

Bald Eagle Recovery in New Hampshire

Chris Martin, Senior Biologist, New Hampshire Audubon



Jack Dorsey photo



Dirk van der Merwe photo

Symbol for U.S.

**Large, charismatic,
easily recognized**

**Serious declines in
population from
contamination of
food web, 1940s-70s**

**Listed as endangered in
early 1970s by
federal government**

**On NH's first list of
endangered wildlife
in late 1970s**

**Removed from federal
list in August 2007**

**Down-listed to NH
threatened in 2008**

DELISTED in NH in 2017!



Long-lived (up to 20-30 yrs)

Latin name:

Haliaeetus leucocephalus
means “white-headed sea eagle”

**Don’t live in the water, but
make their living
primarily from the water**

Dirk van der Merwe photo



Jack Dorsey photo



Jack Dorsey photo



Jack Dorsey photo



Jack Dorsey photo



Jack Dorsey photo



Dennis Skillman photo



Jack Dorsey photo

**Besides fish, other common prey species
include:**

**ducks and geese
gulls and herons
muskrats**



Dirk van der Merwe photo



John Williams photo

Bald eagles focus on rivers, lakes, tidal areas and prefer aquatic prey



Classic white head and white tail pattern doesn't begin to appear until 3+ years old. They spend their first 2-4 years as transients, often with other immature eagles

Judy Lombardi photo

**Immature bald eagle plumage
patterns vary greatly:**

dark chocolate brown

mottled light and dark

white-bellies or backs

light tan or blond

**Serves as very effective
camouflage**

**Young bald eagles are often
mistaken for golden eagles**

Nashua Telegraph photo





Joe Norton photo



Janne Provencher photo



Photographer unknown



Aaron Constant photo



Iain MacLeod photo



Debbie LaValley photo



Photo by Ed Schulz courtesy of USGS

Eagles scavenge large mammal carcasses killed by predators, by harsh winter conditions, or by vehicle collisions



Dirk van der Merwe photo



Nicholas Pringle photo



Chris Martin / NH Audubon photo



Winter roost sites:

**Eagles gather for
night**

Shelter from cold

**Lack of
disturbance**

**Facilitate daytime
foraging**

Social interactions

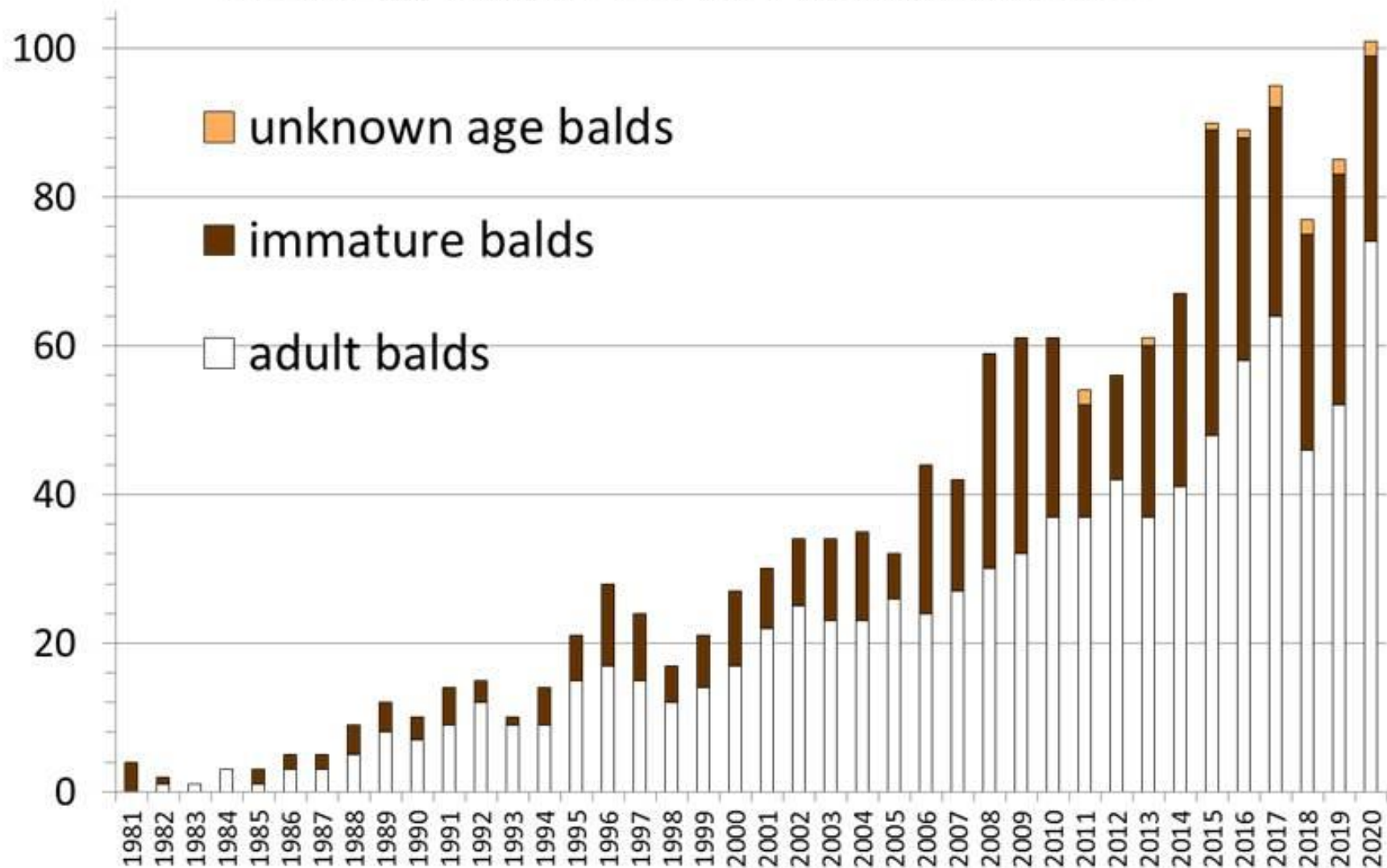
Steve Pitcher photo



Chris Martin / NH Audubon photo



New Hampshire Mid-winter Bald Eagle Survey Results: Count Day Results Jan 1981 through Jan 2020



As they mature, eagles establish and defend territories and attract mates



Judy Lombardi photo

“Doesn’t this look like a lovely neighborhood, dear?”



Hans Gigerenzer photo



Jack Dorsey photo



Jack Dorsey photo



Libby Corbin photo



Construct large stick nests

Prefer “super-canopy” pines

Often on shorelines or islands

**Use same nest multiple years, but
may have several alternate nests**

Nest maintenance is year-round

Jon Winslow photo



Chris Martin / NH Audubon photo



Chris Martin photo



Chris Martin photo



Iain MacLeod photo



Chris Martin photo



Iain MacLeod photo



Chris Martin photo

For eagles, breeding season arrives well before Spring does!



Debbie LaValley photo



Debbie LaValley photo



Debbie LaValley photo



Debbie LaValley photo



Debbie LaValley photo



Debbie LaValley photo



Debbie LaValley photo



Lay 1-3 eggs in late Feb or March

Incubate continuously for 35 days

Both sexes incubate eggs

**Late season snowstorms source of
nesting failure during incubation**



US Fish & Wildlife Service / Northeast Utilities photos



Jack Dorsey photo



Jack Dorsey photo



Jack Dorsey photo

Eagle!





Photo by Jack Dorsey



Nesting behavior observed

Hatch or failure confirmed

**Nests visited when chicks
are about 6-8 weeks old**

**Young are examined, either
in nests, or on the ground**



Jack Dorsey photo

Chicks hatch in April or early May

Must be “brooded” first 2 weeks

Losses from predation and food shortage

11-12 weeks before first flights



Laura Enright photo



Lee Grenier photo



Lee Grenier photo



Joe Kabat photo



06/21/2007



06/21/2007



06/21/2007



Michael LaClair photo



Forrest Hammond / VT F&W photo



Robert Vallieres photo



Chris Martin / NH Audubon photo



Judy Lombardi photo



Norm Lesser photo



Judy Lombardi photo



Judy Lombardi photo





Judy Lombardi photo



Judy Lombardi photo



**Bigger than adults at
first flight when they
are 80-90 days old**

**Remain dependent on
adults at least a
month after fledging
from nest**

**Many die during their
first year of life**

Matt Murphy photo



Peter Goodwin photo



Mark Cronin photo



Jeb Forbush photo

Follow-up fieldwork done in subsequent years helps to identify banded individuals and involves skill, patience ... and a little bit of luck



Jeb Forbush photo



Jack Dorsey photo



Jack Dorsey photo



Jack Dorsey photo



Our team of cooperators:

U.S. Fish & Wildlife Service

N.H. Fish & Game Department

**NH Audubon staff and
volunteers**

BioDiversity Research Institute

Local land owners / managers

Various research laboratories

Nat'l Fish & Wildlife Foundation

TransCanada

Dorr Foundation

Derrick Jackson / Boston Globe photo

No nests in NH from 1950-1987, just one nesting site in NH from 1988-1997

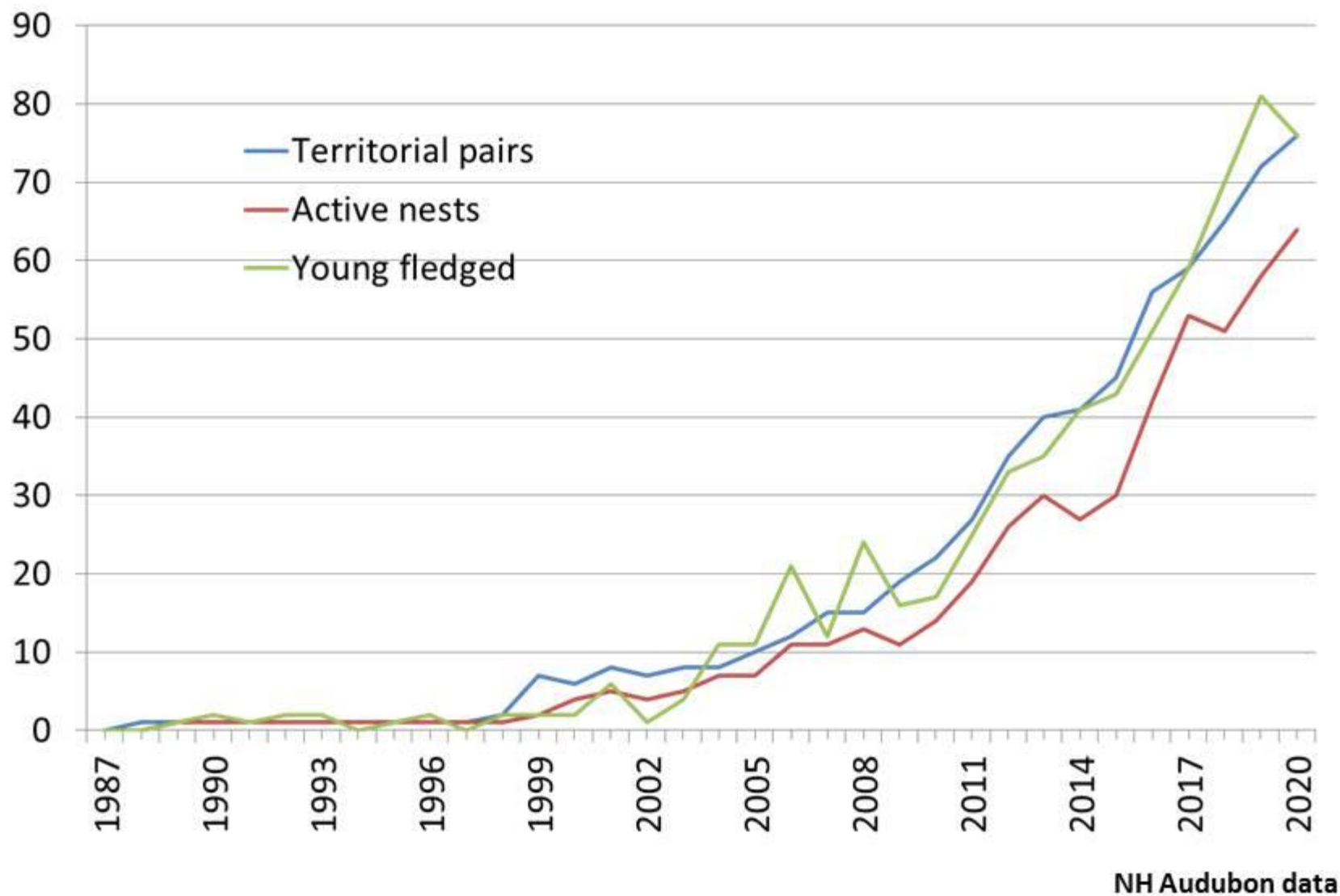
In 2020, 76 territorial pairs, 64 active nests, 51 successful, 76 young fledged in NH

Reclassified from Endangered to Threatened in NH in Sept 2008, then down-listed to Special Concern in March 2017.



Derrick Jackson / Boston Globe photo

New Hampshire Bald Eagle Productivity, 1987-2020



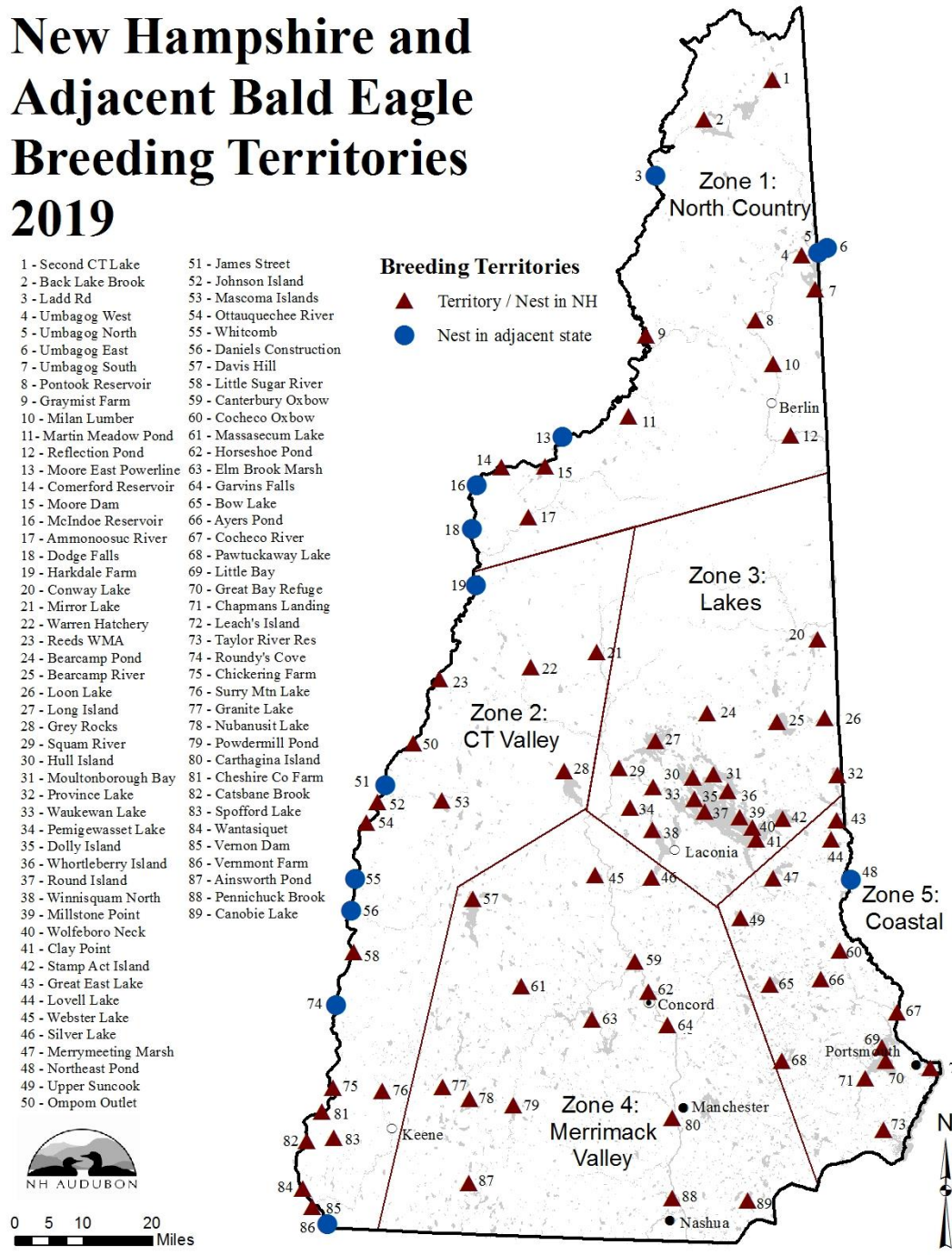
New Hampshire and Adjacent Bald Eagle Breeding Territories 2019

- 1 - Second CT Lake
- 2 - Back Lake Brook
- 3 - Ladd Rd
- 4 - Umbagog West
- 5 - Umbagog North
- 6 - Umbagog East
- 7 - Umbagog South
- 8 - Pontook Reservoir
- 9 - Graymist Farm
- 10 - Milan Lumber
- 11 - Martin Meadow Pond
- 12 - Reflection Pond
- 13 - Moore East Powerline
- 14 - Comerford Reservoir
- 15 - Moore Dam
- 16 - McIndoe Reservoir
- 17 - Ammonoosuc River
- 18 - Dodge Falls
- 19 - Harkdale Farm
- 20 - Conway Lake
- 21 - Mirror Lake
- 22 - Warren Hatchery
- 23 - Reeds WMA
- 24 - Bearcamp Pond
- 25 - Bearcamp River
- 26 - Loon Lake
- 27 - Long Island
- 28 - Grey Rocks
- 29 - Squam River
- 30 - Hull Island
- 31 - Moultonborough Bay
- 32 - Province Lake
- 33 - Waukegan Lake
- 34 - Pemigewasset Lake
- 35 - Dolly Island
- 36 - Whortleberry Island
- 37 - Round Island
- 38 - Winnisquam North
- 39 - Millstone Point
- 40 - Wolfboro Neck
- 41 - Clay Point
- 42 - Stamp Act Island
- 43 - Great East Lake
- 44 - Lovell Lake
- 45 - Webster Lake
- 46 - Silver Lake
- 47 - Merrymeeting Marsh
- 48 - Northeast Pond
- 49 - Upper Suncook
- 50 - Ompom Outlet

- 51 - James Street
- 52 - Johnson Island
- 53 - Mascoma Islands
- 54 - Ottauquechee River
- 55 - Whitcomb
- 56 - Daniels Construction
- 57 - Davis Hill
- 58 - Little Sugar River
- 59 - Canterbury Oxbow
- 60 - Cochecho Oxbow
- 61 - Massasecum Lake
- 62 - Horseshoe Pond
- 63 - Elm Brook Marsh
- 64 - Garvins Falls
- 65 - Bow Lake
- 66 - Ayers Pond
- 67 - Cochecho River
- 68 - Pawtuckaway Lake
- 69 - Little Bay
- 70 - Great Bay Refuge
- 71 - Chapmans Landing
- 72 - Leach's Island
- 73 - Taylor River Res
- 74 - Roundy's Cove
- 75 - Chickering Farm
- 76 - Surry Mtn Lake
- 77 - Granite Lake
- 78 - Nubanusit Lake
- 79 - Powdermill Pond
- 80 - Carthagina Island
- 81 - Cheshire Co Farm
- 82 - Catsbane Brook
- 83 - Spofford Lake
- 84 - Wantasiquet
- 85 - Vernon Dam
- 86 - Vermont Farm
- 87 - Ainsworth Pond
- 88 - Pennichuck Brook
- 89 - Canobie Lake

Breeding Territories

- ▲ Territory / Nest in NH
- Nest in adjacent state





NOW DELISTED!

Peter Gray photo



Chris Martin photo



Joe Grande photo



Chris Martin photo



Chris Martin photo



Chris Martin photo



Joe Grande photo





Marjory Watson photo



Unknown photographer

Bald eagles are effective “bio-sentinels”-- indicators of possible problems in the aquatic food web that could affect all fish-eating species, including humans.



Len Medlock photo

Special thanks to photographers contributing these photos!



Jack Dorsey photo



Thanks to all project supporters and cooperators!

NH Fish & Game Department
U.S. Fish & Wildlife Service
Nat'l Fish & Wildlife Foundation
Great River Hydro (was TransCanada)
Dorr Foundation
Citizen volunteers
Local land owners
Individual donors

Jack Dorsey photo

