



# Transportation Routes & Resources at Risk

Ginger McMullin

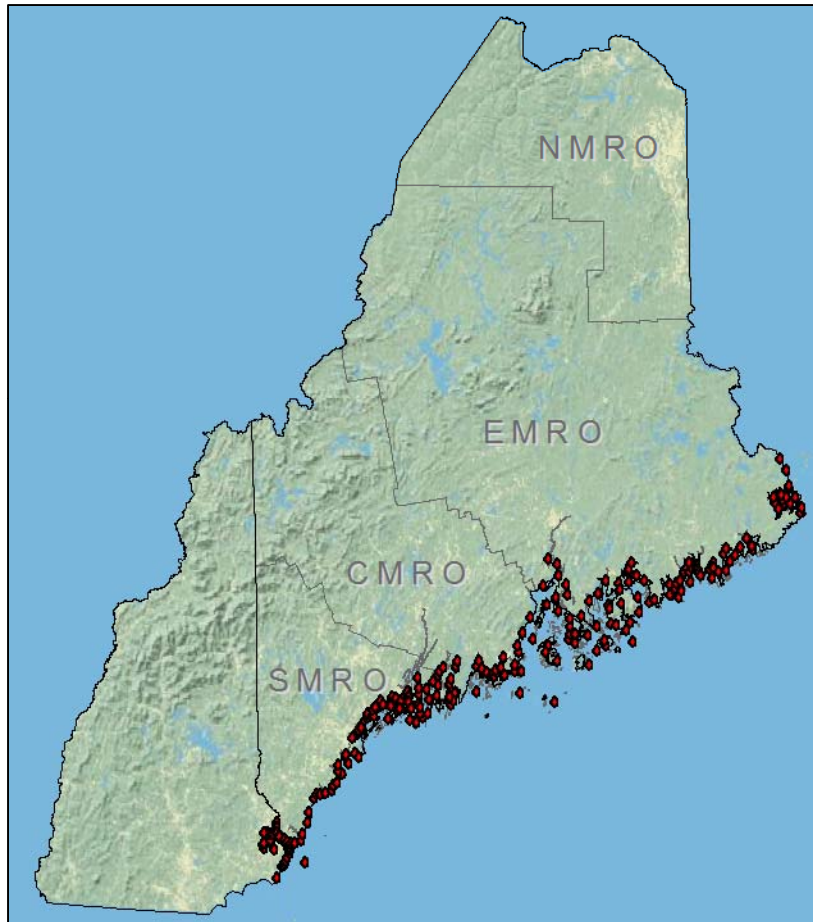
Response Planning Coordinator

Division of Response Services

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

*Protecting Maine's Air, Land and Water*

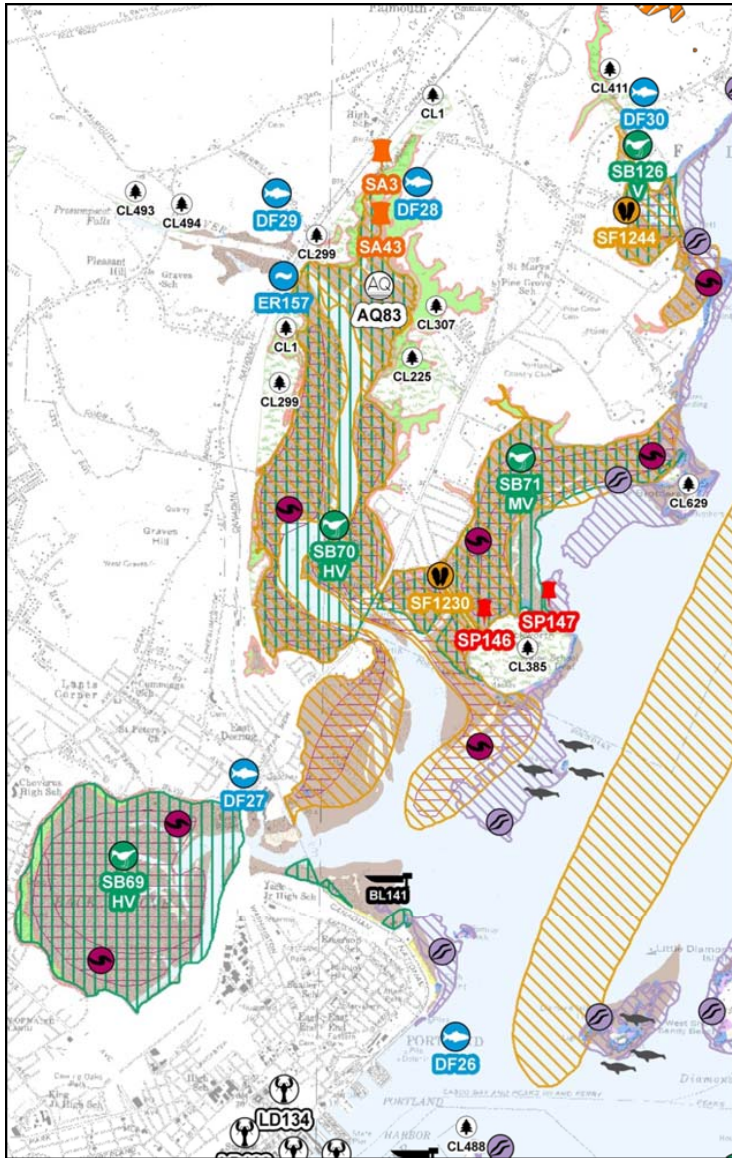
## GEOGRAPHIC RESPONSE STRATEGIES



- Specific strategies for sensitive areas
- 208 in Maine
- Active testing and review program



# ENVIRONMENTAL VULNERABILITY INDEX MAPS



- Identify resources and habitats at risk from marine oil spills
- Atlas of 98 maps coastwide
- Strong partnership with IF&W, DMR and MGS





# 25 Data Sets

## Threatened & Endangered Species

-  Piping Plover / Least Tern Essential Habitat
-  Roseate Tern Essential Habitat
-  Bald Eagle Essential Habitat
-  Harlequin Duck Wintering Habitat
-  Atlantic Salmon Habitat (where endangered)
-  Other Coastal Threatened or Endangered Species
-  Species of Special Concern
- SA = Sensitive Animal    SP = Sensitive Plant 

## Birds




-  Shorebird Areas
  -  Seabird Nesting Islands
- EVID.#  
RANKING**
- Red outline if threatened or endangered species present on island

Rankings: C=Critical    HV=Highly Vulnerable  
MV= Moderately Vulnerable    V=Vulnerable


**Rafting Birds** Areas with counts greater than 200 individuals  
2000 - 2004 Aerial Survey Data

-  Fall Rafting Bird Observations
-  Summer Rafting Bird Observations
-  Winter Rafting Bird Observations
-  Spring Rafting Bird Observations



## Fish

-  Diadromous Fish Runs
-  Elver Runs
-  Herring Spawning Areas






## Shellfish

-  Lobster Pounds
-  Shellfish Beds
-  Mussel Seed Conservation Areas

## Habitats









-  Marine Worm Areas
-  Eelgrass Beds
-  Seal Haul-Outs

## Human Resources

-  Aquaculture Lease Sites
-  Herring Weir Sites
-  Lobster Dealers
-  Conservation Lands
-  Boat Launch State Sponsored or Assisted, Trailerable

## Coastal Marine Geologic Environments

Ranked from most to least vulnerable

-  Marshes (1)
-  Mud Flats, Sheltered (2)
-  Coarse Flats & Bars, Exposed (3)
-  Coarse Beaches & Riprap (4)
-  Mixed & Low Energy Beaches (5)
-  Sand Beaches (6)
-  Rocky Shores (7)
-  Sand Dunes (8)



Coastal Barrier Resources System Area



**ENVIRONMENTAL SENSITIVITY MAP - 17**

GEOGRAPHIC RESPONSE PLANS (GCRP) FOR THIS MAP AREA: B-11-1 B-12-1 B-12-2 B-12-3 B-13-1

**THREATENED AND ENDANGERED SPECIES / SPECIES OF SPECIAL CONCERN**

BALD EAGLE ESSENTIAL HABITAT (BE) HARLEQUIN DUCK WINTERING HABITAT (HD) PIPING PLOVER / LEAST TERN ESSENTIAL HABITAT (PPLT) ROSEATE TERN ESSENTIAL HABITAT (RT) Other T or E Species SA: Sensitive Animal SP: Sensitive Plant Other SSC SA = Sensitive Animal SP = Sensitive Plant

**BIRDS**

EVI NO	COMMON NAME	SCIENTIFIC NAME	ST	FED	MONTHS PRESENT												SPRING MIGRATION	NESTING	FALL MIGRATION	WINTERING	MOLTING
					C= COMMON	U= UNCOMMON	J	F	M	A	M	J	J	A	S	O					
BE202A	Bald Eagle	<i>Haliaeetus leucocapillus</i>	T	T	C	C	C	C	C	C	C	C	C	C	C	C	C	Feb.-Sep.		Oct.-Jan.	
BE202D	Bald Eagle	<i>Haliaeetus leucocapillus</i>	T	T	C	C	C	C	C	C	C	C	C	C	C	C	C	Feb.-Sep.		Oct.-Jan.	
BE269A	Bald Eagle	<i>Haliaeetus leucocapillus</i>	T	T	C	C	C	C	C	C	C	C	C	C	C	C	C	Feb.-Sep.		Oct.-Jan.	
BE269B	Bald Eagle	<i>Haliaeetus leucocapillus</i>	T	T	C	C	C	C	C	C	C	C	C	C	C	C	C	Feb.-Sep.		Oct.-Jan.	
SA13	Salt Marsh Sharp Tailed Sparrow	<i>Ammodramus caudatus</i>	SC										U	C	C	C	U	Apr.-May	May-Aug.	Jul.-Oct.	Oct.-Jan.

**SENSITIVE PLANTS / RARE ANIMALS**

EVI NO	COMMON NAME	SCIENTIFIC NAME	ST	FED
SA13	Salt Marsh Sharp Tailed Sparrow	<i>Ammodramus caudatus</i>		SC

**SHOREBIRDS (SB)** SHOREBIRD SITES ON THIS MAP INCLUDE ONE OR MORE OBSERVATIONS OF THE FOLLOWING SPECIES

COMMON NAME	SCIENTIFIC NAME	ST	FED	MONTHS PRESENT												SPRING MIGRATION	NESTING	FALL MIGRATION	WINTERING	MOLTING
				C= COMMON	U= UNCOMMON	J	F	M	A	M	J	J	A	S	O					
Undertail Yellowlegs	<i>Tringa hypoleucis</i>									C	C	U	C	C	U	Apr.-Jun.		Jul.-Nov.		
Spotted Sandpiper	<i>Actitis macularia</i>									U	C	C	C	C	U			Jul.-Oct.		
Solitary Sandpiper	<i>Tringa solitaria</i>									C	U	C	C	U		May-Jun.		Jul.-Oct.		
Semipalmated Sandpiper	<i>Calidris pusilla</i>									C	C	C	C	U		May-Jun.		Jul.-Oct.		
Semipalmated Plover	<i>Charadrius semipalmatus</i>									C	C	C	C	U		May-Jun.		Jul.-Oct.		
Short-billed Dowitcher	<i>Limnodromus griseus</i>									C	C	C	C	U		May-Jun.		Jul.-Oct.		
Pectoral Sandpiper	<i>Calidris melanotos</i>									U	U	C	C	U	U	Apr.-May		Jul.-Nov.		
Undertail Sandpiper	<i>Calidris alpina</i>									U	C	C	C	U		May-Jun.		Jul.-Oct.		
Lesser Yellowlegs	<i>Tringa flavipes</i>									U	C	C	C	U		May		Jul.-Oct.		
Least Sandpiper	<i>Calidris minutilla</i>									C	U	C	C	U		May-Jun.		Jul.-Oct.		
Killdeer	<i>Charadrius vociferans</i>									U	C	C	C	C	U	Mar-Apr	Apr-Aug	Sep-Nov		
Greater Yellowlegs	<i>Tringa melanoleuca</i>									C	C	U	C	C	U	Apr-Jun		Jul-Nov		
Black-bellied Plover	<i>Plover squatarola</i>									C	C	U	C	C	U	May-Jun		Jul-Nov		

**RAFTING BIRDS** Winter (W) Spring (Spr) Summer (Su) Fall (F)

EVI NO	COMMON NAME	SCIENTIFIC NAME	ST	FED	MONTHS PRESENT												SPRING MIGRATION	NESTING	FALL MIGRATION	WINTERING	MOLTING
					C= COMMON	U= UNCOMMON	J	F	M	A	M	J	J	A	S	O					
W18	Undertail Goldeneye	<i>Bucephala sp.</i>			C	C	C	C	C	U	U	C	C	C	C	Mar-Apr	Apr-Jul	Oct-Dec	Oct-Mar	Jul-Aug	
	Common Eider	<i>Somateria mollissima</i>			C	C	C	C	C	C	C	C	C	C	C	Mar-Apr	Apr-Jul	Sep-Oct	Nov-Mar	Jul-Sep	
	Burhead	<i>Bucephala albeola</i>			C	C	C	C	U		U	C	C	C	Apr-May		Sep-Dec	Nov-Mar			

**FISH: DIADROMOUS FISH (DF) ELVER RUNS (ER) HERRING SPAWNING AREAS (HS)**

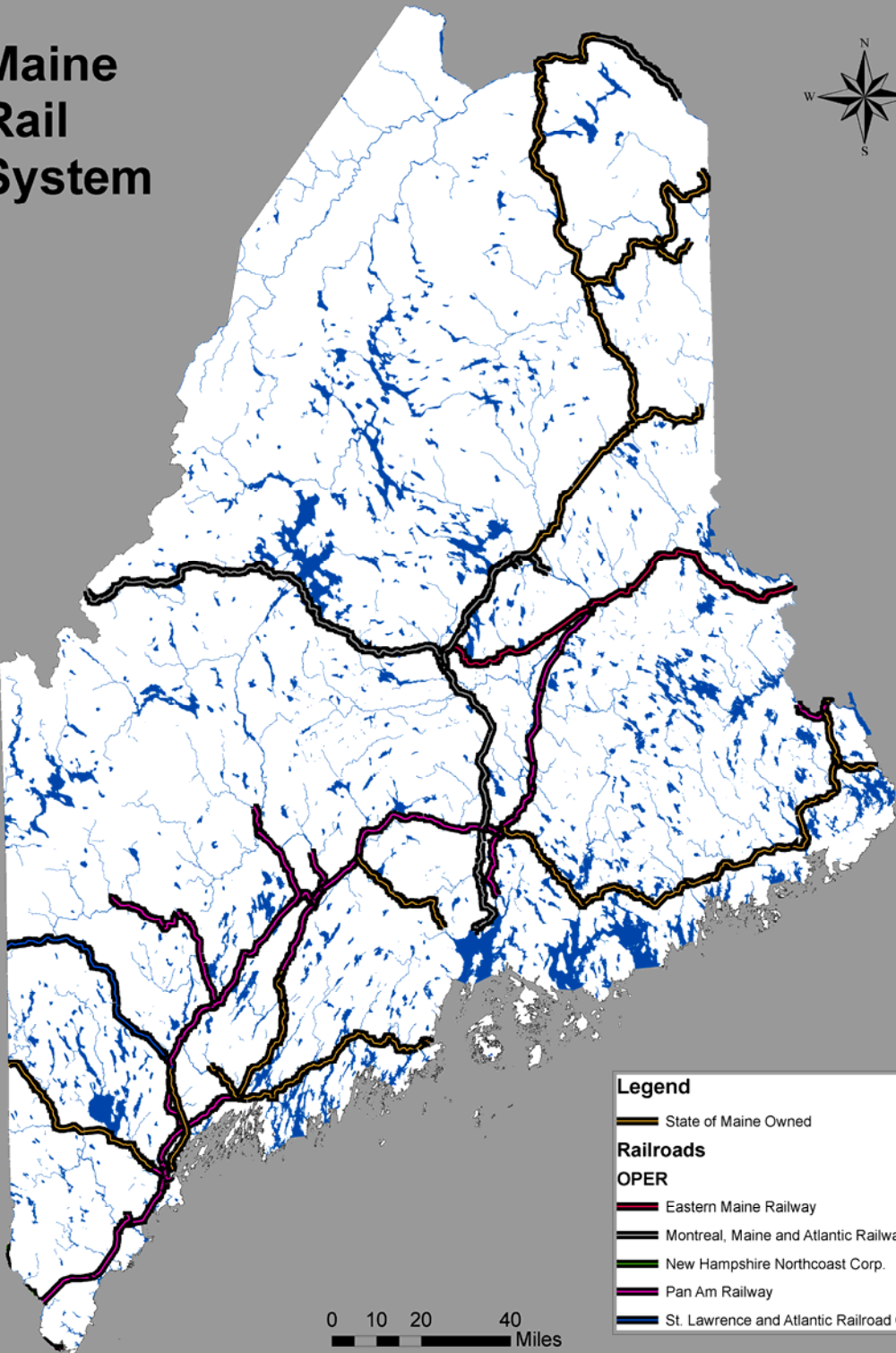
EVI NO	COMMON NAME	SCIENTIFIC NAME	ST	FED	MONTHS PRESENT												SPAWNING	LARVAE	JUVENILE	ADULT
					J	F	M	A	M	J	J	A	S	O	N	D				
DF33	small rainbow	<i>Osmerus mordax</i>			x	x	x	x	x	x	x	x	x	x	Mar-Jun	May-Sept.	Jan-Dec	Jan-Dec		
	east american	<i>Anguilla rostrata</i>			x	x	x	x	x	x	x	x	x	x	NA	Apr-Jun	Jan-Dec	Aug-Nov.		
	shad	<i>Alosa pseudoharengus</i>			R	R	R	x	x	x	x	R	R		FW	FW	Jan-Dec	Apr-Oct.		
	trout brook	<i>Salvelinus fontinalis</i>			x	x	x								FW	FW	FW	May-Sep.		
	trout brown	<i>Salmo trutta</i>											x	x	FW	FW	FW	Oct-Feb.		
	shad american	<i>Alosa sapidissima</i>					R	R	x	x	x	x	R	x	FW	FW	May-Oct	May-Sep.		
DF34	small rainbow	<i>Osmerus mordax</i>			x	x	x	x	x	x	x	x	x	Mar-Jun	May-Sept.	Jan-Dec	Jan-Dec			
	trout brook	<i>Salvelinus fontinalis</i>			x	x	x							FW	FW	FW	May-Sep.			
	east american	<i>Anguilla rostrata</i>			x	x	x	x	x	x	x	x	x	NA	Apr-Jun	Jan-Dec	Aug-Nov.			
DF35	small rainbow	<i>Osmerus mordax</i>			x	x	x	x	x	x	x	x	x	Mar-Jun	May-Sept.	Jan-Dec	Jan-Dec			
DF38	small rainbow	<i>Osmerus mordax</i>			x	x	x	x	x	x	x	x	x	Mar-Jun	May-Sept.	Jan-Dec	Jan-Dec			
DF37	small rainbow	<i>Osmerus mordax</i>			x	x	x	x	x	x	x	x	x	Mar-Jun	May-Sept.	Jan-Dec	Jan-Dec			
DF38	small rainbow	<i>Osmerus mordax</i>			x	x	x	x	x	x	x	x	x	Mar-Jun	May-Sept.	Jan-Dec	Jan-Dec			
DF39	small rainbow	<i>Osmerus mordax</i>			x	x	x	x	x	x	x	x	x	Mar-Jun	May-Sept.	Jan-Dec	Jan-Dec			
DF40	small rainbow	<i>Osmerus mordax</i>			x	x	x	x	x	x	x	x	x	Mar-Jun	May-Sept.	Jan-Dec	Jan-Dec			
ER150	east american	<i>Anguilla rostrata</i>			x	x	x	x	x	x	x	x	x	NA	Apr-Jun	Jan-Dec	Aug-Nov.			
ER160	east american	<i>Anguilla rostrata</i>			x	x	x	x	x	x	x	x	x	NA	Apr-Jun	Jan-Dec	Aug-Nov.			

- Access database with agency supplied data
- Custom GIS script tool selects all “EVI numbers” on screen
- Populates table linked to Access report
- Very fast reports “on the fly” of resources in the immediate area

[LINK](#)



# Maine Rail System



**Legend**

- State of Maine Owned

**Railroads**

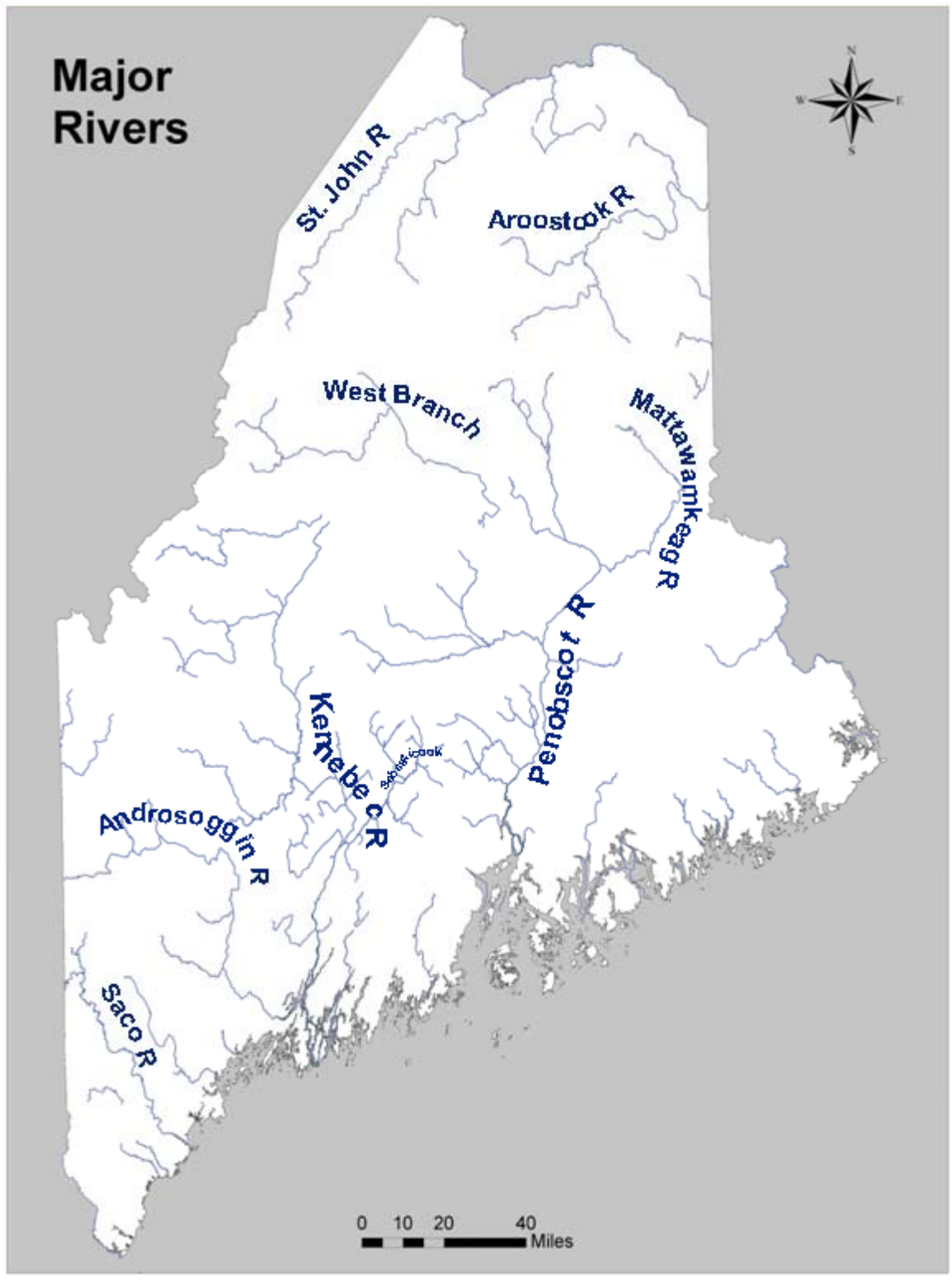
**OPER**

- Eastern Maine Railway
- Montreal, Maine and Atlantic Railway
- New Hampshire Northcoast Corp.
- Pan Am Railway
- St. Lawrence and Atlantic Railroad Co.

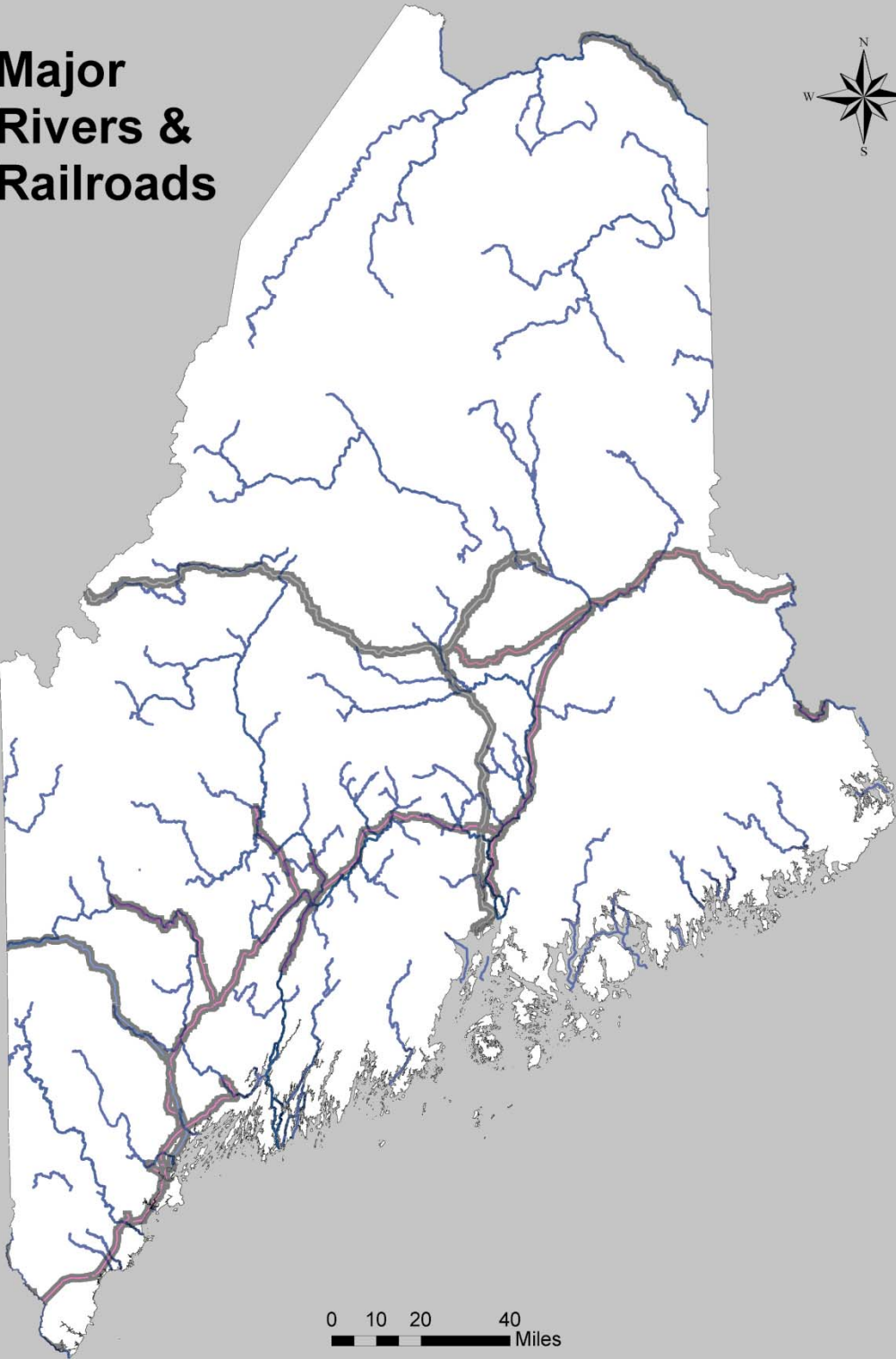
0 10 20 40 Miles



# Major Rivers



# Major Rivers & Railroads

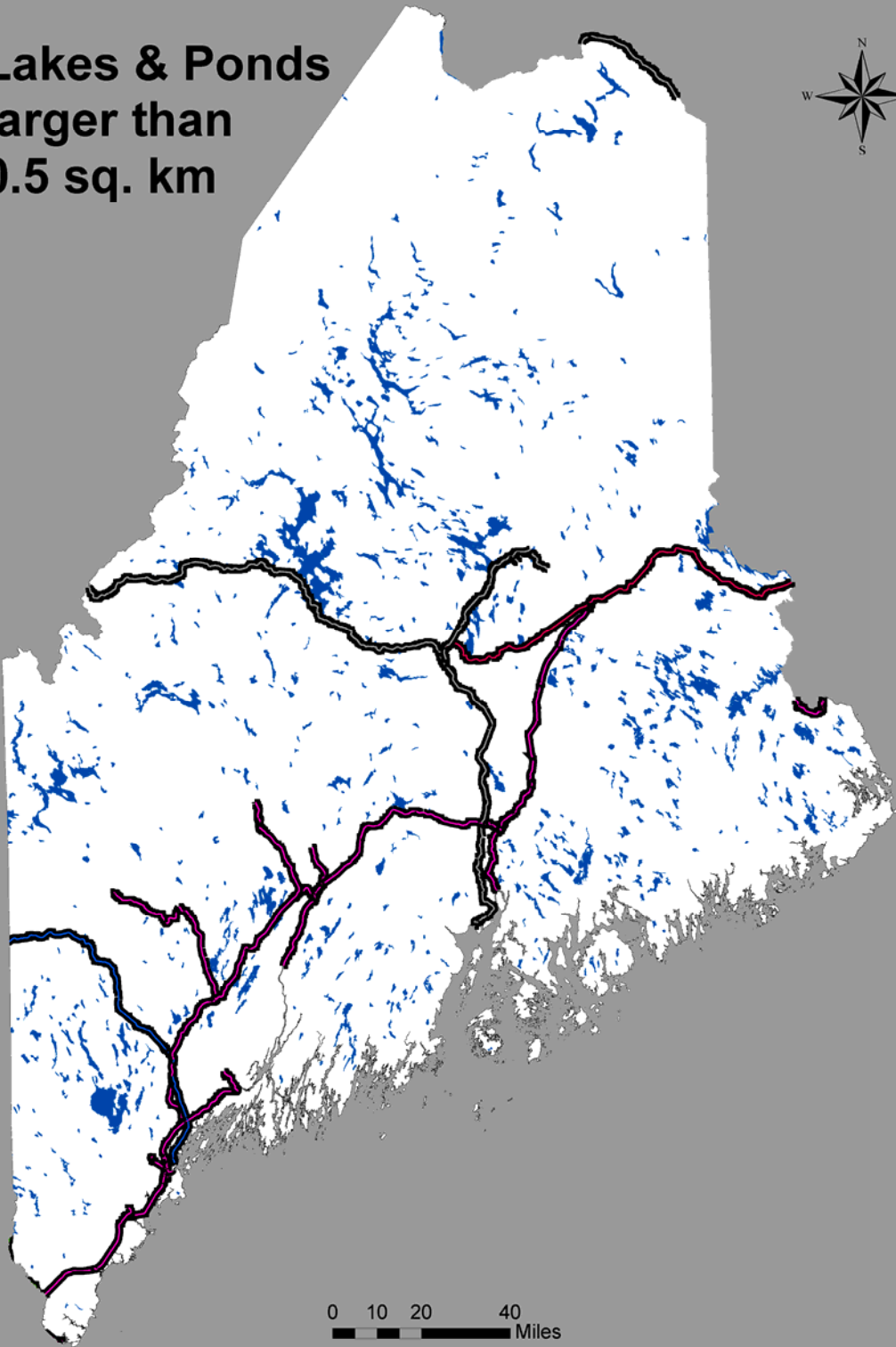


0 10 20 40  
Miles





**Lakes & Ponds  
larger than  
0.5 sq. km**

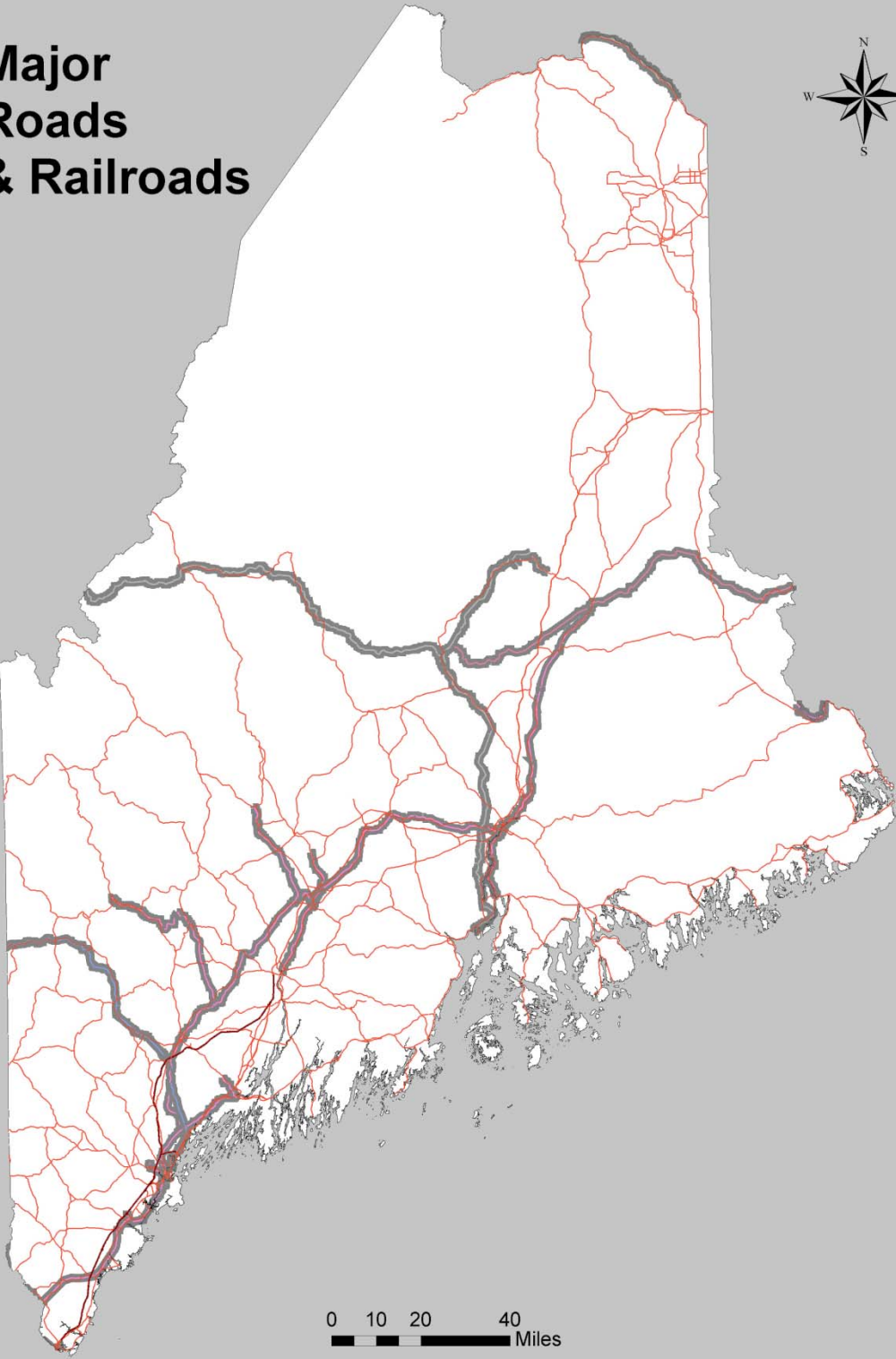


0 10 20 40  
Miles



MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION  
[www.maine.gov/dep](http://www.maine.gov/dep)

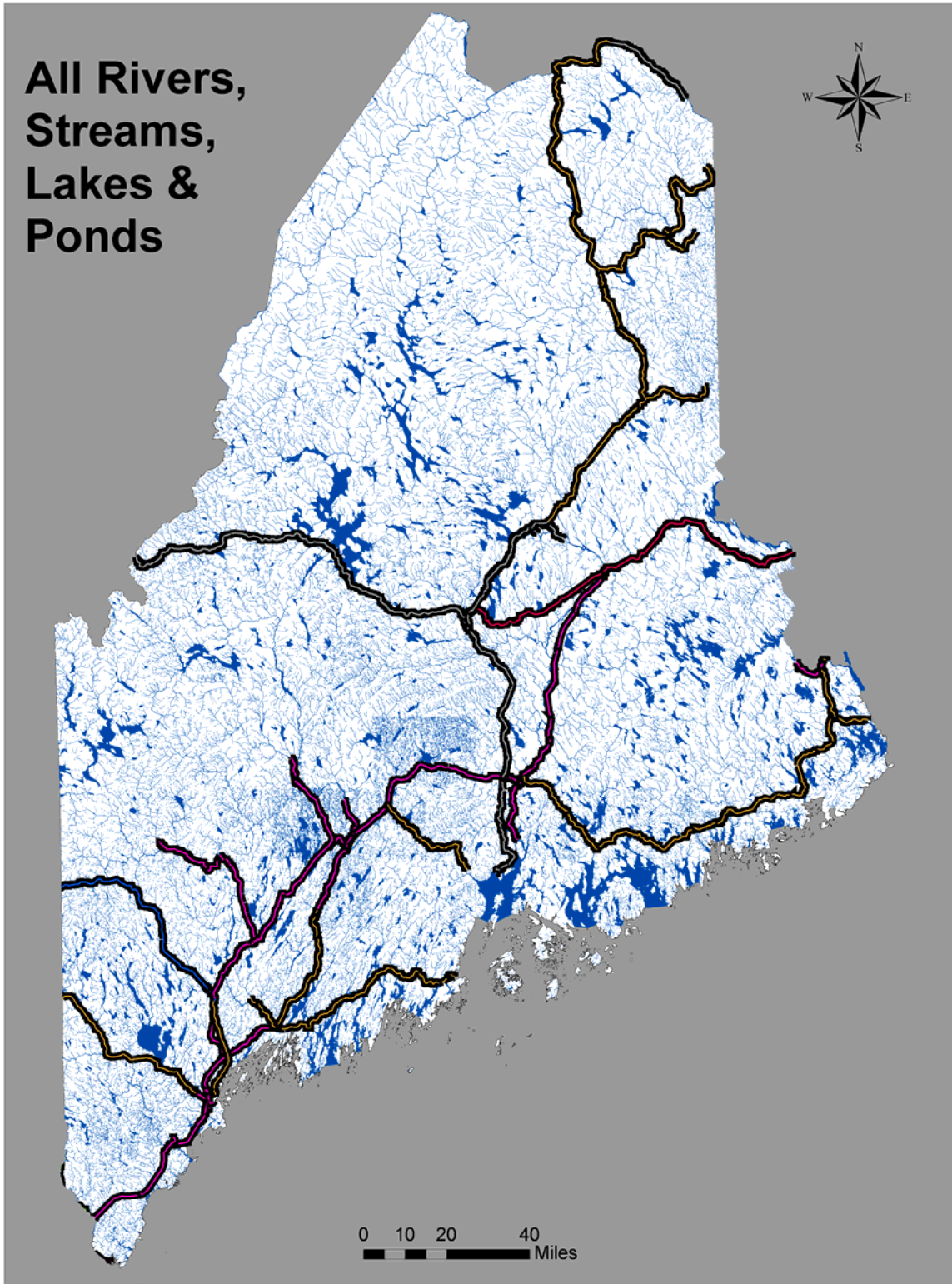
# Major Roads & Railroads



0 10 20 40  
Miles



# All Rivers, Streams, Lakes & Ponds

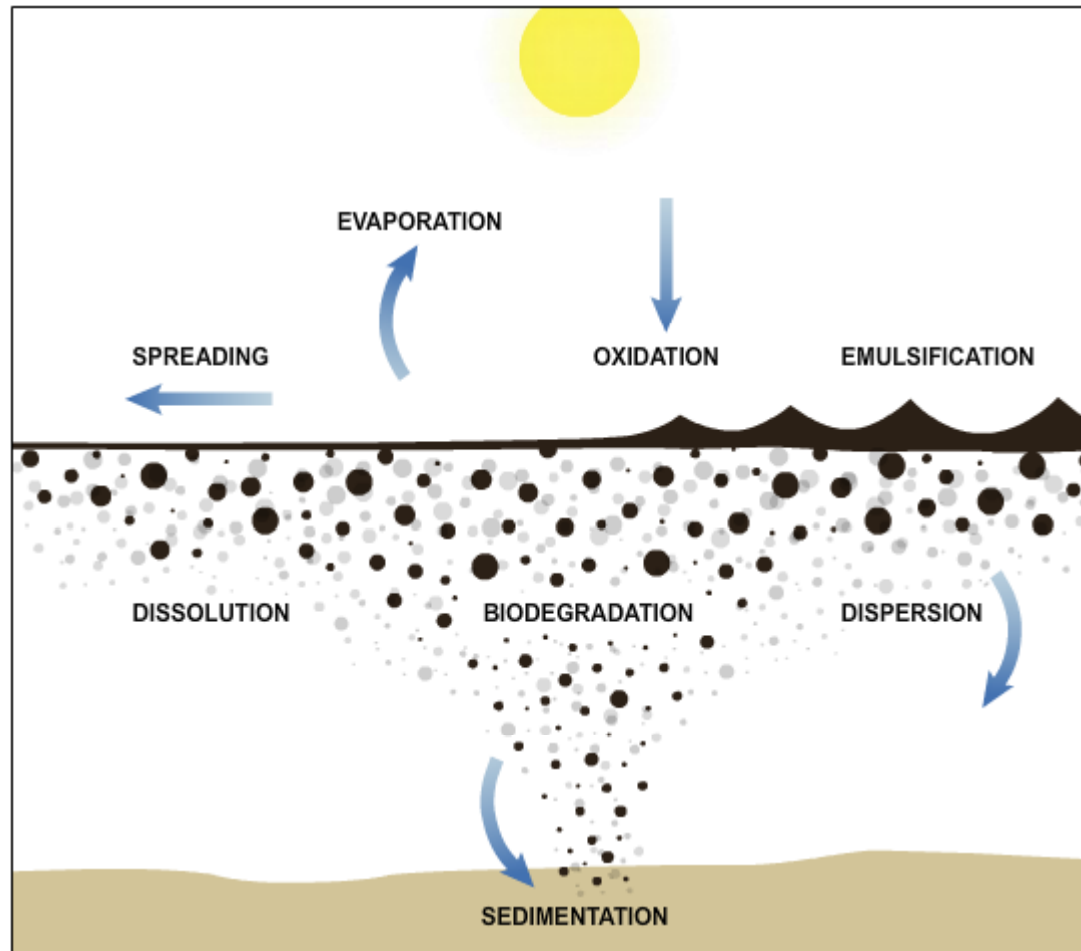


[LINK](#)



MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION  
[www.maine.gov/dep](http://www.maine.gov/dep)

# Resources at Risk



# Resources at Risk

## Public Drinking Water Supplies

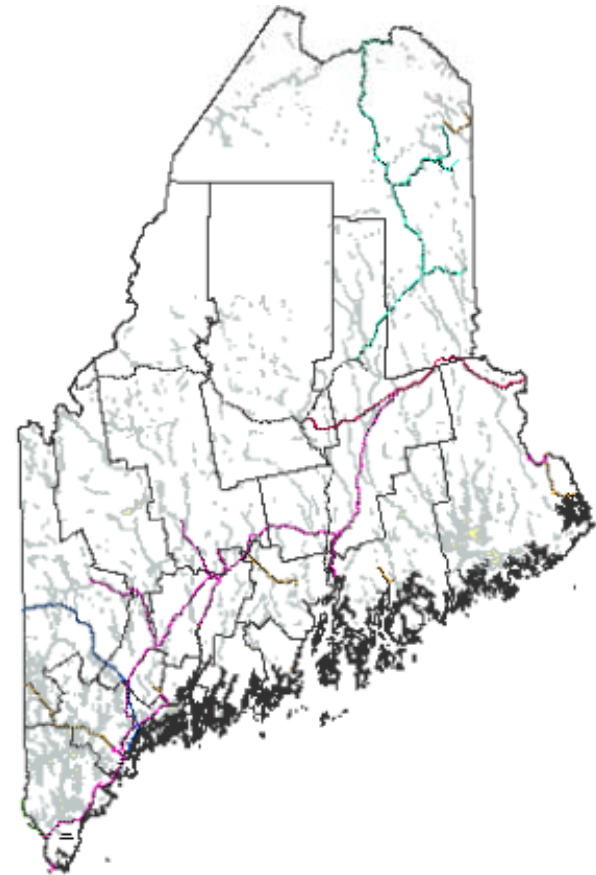
- ◆ Community PWS
- Surface Water Intake PWS
- ▲ Transient PWS
- Non-transient, non-community PWS
- ◆ Non-public
- No details



# Resources at Risk

## Sand and Gravel Aquifers

- 10-50 gallons/min.
- > 50 gallons/min.



# Resources at Risk



## Endangered, Threatened

Golden Eagle, Least Bittern, Northern Black Racer (E)

Upland Sandpiper, Blanding's Turtle, Northern Bog Lemming (T)



## Species of Special Concern

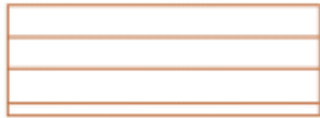
Bald Eagle, Ribbon Snake, Spring Salamander



## Atlantic Salmon Habitat



# Resources at Risk



Deer Wintering Areas



Inland Waterfowl & Wading Bird Habitat



Significant Vernal Pools





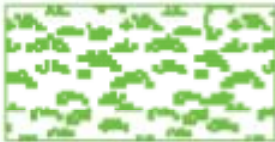
# Resources at Risk



Diadromous Fish Runs



National Wetlands Inventory



Conservation Lands



Boat Launches



