False Heather	ST	S1	G4	
<i>Lechea minor</i>	Thyme-leaved Pinweed	C*	S1	G5	IND
Convolvulaceae (Bindweed Family)					
<i>Calystegia silvatica</i> ssp. <i>fraterniflora</i>	Short-stalked False Bindweed	C*	S1	G5T5	
<i>Cuscuta coryli</i>	Hazel Dodder	SH	SH	G5	Div 2
<i>Cuscuta gronovii</i> var. <i>latiflora</i>	Common Dodder	C*	S1	G5T4	IND
<i>Cuscuta indecora</i> var. <i>indecora</i>	Collared Dodder	SE*	S1	G5T5	Div 2
<i>Cuscuta pentagona</i>	Bush-clover Dodder	SH	SH	G5	Div 4
<i>Cuscuta polygonorum</i>	Smartweed Dodder	C*	SU	G5	Div 2
Cornaceae (Dogwood Family)					
<i>Chamaepericlymenum canadense</i>	Canada Dwarf-dogwood	C	S1	G5	
<i>Swida rugosa</i>	Round-leaved Dogwood	C	S1	G5	
Cyperaceae (Sedge Family)					
<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i>	Saltmarsh Tuber-bulrush	C	S1	G5	
<i>Bolboschoenus novae-angliae</i>	New England Tuber-bulrush	C*	S1	G5	Div 2
<i>Carex alata</i>	Broad-winged Sedge	C*	S1	G5	
<i>Carex albicans</i>	White-tinged Sedge	C*	S1	G5	
<i>Carex albusina</i>	White Bear Sedge	C*	S1	G5	
<i>Carex aquatilis</i> ssp. <i>altior</i>	Water Sedge	SE*	S1	G5	
<i>Carex bicknellii</i>	Bicknell's Sedge	C*	S1	G5	Div 2
<i>Carex buxbaumii</i>	Brown Bog Sedge	C*	S1	G5	
<i>Carex collinsii</i>	Collins' Sedge	SE	S1	G4	Div 2
<i>Carex cumulata</i>	Clustered Sedge	C	S1	G4	
<i>Carex debilis</i> var. <i>debilis</i>	White-edged Sedge	C*	S1	G5T5	Div 2
<i>Carex exilis</i>	Meager Sedge	C	S1	G5	
<i>Carex limosa</i>	Mud Sedge	SH	SH	G5	
<i>Carex meadii</i>	Mead's Sedge	SH	SH	G4	Div 4
<i>Carex mitchelliana</i>	Mitchell's Sedge	C*	S1	G4	Div 2
<i>Carex pedunculata</i> ssp. <i>pedunculata</i>	Long-stalked Sedge	ST	S1	G5	
<i>Carex polymorpha</i>	Variable Sedge	SE	S1	G3	Div 1
<i>Carex reznicekii</i>	Reznicek's Sedge	SH	SH	G5	Div 2
<i>Carex schweinitzii</i>	Schweinitz's Sedge	SH	SH	G3	Div 1
<i>Carex sparganioides</i>	Bur-reed Sedge	SH	SH	G5	Div 3
<i>Carex sterilis</i>	Dioecious Sedge	SH	SH	G4	Div 3
<i>Carex striata</i>	Walter's Sedge	SE	S1	G4	Div 2
<i>Carex styloflexa</i>	Bent Sedge	C*	S1	G4	Div 2
<i>Cyperus odoratus</i>	Rusty Flatsedge	C*	S1	G5	
<i>Cyperus squarrosus</i>	Awned Flatsedge	SE	S1	G5	
<i>Eleocharis ambigens</i>	Ambiguous Spikesedge	SH	SH	G5	Div 4
<i>Eleocharis equisetoides</i>	Horsetail Spikesedge	C	S2	G4	Div 2
<i>Eleocharis melanocarpa</i>	Black-fruited Spikesedge	SE	S1	G4	
<i>Eleocharis ovata</i>	Ovoid Spikesedge	C*	S1	G5	IND
<i>Eleocharis rostellata</i>	Beaked Spikesedge	C	S1	G5	Div 2
<i>Eleocharis tricostata</i>	Three-angled Spikesedge	SE	S1	G4	Div 2
<i>Eleocharis tuberculosa</i>	Long-tubercled Spikesedge	C*	S1	G5	Div 3
<i>Eriophorum gracile</i>	Slender Cottonsedge	ST	S1	G5	

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
<i>Eriophorum vaginatum</i>	Tawny Cottonsedge	SH	SH	G5	
<i>Eriophorum viridicarinatum</i>	Green-keeled Cottonsedge	C	S1	G5	
<i>Fuirena pumila</i>	Dwarf Umbrella-sedge	SE	S1	G4	Div 3
<i>Lipocarpha micrantha</i>	Small-flowered Dwarf-bulrush	ST	S1	G4	
<i>Rhynchospora inundata</i>	Narrow-fruited Beaksedge	SE	S1	G3G4	Div 2
<i>Rhynchospora macrostachya</i>	Tall Beaksedge	C	S1	G4	
<i>Rhynchospora scirpoides</i>	Long-beaked Beaksedge	SE	S1	G4	
<i>Rhynchospora torreyana</i>	Torrey's Beaksedge	SE	S1	G4	Div 2
<i>Schoenoplectus etuberculatus</i>	Canby's Bulrush	SE	S1	G3G4	Div 1
<i>Schoenoplectus smithii</i> var. <i>smithii</i>	Smith's Bulrush	ST	S1	G5	
<i>Schoenoplectus subterminalis</i>	Water Bulrush	ST	S1	G4G5	
<i>Schoenoplectus torreyi</i>	Torrey's Bulrush	ST	S1	G5	
<i>Scirpus georgianus</i>	Georgia Bulrush	C*	S1	G5	IND
<i>Scirpus longii</i>	Long's Wooldsedge	SE	S1	G2G3	Div 1
<i>Scleria pauciflora</i> var. <i>caroliniana</i>	Few-flowered Nutsedge	ST	S1	G5	Div 2
<i>Scleria reticularis</i>	Netted Nutsedge	ST	S1	G4	
<i>Scleria triglomerata</i>	Whip Nutsedge	ST	S1	G5	Div 2
<i>Trichophorum alpinum</i>	Alpine Clubsedge	SH	SH	G5	
Dioscoreaceae (Yam Family)					
<i>Dioscorea villosa</i>	Wild Yam	C*	S1	G5	
Droseraceae (Sundew Family)					
<i>Drosera filiformis</i>	Thread-leaved Sundew	SH	SH	G5	
Elatinaceae (Waterwort Family)					
<i>Elatine americana</i>	American Waterwort	C	S1	G4	Div 2
Ericaceae (Heath Family)					
<i>Andromeda polifolia</i> var. <i>glaucophylla</i>	Bog-rosemary	SH	SH	G5	
<i>Gaultheria hispidula</i>	Creeping Spicy-wintergreen	SH	SH	G5	
<i>Gaylussacia bigeloviana</i>	Dwarf Huckleberry	C	S1	G5	
<i>Hypopitys lanuginosa</i>	Hairy Pine-sap	C*	S1	G5	IND
<i>Kalmia polifolia</i>	Bog American-laurel	SE	S1	G5	
<i>Lyonia mariana</i>	Piedmont Staggerbush	SH	SH	G5	Div 4
<i>Moneses uniflora</i>	One-flowered-shinleaf	SE	S1	G5	
<i>Orthilia secunda</i>	One-sided-shinleaf	ST	S1	G5	
<i>Pyrola chlorantha</i>	Green-flowered Shinleaf	C	S1	G5	
<i>Rhododendron canadense</i>	Rhodora	C	S1	G5	
<i>Rhododendron periclymenoides</i>	Pink Azalea	C*	S1	G5	
Euphorbiaceae (Spurge Family)					
<i>Euphorbia nutans</i>	Eyebane Sandmat	C*	S1	G5	IND
Fabaceae (Bean Family)					
<i>Crotalaria sagittalis</i>	Arrow-head Rattlebox	SE	S1	G5	
<i>Desmodium ciliare</i>	Hairy Small-leaved Tick-trefoil	ST	S1	G5	
<i>Desmodium cuspidatum</i>	Long-bracted Tick-trefoil	C*	S1	G5	Div 2
<i>Desmodium glutinosum</i>	Large Tick-trefoil	C*	S1	G5	
<i>Desmodium sessilifolium</i>	Sessile-leaved Tick-trefoil	ST	S1	G5	Div 2
<i>Lupinus perennis</i> ssp. <i>perennis</i>	Sundial Lupine	C*	S2	G5	Div 3
<i>Senna hebecarpa</i>	Northern Wild Senna	SH	SH	G5	Div 2

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
<i>Strophostyles umbellata</i>	Perennial Woolly Bean	SE	S1	G5	Div 2
<i>Tephrosia virginiana</i>	Wild Goat's-rue	C	S2	G5	
Fagaceae (Oak Family)					
<i>Quercus macrocarpa</i>	Burr Oak	SH	SH	G5	
<i>Quercus prinoides</i>	Dwarf Chestnut Oak	C	S1	G5	
<i>Quercus stellata</i>	Post Oak	C	S1	G5	
Gentianaceae (Gentian Family)					
<i>Bartonia iodandra</i>	Purple Screwstem	C*	S1	G5	IND
<i>Bartonia paniculata</i>	Twining Screwstem	C*	S1	G5	IND
<i>Gentiana andrewsii</i> var. <i>andrewsii</i>	Andrew's Bottle Gentian	SH	SH	G4	Div 2
<i>Gentiana clausa</i>	Closed Gentian	C*	S1	G5	
<i>Gentianopsis crinita</i>	Greater Fringed Gentian	SE*	S1	G4	
<i>Sabatia kennedyana</i>	Plymouth Rose-gentian	SE	S1	G3	Div 1
<i>Sabatia stellaris</i>	Annual Rose-gentian	ST	S1	G5	Div 2
Geraniaceae (Geranium Family)					
<i>Geranium bicknellii</i>	Northern Crane's-bill	SE*	S1	G5	
<i>Geranium robertianum</i>	Mountain Crane's-bill	C	S1	G5	
Grossulariaceae (Gooseberry Family)					
<i>Ribes hirtellum</i>	Hairy-stemmed Gooseberry	C	S1	G5	
Haemodoraceae (Bloodwort Family)					
<i>Lachnanthes caroliniana</i>	Carolina Bloodroot	ST	S1	G4	
Haloragaceae (Water-milfoil Family)					
<i>Myriophyllum alterniflorum</i>	Alternate-flowered Water-milfoil	SH	SH	G5	
<i>Myriophyllum pinnatum</i>	Cut-leaved Water-milfoil	ST	S1	G5	Div 2
<i>Proserpinaca pectinata</i>	Comb-leaved Mermaid-weed	C*	S1	G5	
Hypericaceae (St. John's-wort Family)					
<i>Hypericum adpressum</i>	Creeping St. John's-wort	ST	S1	G3	Div 1
Iridaceae (Iris Family)					
<i>Sisyrinchium fuscatum</i>	Coastal Plain Blue-eyed Grass	SH	SH	G5	
Juncaceae (Rush Family)					
<i>Juncus antheratus</i>	Wiegand's Rush	C*	S1	G5	
<i>Juncus debilis</i>	Weak Rush	SH	SH	G5	Div 2
<i>Luzula bulbosa</i>	Bulbous Wood-rush	C*	S1		
Juncaginaceae (Arrow-grass Family)					
<i>Triglochin palustre</i>	Marsh Arrow-grass	SH	SH	G5	
Lamiaceae (Mint Family)					
<i>Clinopodium vulgare</i>	Wild Basil	C*	S1	G5	
<i>Hedeoma pulegioides</i>	American False Pennyroyal	C	S1	G5	
<i>Lycopus rubellus</i>	Stalked Water-horehound	SH	SH	G5	Div 2
<i>Monarda fistulosa</i> var. <i>mollis</i>	Wild Bee-balm	C	S1	G5	
<i>Physostegia virginiana</i> ssp. <i>virginiana</i>	Obedient False Dragonhead	C*	S1	G5	
<i>Pycnanthemum incanum</i>	Hoary Mountain-mint	C*	SU	G5	
<i>Stachys hispida</i>	Hispid Hedge-nettle	C*	S1	G5	IND
<i>Stachys hyssopifolia</i>	Hyssop-leaved Hedge-nettle	ST	S1	G5	Div 3

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
<i>Stachys pilosa</i> var. <i>arenicola</i>	Hairy Hedge-nettle	SH	SH	G5T4	Div 4
<i>Teucrium canadense</i> var. <i>occidentale</i>	American Germander	C*	S1	G5T5	
Lentibulariaceae (Bladderwort Family)					
<i>Utricularia geminiscapa</i>	Mixed Bladderwort	C	S1	G4G5	
<i>Utricularia gibba</i>	Creeping Bladderwort	C	S1	G5	
<i>Utricularia intermedia</i>	Flat-leaved Bladderwort	C	S1	G5	
<i>Utricularia minor</i>	Lesser Bladderwort	SH	SH	G5	
<i>Utricularia resupinata</i>	Resupinate Bladderwort	C	Ss1	G4	
<i>Utricularia subulata</i>	Slender Bladderwort	C	S1	G5	Div 2
Liliaceae (Lily Family)					
<i>Clintonia borealis</i>	Yellow Blue-bead Lily	C	S1	G5	
<i>Lilium canadense</i>	Canada Lily	ST	S1	G5	
<i>Lilium philadelphicum</i>	Wood Lily	C	S2	G5	
<i>Streptopus lanceolatus</i>	Lance-leaved Twisted-stalk	SH	SH	G5	
Linaceae (Flax Family)					
<i>Linum intercursum</i>	Sandplain Yellow Flax	SH	SH	G4	
<i>Linum medium</i> ssp. <i>texanum</i>	Common Yellow Flax	ST	S1	G5T5	Div 2
<i>Linum sulcatum</i> var. <i>sulcatum</i>	Grooved Yellow Flax	SH	SH	G5	Div 2
Lythraceae (Loosestrife Family)					
<i>Cuphea viscosissima</i>	Clammy Waxweed	SH	SH	G5	Div 4
<i>Lythrum alatum</i> ssp. <i>alatum</i>	Winged Loosestrife	C*	S1	G5T5	Div 2
<i>Rotala ramosior</i>	Toothcup	ST	S1	G5	Div 2
Melanthiaceae (Bunchflower Family)					
<i>Trillium cernuum</i>	Nodding Wakerobin	C	S1	G5	
<i>Trillium erectum</i>	Red Wakerobin	SE	S1	G5	
<i>Trillium undulatum</i>	Painted Wakerobin	C	S1	G5	
Menyanthaceae (Buckbean Family)					
<i>Menyanthes trifoliata</i>	Buck-bean	C	S1	G5	
Myrsinaceae (Myrsine Family)					
<i>Lysimachia maritima</i>	Sea-milkwort	SH	SH	G5	
Nartheciaceae (Narthesium Family)					
<i>Aletris farinosa</i>	White Colic-root	C	S1	G5	
Oleaceae (Ash Family)					
<i>Fraxinus nigra</i>	Black Ash	C	S1	G5	
Onagraceae (Evening-primrose Family)					
<i>Circaea alpina</i> ssp. <i>alpina</i>	Small Enchanter's-nightshade	C	S1	G5	
<i>Epilobium palustre</i>	Marsh Willow-herb	SE	S1	G5	
<i>Ludwigia sphaerocarpa</i>	Round-pod Water-primrose	SE	S1	G5	Div 2
<i>Oenothera fruticosa</i> ssp. <i>fruticosa</i>	Narrow-leaved Evening-primrose	C*	S1	G5	
Orchidaceae (Orchid Family)					
<i>Arethusa bulbosa</i>	Dragon's-mouth	SE*	S1	G4	Div 3
<i>Calopogon tuberosus</i> var. <i>tuberosus</i>	Tuberous Grass-pink	C	S2	G5	
<i>Coelogossum viride</i>	Long-bracted Green Orchid	ST	S1	G5T5	
<i>Corallorhiza maculata</i> var. <i>maculata</i>	Spotted Coral-root	C	S1	G5	

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
<i>Corallorhiza odontorhiza</i> var. <i>odontorhiza</i>	Fall Coral-root	ST	S1	G5	Div 3
<i>Corallorhiza trifida</i>	Early Coral-root	C	S1	G5	
<i>Cypripedium parviflorum</i> var. <i>pubescens</i>	(Large) Yellow Lady's-slipper	SE*	S1	G5	
<i>Cypripedium parviflorum</i> var. <i>parviflorum</i>	(Small) Yellow Lady's-slipper	SH	SH	G5	IND
<i>Galearis spectabilis</i>	Showy Orchid	SH	SH	G5	Div 3
<i>Goodyera tessellata</i>	Checkered Rattlesnake-plantain	C	S1	G5	
<i>Isotria medeoloides</i>	Small Whorled Pogonia	SH	SH	G2	Div 1
<i>Isotria verticillata</i>	Large Whorled Pogonia	C	S1	G5	
<i>Liparis lilifolia</i>	Lily-leaved Wide-lipped Orchid	SH	SH	G5	Div 2
<i>Liparis loeselii</i>	Loesel's Wide-lipped Orchid	SE*	S1	G5	
<i>Malaxis bayardii</i>	Bayard's Adder's-mouth	SH	SH	G1G2	Div 1
<i>Malaxis unifolia</i>	Green Adder's-mouth	SE	S1	G5	
<i>Neottia cordata</i>	Heart-leaved Twayblade	SH	SH	G5	Div 3
<i>Platanthera aquilonis</i>	North Wind Bog-orchid	C*	S1	G5	
<i>Platanthera blephariglottis</i>	White Fringed Bog-orchid	ST	S1	G4G5	
<i>Platanthera ciliaris</i>	Orange-fringed Bog-orchid	SE	S1	G5	Div 2
<i>Platanthera clavellata</i>	Little Club-spur Bog-orchid	C	S2	G5	
<i>Platanthera flava</i> var. <i>herbiola</i>	Northern Tubercled Bog-orchid	ST	S1	G4T4	
<i>Platanthera grandiflora</i>	Greater Purple-fringed Bog-orchid	C	S2	G5	
<i>Platanthera hookeri</i>	Hooker's Bog-orchid	SH	SH	G5	
<i>Platanthera huronensis</i>	Lake Huron Green Bog-orchid	ST	S1	G5	IND
<i>Platanthera lacera</i>	Green Fringed Bog-orchid	C	S2	G5	
<i>Platanthera macrophylla</i>	Large-leaved Bog-orchid	SH	SH	G5	
<i>Platanthera orbiculata</i>	Round-leaved Bog-orchid	SH	SH	G5	
<i>Platanthera psycodes</i>	Lesser Purple Fringed Bog-orchid	C	S2	G5	
<i>Spiranthes lucida</i>	Shining Ladies'-tresses	SH	SH	G5	
<i>Spiranthes ochroleuca</i>	Yellow Ladies'-tresses	C*	SU	G4	
<i>Spiranthes tuberosa</i>	Little Ladies'-tresses	SE	S1	G5	
<i>Spiranthes vernalis</i>	Spring Ladies'-tresses	C	S1	G5	
Orobanchaceae (Broom-rape Family)					
<i>Agalinis acuta</i>	Sandplain Agalinis	FE	S1	G1	Div 1
<i>Agalinis tenuifolia</i>	Slender-leaved Agalinis	C	S2	G5	
<i>Aureolaria flava</i>	Smooth False Foxglove	C	S1	G5	
<i>Aureolaria pedicularia</i>	Fern-leaved False Foxglove	C	S2	G5	
<i>Aureolaria virginica</i>	Downy False Foxglove	C	S1	G5	
<i>Castilleja coccinea</i>	Scarlet Painted Cup	SH	SH	G5	Div 2
<i>Conopholis americana</i>	American Squaw-root	C	S1	G5	
Oxalidaceae (Wood Sorrel Family)					
<i>Oxalis violacea</i>	Violet Wood Sorrel	SE	S1	G5	Div 2
Papaveraceae (Poppy Family)					
<i>Adlumia fungosa</i>	Allegheny-vine	SE*	S1	G4	

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
<i>Capnoides sempervirens</i>	Pink Corydalis	C	S2	G4G5	
<i>Sanguinaria canadensis</i>	Blood-root	C	S2	G5	
Parnassiaceae (Grass-of-Parnassus Family)					
<i>Parnassia glauca</i>	Fen Grass-of-Parnassus	SH	SH	G5	
Penthoraceae (Ditch-stonecrop Family)					
<i>Penthorum sedoides</i>	Ditch-stonecrop	C	S1	G5	
Plantaginaceae (Plantain Family)					
<i>Gratiola virginiana</i> var. <i>virginiana</i>	Round-fruited Hedge-hyssop	SH	SH	G5	Div 4
<i>Penstemon digitalis</i>	Foxglove Beard-tongue	ST	S1	G5	
<i>Penstemon hirsutus</i>	Northeastern Beard-tongue	C*	S1	G4	
Poaceae (Grass Family)					
<i>Aristida longespica</i> var. <i>geniculata</i>	Red Threeawn	C	S1	G5	
<i>Aristida purpurascens</i> var. <i>purpurascens</i>	Arrow-feather Threeawn	ST	S1	G5	Div 2
<i>Dichantherium acuminatum</i> ssp. <i>acuminatum</i>	Hairy Rosette-panicgrass	C*	S1	G5T5	IND
<i>Dichantherium dichotomum</i> ssp. <i>mattamuskatense</i>	Forked Rosette-panicgrass	SH	SH	G3	Div 2
<i>Dichantherium ovale</i> ssp. <i>villosissimum</i>	Stiff-leaved Rosette-panicgrass	SH	SH	G5T5	Div 4
<i>Dichantherium scabriusculum</i>	Tall Swamp Rosette-panicgrass	SH	SH	G4	Div 2
<i>Dichantherium scoparium</i>	Velvety Rosette-panicgrass	SH	SH	G5	Div 4
<i>Dichantherium wrightianum</i>	Wright's Rosette-panicgrass	C	S1	G4	
<i>Elymus glabriflorus</i> var. <i>australis</i>	Southeastern Wild-rye	SH	SH	G5	Div 2
<i>Elymus hystrix</i> var. <i>bigeloviana</i>	Eastern Bottle-brush Grass	C*	S1	G5T5	
<i>Elymus macgregorii</i>	Early Wild-rye	C*	S1	G5	Div 2
<i>Elymus villosus</i> var. <i>villosus</i>	Downy Wild-rye	C*	S1	G5T5	IND
<i>Leptochloa fusca</i> ssp. <i>fascicularis</i>	Bearded Sprangletop	SE	S1	G5T	Div 2
<i>Panicum amarum</i> ssp. <i>amarum</i>	Bitter Panicgrass	C*	S1	G5	Div 2
<i>Paspalum setaceum</i> var. <i>psammophilum</i>	Slender Beadgrass	C	S1	G5T4	Div 2
<i>Piptatherum pungens</i>	Short-awned Mountain-rice Grass	C*	S1	G5	
<i>Poa saltuensis</i> ssp. <i>languida</i>	Weak Spear Grass	C*	S1	G5T5	
<i>Puccinellia pumila</i>	Tundra Alkali Grass	SH	SH	G4	
<i>Setaria parviflora</i>	Knotroot Foxtail	C*	S1	G5	
<i>Sorengia longifolia</i> ssp. <i>elongata</i>	Long-leaved Redtop-panicgrass	C*	S1	G5T5	
<i>Sorghastrum nutans</i>	Indian Grass	C	S1	G5	Div 3
<i>Spartina cynosuroides</i>	Big Cordgrass	C	S1	G5	Div 2
<i>Sphenopholis nitida</i>	Shiny Wedgescale	C	S1	G5	Div 2
<i>Sphenopholis obtusata</i>	Prairie Wedgescale	C*	S1	G5	Div 2
<i>Sphenopholis pensylvanica</i>	Swamp Wedgescale	ST	S1	G4	Div 2
<i>Sporobolus compositus</i> var. <i>compositus</i>	Rough Dropseed	C*	S1	G5	
<i>Tripsacum dactyloides</i>	Eastern Gamagrass	C	S2	G5	
<i>Zizania aquatica</i> var. <i>aquatica</i>	Southern Wild Rice	C*	S1	G5	

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
<i>Zizania palustris</i> var. <i>palustris</i>	Northern Wild Rice	C*	S1	G5	
Podostemaceae (River-weed Family)					
<i>Podostemum ceratophyllum</i>	Horn-leaved Riverweed	C	S1	G5	
Polygalaceae (Milkwort Family)					
<i>Polygala ambigua</i>	Alternate Milkwort	SH	S1	G	Div 2
<i>Polygala cruciata</i> ssp. <i>aquilonia</i>	Drum-heads Milkwort	C	S2	G5	
<i>Polygala verticillata</i>	Whorled Milkwort	C	S1	G5	
Polygonaceae (Buckwheat Family)					
<i>Persicaria puritanorum</i>	Puritan Smartweed	SH	SH	G4	Div 2
<i>Persicaria setacea</i>	Bristly Smartweed	SH	SH	G5	Div 2
<i>Polygonum erectum</i>	Upright Knotweed	SH	SH	G5	IND
<i>Polygonum glaucum</i>	Seaside Knotweed	ST	S1	G3	Div 1
<i>Polygonum tenue</i>	Slender Knotweed	C*	SU	G5	
Portulacaceae (Purslane Family)					
<i>Claytonia virginica</i>	Virginia Spring-beauty	SH	SH	G5	
Potamogetonaceae (Pondweed Family)					
<i>Potamogeton confervoides</i>	Alga-like Pondweed	SH	SH	G4	
<i>Potamogeton gemmiparus</i>	Budding Pondweed	SH	SH	G5T3	Div 1
Primulaceae (Primrose Family)					
<i>Hottonia inflata</i>	American Featherfoil	C	S1	G4	
Rhamnaceae (Buckthorn Family)					
<i>Ceanothus americanus</i>	New Jersey Tea	C	S1	G5	
Ranunculaceae (Buttercup Family)					
<i>Actaea rubra</i>	Red Baneberry	ST	S1	G5	
<i>Anemone americana</i>	Blunt-lobed Hepatica	ST	S1	G5	
<i>Anemone cylindrica</i>	Long-headed Windflower	C	S1	G5	
<i>Anemone virginiana</i> var. <i>virginiana</i>	Tall Windflower	SE*	S1	G5	
<i>Clematis occidentalis</i> ssp. <i>occidentalis</i>	Purple Virgin's-bower	SE	S1	G5	
<i>Ranunculus allegheniensis</i>	Allegheny Crowfoot	C*	S1	G4G5	
<i>Ranunculus ambigens</i>	Water-plantain Crowfoot	C*	S1	G4	Div 2
<i>Ranunculus aquatilis</i> var. <i>diffusus</i>	White Water Crowfoot	SE*	S1	G5	
<i>Ranunculus cymbalaria</i>	Seaside Crowfoot	SH	SH	G5	
<i>Ranunculus flabellaris</i>	Greater Yellow Water Crowfoot	C	S1	G5	
<i>Ranunculus hispidus</i>	Hispid Crowfoot	C	S1	G5	IND
<i>Ranunculus micranthus</i>	Small-flowered Crowfoot	SE*	S1	G5	Div 2
<i>Ranunculus sceleratus</i> var. <i>scleratus</i>	Cursed Crowfoot	C	S1	G5	
<i>Thalictrum dioicum</i>	Early Meadow-rue	C*	SU	G5	
<i>Thalictrum revolutum</i>	Waxy-leaved Meadow-rue	SE*	S1	G5	
<i>Thalictrum thalictroides</i>	Anemone Meadow-rue	C	SU	G5	
Rosaceae (Rose Family)					
<i>Amelanchier nantucketensis</i>	Nantucket Shadbush	SE*	S1	G	Div 1
<i>Agrimonia pubescens</i>	Downy Agrimony	SE*	S1	G5	
<i>Crataegus levis</i>	Smooth Hawthorn	SH	SH	G4	Div 4
<i>Crataegus intricata</i>	Entangles Hawthorn	C*	S1	G5	
<i>Crataegus jesupii</i>	Jesup's Hawthorn	C*	S1	G4G5	
<i>Crataegus populnea</i>	Poplar Hawthorn	C*	S1	GU	
<i>Geum laciniatum</i>	Floodplain Avens	ST	S1	G5	
<i>Prunus susquehanae</i>	Appalachian Sand Plum	C	S1	G5	

APPENDIX 1d: LIST OF RARE PLANTS IN RHODE ISLAND

Species	Common Name	State Status	State Rank	Global Rank	NEPCoP FLO CON
<i>Rubus dalibarda</i>	Dewdrop	SH	SH	G5	
<i>Sanguisorba canadensis</i>	Canada Burnet	SE	S1	G5	
<i>Sibbaldia tridentata</i>	Three-toothed-cinquefoil	SH	SH	G5	
Rubiaceae (Madder Family)					
<i>Houstonia longifolia</i>	Long-leaved Bluets	SH	SH	G4G5	
Ruscaceae (Solomon's-seal Family)					
<i>Maianthemum trifolium</i>	3-leaved False Solomon's-seal	SE*	S1	G5	
Sapindaceae (Soapberry Family)					
<i>Acer pensylvanicum</i>	Striped Maple	C	S2	G5	
<i>Acer spicatum</i>	Mountain Maple	ST	S1	G5	
Salicaceae (Willow Family)					
<i>Populus heterophylla</i>	Swamp Poplar	SE	S1	G5	Div 2
<i>Salix pedicellaris</i>	Bog Willow	SH	SH	G5	
Saururaceae (Lizard's-tail Family)					
<i>Saururus cernuus</i>	Lizard's-tail	SE	S1	G5	Div 2
Saxifragaceae (Saxifrage Family)					
<i>Micranthes pensylvanica</i>	Swamp Small-flowered-saxifrage	C	S1	G5	
<i>Micranthes virginensis</i>	Early Small-flowered-saxifrage	C	S2	G5	
<i>Tiarella cordifolia</i> var. <i>cordifolia</i>	Foam-flower	SH	SH	G5	
Scheuchzeriaceae (Pod-grass Family)					
<i>Scheuchzeria palustris</i>	Pod-grass	SE	S1	G5	
Scrophulariaceae (Figwort Family)					
<i>Limosella australis</i>	Atlantic Mudwort	C	S1	G4G5	
<i>Pedicularis canadensis</i>	Canadian Lousewort	C*	S1	G5	
<i>Scrophularia lanceolata</i>	Lance-leaved Figwort	C	S1	G5	
<i>Scrophularia marilandica</i>	Eastern Figwort	ST	S1	G5	
Urticaceae (Nettle Family)					
<i>Laportea canadensis</i>	Canada Wood-nettle	C*	S1	G5	
<i>Pilea fontana</i>	Clearweed	C*	S1	G5	IND
Violaceae (Violet Family)					
<i>Viola canadensis</i> var. <i>canadensis</i>	Canada Violet	SH	SH	G5	
<i>Viola palmata</i>	Wood Violet	ST	S1	G5	
<i>Viola pubescens</i> var. <i>pubescens</i>	Yellow Forest Violet	C	S1	G5	
<i>Viola pubescens</i> var. <i>scabriuscula</i>	Yellow Forest Violet	C	S1	G5	
<i>Viola rotundifolia</i>	Round-leaved Violet	SE*	S1	G5	
<i>Viola subsinuata</i>	Early Blue Violet	SE*	S!	G2	
Viscaceae (Christmas-mistletoe Family)					
<i>Arceuthobium pusillum</i>	Dwarf Mistletoe	SH	SH	G5	
Xyridaceae (Yellow-eyed-grass Family)					
<i>Xyris montana</i>	Northern Yellow-eyed-grass	ST	S1	G4	
<i>Xyris smalliana</i>	Small's Yellow-eyed-grass	C	S1	G5	

Appendix 1e: Summary of Rhode Island Vertebrate Additions and Deletions to 2005 SGCN List

Key to Reason:

Additions:

1. Newly documented in RI.
2. Identified as Regional SGCN, or newly identified as concern by other programs
3. Inventory suggests species is not as common as previously thought
4. Special interest due to newly identified threat (e.g., white nose syndrome)

Deletions:

5. Inventory suggests not in need of conservation attention in RI.
6. Extirpated from state - no reproductive population known from past 10-20 Yrs.
7. Inventory confirms no known occurrence in RI.
8. Uncommon in RI, but limited concern elsewhere in region.
9. Species is exotic, non-native

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
Mammals			
big brown bat	<i>Eptesicus fuscus</i>	Add	4
Eastern mole	<i>Scalopus aquaticus</i>	Add	1
harbor porpoise	<i>Phocoena phocoena</i>	Add	2
harbor seal	<i>Phoca vitulina</i>	Add	2
blue whale	<i>Balaenoptera musculus</i>	Del	5
minke whale	<i>Balaenoptera acutorostrata</i>	Del	5
porcupine	<i>Erethizon dorsatum</i>	Del	5
sei whale	<i>Balaenoptera borealis</i>	Del	5
sperm whale	<i>Physeter macrocephalus</i>	Del	5
Birds			
American redstart	<i>Setophaga ruticilla</i>	Add	2
American wigeon	<i>Anas americana</i>	Add	2
Atlantic brant	<i>Branta bernicla</i>	Add	2
black scoter	<i>Melanitta americana</i>	Add	2
blackpoll warbler	<i>Setophaga striata</i>	Add	2
bufflehead	<i>Bucephala albeola</i>	Add	2
Canada goose - Atlantic population	<i>Branta canadensis</i>	Add	2
Canada goose - North Atlantic population	<i>Branta canadensis</i>	Add	2
canvasback	<i>Aythya valisineria</i>	Add	2
common eider	<i>Somateria mollissima</i>	Add	2
common goldeneye	<i>Bucephala clangula</i>	Add	2
common loon	<i>Gavia immer</i>	Add	2
Cory's shearwater	<i>Calonectris diomedea</i>	Add	2
Eastern bluebird	<i>Sialia sialis</i>	Add	3
great shearwater	<i>Puffinus gravis</i>	Add	2
greater scaup	<i>Aythya marila</i>	Add	2
hooded merganser	<i>Lophodytes cucullatus</i>	Add	2
horned grebe	<i>Podiceps auritus</i>	Add	2
lesser scaup	<i>Aythya affinis</i>	Add	2
Nelson's sparrow	<i>Ammadramus nelsoni</i>	Add	2
Northern gannet	<i>Morus bassanus</i>	Add	2
Northern pintail	<i>Anas acuta</i>	Add	2

**APPENDIX 1e: SUMMARY OF RHODE ISLAND VERTEBRATE ADDITIONS
AND DELETIONS TO 2005 SGCN LIST**

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
razorbill	<i>Alca torda</i>	Add	2
red-breasted merganser	<i>Mergus serrator</i>	Add	2
red-throated loon	<i>Gavia stellata</i>	Add	2
ruddy duck	<i>Oxyura jamaicensis</i>	Add	2
rusty blackbird	<i>Euphagus carolinus</i>	Add	2
surf scoter	<i>Melanitta perspicillata</i>	Add	2
tree swallow	<i>Tachycineta bicolor</i>	Add	2
veery	<i>Catharus fuscenscens</i>	Add	2
Virginia rail	<i>Rallus limicola</i>	Add	3
white-winged scoter	<i>Melanitta deglandi</i>	Add	2
wood duck	<i>Aix sponsa</i>	Add	2
American Bittern	<i>Botaurus lentiginosus</i>	Del	6
Baltimore oriole	<i>Icterus galbula</i>	Del	5
barred owl	<i>Strix varia</i>	Del	5
belted kingfisher	<i>Ceryle alcyon</i>	Del	5
black skimmer	<i>Rynchops niger</i>	Del	7
black-throated green warbler	<i>Setophaga virens</i>	Del	5
blue-winged teal	<i>Anas discors</i>	Del	4
broad-winged hawk	<i>Buteo platypterus</i>	Del	5
brown creeper	<i>Certhia familiaris</i>	Del	5
cattle egret	<i>Bubulcus ibis</i>	Del	6
cliff swallow	<i>Petrochelidon pyrrhonota</i>	Del	4
common gallinule	<i>Gallinula chloropus</i>	Del	4
common nighthawk	<i>Chordeiles minor</i>	Del	5
common yellowthroat	<i>Geothlypis trichas</i>	Del	5
double-crested cormorant	<i>Phalacrocorax auritus</i>	Del	5
golden-crowned kinglet	<i>Regulus satrapa</i>	Del	6
great black-backed gull	<i>Larus marinus</i>	Del	5
great blue heron	<i>Ardea herodias</i>	Del	5
hermit thrush	<i>Catharus guttatus</i>	Del	5
lesser yellowlegs	<i>Tringa flavipes</i>	Del	5
little blue heron	<i>Egretta caerulea</i>	Del	6
long-eared owl	<i>Asio otus</i>	Del	4
Louisiana waterthrush	<i>Parkesia motacilla</i>	Del	5
orchard oriole	<i>Icterus spurius</i>	Del	8
ovenbird	<i>Seiurus aurocapillus</i>	Del	5
pectoral sandpiper	<i>Calidris melanotos</i>	Del	5
purple martin	<i>Progne subis</i>	Del	5
red-breasted nuthatch	<i>Sitta canadensis</i>	Del	5
ring-necked pheasant	<i>Phasianus colchicus</i>	Del	9
sharp-shinned hawk	<i>Accipiter striatus</i>	Del	6
solitary sandpiper	<i>Tringa solitaria</i>	Del	5
upland sandpiper	<i>Bartramia longicauda</i>	Del	6
whimbrel	<i>Numenius phaeopus</i>	Del	5
winter wren	<i>Troglodytes troglodytes</i>	Del	8
worm-eating warbler	<i>Helmitheros vermivorum</i>	Del	5
yellow warbler	<i>Dendroica petechia</i>	Del	5
Reptiles			
Northern black racer	<i>Coluber constrictor constrictor</i>	Add	2

**APPENDIX 1e: SUMMARY OF RHODE ISLAND VERTEBRATE ADDITIONS
AND DELETIONS TO 2005 SGCN LIST**

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
timber rattlesnake	<i>Crotalus horridus</i>	Add	2,4
Atlantic hawkbill	<i>Eretmochelys imbricata</i>	Del	7
Amphibians			
spotted salamander	<i>Ambystoma maculatum</i>	Add	2
Fish			
Atlantic cod	<i>Gadus morhua</i>	Add	2
Atlantic herring	<i>Clupea harengus</i>	Add	2
Atlantic silverside	<i>Menidia menidia</i>	Add	2
bay anchovy	<i>Anchoa mitchilli</i>	Add	2
black sea bass	<i>Centropristis striata</i>	Add	2
bluefish	<i>Pomatomus saltatrix</i>	Add	2
butterfish	<i>Poronotus triacanthus</i>	Add	2
false albacore	<i>Euthynnus alletteratus</i>	Add	2
grubby sculpin	<i>Myoxocephalus aenaeus</i>	Add	2
inland silverside	<i>Menidia beryllina</i>	Add	2
mummichog	<i>Fundulus heteroclitus</i>	Add	2
Northern sea robin	<i>Prionotus carolinus</i>	Add	2
Pollock	<i>Pollathius birens</i>	Add	2
rainwater killifish	<i>Lucania parva</i>	Add	2
sand tiger	<i>Carcharias taurus</i>	Add	2
sheepshead minnow	<i>Cyprinodon variegatus</i>	Add	2
spiny dogfish	<i>Squalus acanthius</i>	Add	2
sticklebacks	<i>Gasterosteus spp</i>	Add	2
striped killifish	<i>Fundulus majalis</i>	Add	2
tautog	<i>Tautoga onitis</i>	Add	2
white perch	<i>Morone americana</i>	Add	2
banded sunfish	<i>Enneacanthus obesus</i>	Del	5
creek chubsucker	<i>Erimyzon oblongus</i>	Del	5
cunner	<i>Tautoglabrus adspersus</i>	Del	5
goosefish	<i>Lophius americanus</i>	Del	5
longnose dace	<i>Rhinichthys cataractae</i>	Del	5
Northern kingfish	<i>Menticirrhus saxatilis</i>	Del	5
sea raven	<i>Hemitripterus americanus</i>	Del	5
short-nosed sturgeon	<i>Acipenser brevirostrum</i>	Del	6
smooth dogfish	<i>Mustelus canis</i>	Del	5
spottail shiner	<i>Notropis hudsonius</i>	Del	5

Appendix 1f: Summary of Rhode Island Invertebrate Additions and Deletions to 2005 SGCN List

Key to Reason:

Additions:

1. Newly documented in RI.
2. Identified as Regional SGCN, or newly identified as concern by other programs
3. Inventory suggests species is not as common as previously thought
4. Special interest due to newly identified threat (e.g., white nose syndrome)

Deletions:

5. Inventory suggests not in need of conservation attention in RI.
6. Extirpated from state - no reproductive population known from past 10-20 Yrs.
7. Inventory confirms no known occurrence in RI.
8. Uncommon in RI, but limited concern elsewhere in region.
9. Species is exotic, non-native

Annelids

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
bamboo worm	<i>Clymenella torquata</i>	Add	2
blood worm	<i>Glycera dibanchiata</i>	Add	2
clam worm	<i>Alitta virens</i>	Add	2
cone worm	<i>Pectinaria gouldii</i>	Add	2
coral worm	<i>Dodecaceria corallii</i>	Add	2
parchment tube worm	<i>Spiochaetopterus costarum oculatus</i>	Add	2
parchment worm	<i>Chaetopterus variopedatus</i>	Add	2
red gilled worm	<i>Marphysa belli</i>	Add	2
tube worm	<i>Diopatra cuprea</i>	Add	2

Beetles

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
festive tiger beetle	<i>Cinidela scutellaris rugifrons</i>	Add	2
barrens tiger beetle	<i>Cicindela patruela</i>	Del	6
ox beetle	<i>Strategus antaeus</i>	Del	6
silphid beetle	<i>Thanatophilus lapponicus</i>	Del	6

Butterflies, Moths and Skippers

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
monarch butterfly	<i>Danaus plexippus</i>	Add	4
achemon sphinx	<i>Eumorpha achemon</i>	Add	2
American brindle moth	<i>Lithomoia germana</i>	Add	2
Angus's datana	<i>Datana angusii</i>	Add	2
aphrodite fritillary	<i>Speyeria aphrodite</i>	Add	2
bay underwing	<i>Catocala badia</i>	Add	2
big poplar sphinx	<i>Pachysphinx modesta</i>	Add	2
black dash	<i>Euphyes conspicua</i>	Add	2
cecropia moth	<i>Hyalophora cecropia</i>	Add	2
chain fern borer moth	<i>Papaipema stenocelis</i>	Add	2

**APPENDIX 1f: SUMMARY OF RHODE ISLAND INVERTEBRATE ADDITIONS
AND DELETIONS TO 2005 SGCN LIST**

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
charming underwing	<i>Catocala blandula</i>	Add	2
chokeberry underwing	<i>Catocala crataegi</i>	Add	2
cobweb skipper	<i>Hesperia metea</i>	Add	2
contracted datana	<i>Datana contracta</i>	Add	2
four-spotted speraza moth	<i>Speranza coortaria</i>	Add	2
fragile dagger moth	<i>Acronicta fragilis</i>	Add	2
geometrid moth	<i>Speranza sulphurea</i>	Add	2
Hanham's owl	<i>Phalaenostola hanhami</i>	Add	2
hermit sphinx	<i>Sphinx eremitus</i>	Add	2
included cordgrass borer moth	<i>Photedes includens</i>	Add	2
joyful holomelina moth	<i>Virbia laeta</i>	Add	2
laurel sphinx	<i>Sphinx kalmiae</i>	Add	2
little virgin tiger moth	<i>Grammia virguncula</i>	Add	2
lost sawfly moth	<i>Eupsilia devia</i>	Add	2
marooning moth	<i>Sideridis maryx</i>	Add	2
noctuid moth	<i>Apamea inebriata</i>	Add	2
noctuid moth	<i>Eucoptocnemis fimbriaris</i>	Add	2
noctuid moth	<i>Hyperstrotia flaviguttata</i>	Add	2
Bridgham's brocade	<i>Oligia bridghami</i>	Add	2
noctuid moth	<i>Sideridis congermana</i>	Add	2
noctuid moth	<i>Sympistis riparia</i>	Add	2
pink-border yellow	<i>Phytometra rhodarialis</i>	Add	2
promethia silkmoth	<i>Callosamia promethea</i>	Add	2
scarlet-winged lichen moth	<i>Hypoprepia miniata</i>	Add	2
scrub euchaena moth	<i>Euchaena madusaria</i>	Add	2
sharp-lined powder moth	<i>Eufidonia discospilata</i>	Add	2
silver-bordered fritillary	<i>Boloria selene</i>	Add	2
spotted dartmoth	<i>Agrotis stigmata</i>	Add	2
spotted datana	<i>Datana perspicua</i>	Add	2
triton daggermoth	<i>Acronicta tritona</i>	Add	2
tufted sedge moth	<i>Hypocoena inquinata</i>	Add	2
tulip tree silkworm	<i>Callosamia angulifera</i>	Add	2
twin-dotted macrochilo moth	<i>Macrochilo hypocritalis</i>	Add	2
venus flytrap cutworm	<i>Hemipachnobia subporphyrea</i>	Add	2
violet dart moth	<i>Euxoa violaris</i>	Add	2
waved sphinx	<i>Ceratomia undulosa</i>	Add	2
wild cherry sphinx	<i>Sphinx drupiferarum</i>	Add	2
underwing moth	<i>Catocala n. sp.</i>	Add	2
pink steak moth	<i>Dargida rubripennis</i>	Add	2
pink star moth	<i>Derrima stellata</i>	Add	2
dart moth	<i>Leucania extincta</i>	Add	2
baltimore	<i>Euphydryas phaeton</i>	Del	5
broad-winged skipper	<i>Poanes viator</i>	Del	5
brown elfin	<i>Callophrys augustinus</i>	Del	5
columbine duskywing	<i>Erynnis lucilius</i>	Del	5
dark scallop moth	<i>Cepphis decoloraria</i>	Del	5
Eastern pine elfin	<i>Callophrys nippon</i>	Del	5
harvester	<i>Feniseca tarquinius</i>	Del	5
marsh fern moth	<i>Fagitana littera</i>	Del	5
mulberry wing	<i>Poanes massasoit</i>	Del	5

**APPENDIX 1f: SUMMARY OF RHODE ISLAND INVERTEBRATE ADDITIONS
AND DELETIONS TO 2005 SGCN LIST**

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
multicolored sedge miner	<i>Meropleon diversicolor</i>	Del	5
noctuid moth	<i>Apamea burgessi</i>	Del	5
noctuid moth	<i>Aplectoides condita</i>	Del	5
noctuid moth	<i>Lithophane baileyi</i>	Del	5
noctuid moth	<i>Sideridis maryx</i>	Del	5
Northern hairstreak	<i>Fixsenia favonius ontario</i>	Del	5
Northern pearly eye	<i>Enodia anthedon</i>	Del	5
regal fritillary	<i>Speyaria idalia</i>	Del	6
water lily moth	<i>Homophoberia cristata</i>	Del	5
white m hairstreak	<i>Parrhasius m-album</i>	Del	5
white-eyed borer moth	<i>Iodopepla u-album</i>	Del	5
pink streak	<i>Faronata rubripennis</i>	Del	5

Dragonflies and Damselflies

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
umber shadowdragon	<i>Neurocordulia obsoleta</i>	Add	2
spatterdock darner	<i>Aeshna mutata</i>	Del	5

Mayflies, Stoneflies, True Flies

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
mayflies (little maryatts)	<i>Epeorus</i> spp.	Add	2
small minnow mayflies	<i>Heterocloeon</i> spp.	Add	2
giant stonefly	<i>Attaneuria ruralis</i>	Add	2
golden stoneflies	<i>Paragnetina</i> spp.	Add	2
sallflies (green stoneflies)	<i>Haploperla</i> spp.	Add	2
yellow stoneflies	<i>Eccoptura xanthenes</i>	Add	2
watersnipe flies	<i>Atherix</i> spp.	Add	2
bee-like robber fly	<i>Laphria champlainii</i>	Add	2
robber fly	<i>Pogonosoma dorsatum</i>	Add	2
robber fly	<i>Stichopogon argenteus</i>	Add	2

Bumblebees

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
rusty-patched bumblebee	<i>Bombus affinis</i>	Add	2
yellowbanded bumblebee	<i>Bombus terricola</i>	Add	2

Crustaceans

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
American marsh hopper	<i>Ochestia grillus</i>	Add	2
amphipod	<i>Gammarus faciatus</i>	Add	2
amphipod	<i>Gammarus lawrencianus</i>	Add	2
amphipod	<i>Gammarus tigrinus</i>	Add	2
amphipod	<i>Hyale plumulosa</i>	Add	2
Atlantic mud crab	<i>Panopeus herbstii</i>	Add	2
banded marsh hopper	<i>Uholorchestia uhleri</i>	Add	2
coastal mud shrimp	<i>Upogebia affinis</i>	Add	2
digging amphipod	<i>Haustorius canadensis</i>	Add	2
flat-backed mud crab	<i>Eurypanopeus depressus</i>	Add	2
Harris' mud crab	<i>Rhithropanopeus harrisi</i>	Add	2
Jonah crab	<i>Cancer borealis</i>	Add	2

**APPENDIX 1f: SUMMARY OF RHODE ISLAND INVERTEBRATE ADDITIONS
AND DELETIONS TO 2005 SGCN LIST**

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
lady crab	<i>Ovalipes ocellatus</i>	Add	2
purple marsh crab	<i>Sesarma reticulatum</i>	Add	2
sand burrower	<i>Amphiporeia virginiana</i>	Add	2
tube-dwelling amphipod	<i>Ampelisca</i> spp.	Add	2
green crab	<i>Carcinus maenas</i>	Del	5

Cnidarians

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
American tube-dwelling anemone	<i>Ceriantheopsis americana</i>	Add	2
burrowing anemone	<i>Actinothoe modesta</i>	Add	2
burrowing anemone	<i>Edwardsia elegans</i>	Add	2
Northern star coral	<i>Astrangia poculata</i>	Add	2

Echinoderms

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
common sand dollar	<i>Echinarachnius parma</i>	Add	2
green sea urchin	<i>Strongylocentrotus droebachiensis</i>	Add	2
hairy sea cucumber	<i>Sclerodactyla briareus</i>	Add	2
short-spined brittle star	<i>Ophioderma brevispinum</i>	Add	2

Mollusks

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
Atlantic mud piddock	<i>Barnea truncata</i>	Add	2
Atlantic surf clam	<i>Spisula solida</i>	Add	2
bay scallop	<i>Argopecten irradians</i>	Add	2
channeled whelk	<i>Busycon canaliculatus</i>	Add	2
dwarf balloon aeolis	<i>Eubranchus exigus</i>	Add	2
Eastern emerald elysia	<i>Elysia chlorotica</i>	Add	2
Eastern oyster	<i>Crassostrea virginica</i>	Add	2
false angelwing	<i>Petricola pholadiformis</i>	Add	2
golden ambersnail	<i>Succinea wilsoni</i>	Add	2
marsh snail	<i>Melampus bidentatus</i>	Add	2
modest alderia	<i>Alderia modesta</i>	Add	2
Morton's eggcockle	<i>Laevicardium mortoni</i>	Add	2
mouse ear marsh snail	<i>Ovatella myosotis</i>	Add	2
Northern horse mussel	<i>Modiolus modiolus</i>	Add	2
Northern lacuna	<i>Lacuna vincta</i>	Add	2
nudibranch	<i>Elysia catulus</i>	Add	2
nudibranch	<i>Tergipes tergipes</i>	Add	2
ocean (black) quahog	<i>Arctica islandica</i>	Add	2
painted balloon worm	<i>Eubranchus pallidus</i>	Add	2
razor clam	<i>Ensis directus</i>	Add	2
ribbed mussel	<i>Geukensia demissa</i>	Add	2
soft-shell clam	<i>Mya arenaria</i>	Add	2
striped nudibranch	<i>Cratena pilata</i>	Add	2
brook floater	<i>Alasmidonta varicosa</i>	Del	7
tidewater mucket	<i>Leptodea ochracea</i>	Del	7

APPENDIX 1f: SUMMARY OF RHODE ISLAND INVERTEBRATE ADDITIONS
AND DELETIONS TO 2005 SGCN LIST

Tunicates

<u>Common Name</u>	<u>Scientific Name</u>	<u>Add/Delete</u>	<u>Reason</u>
club tunicate	<i>Styela clava</i>	Del	5
European sea squirt	<i>Asciella aspersa</i>	Del	5
golden star tunicate	<i>Botryllus schlosseri</i>	Del	5
orange sheath tunicate	<i>Botrylloides diegensis</i>	Del	5
sea grapes	<i>Molgula manhattensis</i>	Del	5
sea vase	<i>Ciona intestinalis</i>	Del	5