

APPENDIX 4 TABLE OF CONTENTS

INTRODUCTION	i
MARINE INVERTEBRATES – INTRODUCTION	1
NEARSHORE SOFT BENTHIC ECOSYSTEMS.....	2
EELGRASS INVERTEBRATES	2
INTERTIDAL AND SHALLOW SUBTIDAL BIVALVES.....	7
DEEP BENTHIC ECOSYSTEMS.....	10
CORALS, TUNICLES, AND SPONGES	11
SALT MARSH ECOSYSTEMS	15
SALT MARSH-ASSOCIATED INVERTEBRATES.....	15
PELAGIC ECOSYSTEMS	18
ZOOPLANKTON	18
NEARSHORE ROCKY REEF ECOSYSTEMS	22
BENTHIC GRAZERS: <i>KATHARINA TUNICATA</i> AND <i>CRYPTOCHITON STELLERI</i>	23
SHALLOW ROCKY REEF ECOSYSTEM (0–20 METERS): <i>HALIOTIS KAMTSCHATKANA</i>	29
FRESHWATER INVERTEBRATES	35
DRAGONFLIES AND DAMSELFLIES	35
CLADOCERA (WATER FLEAS)	40
EPHEMEROPTERA/PLECOPTERA/TRICHOPTERA	44
KARST CAVE DWELLING AQUATIC INVERTEBRATES.....	48
MOLLUSCA	57
TERRESTRIAL INVERTEBRATES – INTRODUCTION	64
MARINE FISH – INTRODUCTION.....	74
FORAGE FISH OCCURRING IN INTERTIDAL/SHALLOW SUBTIDAL AREAS	75
NEARSHORE OCCURRENCE OF PELAGIC FORAGE FISH	82
FRESHWATER FISH – INTRODUCTION	89
LAMPREYS.....	91
ANADROMOUS SMELOTS	98
BERING CISCO.....	102
BROAD WHITEFISH.....	105
PYGMY WHITEFISH	109
TROUT-PERCH.....	112
ALASKA BLACKFISH	114
STICKLEBACK (COOK INLET RADIATION)	118
NATIVE AMPHIBIANS – INTRODUCTION.....	127
REPTILES – INTRODUCTION.....	146
LEATHERBACK SEATURTLE	146
WATERFOWL – INTRODUCTION.....	149
SEA DUCKS.....	153
WATERBIRDS – INTRODUCTION	161
GREBES	161
LOONS	166
RED-THROATED LOON.....	170

Appendix 4, Page iii

YELLOW-BILLED LOON.....	175
SEABIRDS – INTRODUCTION.....	180
LEACH’S AND FORK-TAILED STORM-PETRELS.....	180
RED-FACED CORMORANT	185
BLACK-LEGGED KITTIWAKE.....	190
RED-LEGGED KITTIWAKE	193
ARCTIC TERN	197
ALEUTIAN TERN	201
COMMON AND THICK-BILLED MURRES	205
MARBLED MURRELET	211
KITTLITZ’S MURRELET.....	216
LEAST AND CRESTED AUKLETS.....	221
RAPTORS – INTRODUCTION	241
NORTHERN GOSHAWK.....	242
CONTAMINANT-AFFECTED RAPTOR SPECIES	248
DIURNAL MIGRANT RAPTORS	253
BLACK MERLIN AND GYRFALCON.....	258
FOREST OWLS	261
SNOWY OWL.....	266
SHOREBIRDS – INTRODUCTION	269
BLACK OYSTERCATCHER	274
LESSER YELLOWLEGS.....	278
SOLITARY SANDPIPER.....	283
BRISTLE-THIGHED CURLEW.....	288
MARBLED GODWIT.....	292
ROCK SANDPIPER	298
BUFF-BREASTED SANDPIPER	303
LANDBIRDS – INTRODUCTION	319
LANDBIRDS WITH LONG-TERM DECLINES IN POPULATION SIZE	322
LANDBIRDS SENSITIVE TO FOREST MANAGEMENT	328
OLIVE-SIDED FLYCATCHER	336
BLACKPOLL WARBLER.....	342
RUSTY BLACKBIRD.....	350
ALEUTIAN AND BERING SEA ISLANDS ENDEMNIC LANDBIRDS.....	357
SMITH’S LONGSPUR.....	363
TERRESTRIAL MAMMALS – INTRODUCTION	369
SOUTHCOASTAL ALASKA BATS	377
SOUTHEAST ALASKA ENDEMNIC SMALL MAMMALS	381
SOUTHWEST ALASKA/BERING SEA INSULAR ENDEMNIC SMALL MAMMALS.....	386
MONTAGUE ISLAND MARMOT	388
KENAI PENINSULA ENDEMNIC SMALLER MAMMALS	392
ALASKA MARMOT AND BARROW GROUND SQUIRREL	395
MARINE MAMMALS – INTRODUCTION	398
COOK INLET BELUGA WHALE	399
ICE-ASSOCIATED MARINE MAMMALS	404
LARGE WHALE GROUP	409
BOWHEAD WHALE	413
HUMPBACK WHALE.....	417
BEAKED WHALE GROUP.....	421

Appendix 4, Page iv

NORTH PACIFIC RIGHT WHALE	424
NORTHERN SEA OTTER.....	427

LIST OF TABLES: APPENDIX 4

Table		Page
1.	Land mammal taxa of conservation concern..	370

LIST OF FIGURES: APPENDIX 4

Figure	Page
1. Leach's Storm-Petrel colonies in Alaska.....	225
2. Fork-tailed Storm-Petrel colonies in Alaska.....	226
3. Red-faced Cormorant colonies in Alaska	227
4. Black-legged Kittiwake colonies in Alaska.....	228
5. Red-legged Kittiwake colonies in Alaska.....	229
6. Arctic Tern colonies in Alaska	230
7. Aleutian Tern colonies in Alaska.....	231
8. Common Murre colonies in Alaska	232
9. Common Murre colonies in Alaska and Russian Far East.....	233
10. Thick-billed Murres in Alaska.....	234
11. Thick-billed Murres in Alaska and Russian Far East	235
12. Distribution of Kittlitz's Murrelets in Alaska.....	236
13. Least Auklet colonies in Alaska	237
14. Least Auklet colonies in Alaska and Russian Far East	238
15. Crested Auklet colonies in Alaska.....	239
16. Crested Auklet colonies in Alaska and Russian Far East	240
17. Year round (green) and nonbreeding (yellow) distribution of the Black Oystercatcher	310
18. Breeding (blue) and nonbreeding (yellow) ranges of the Lesser Yellowlegs	311
19. Breeding (blue) and nonbreeding (yellow) distribution of Solitary Sandpiper.....	312
20. The breeding range of the Bristle-thighed Curlew is restricted to two small portions (shown in light blue) of western Alaska.....	313
21. Breeding (blue) and nonbreeding (yellow) distributions of the Marbled Godwit.....	314
22. Breeding (blue), breeding and nonbreeding (green), and nonbreeding (yellow) distributions of the Rock Sandpiper.....	315
23. Breeding range (light blue) of the Buff-breasted Sandpiper, excluding small areas of Russia where the species occurs sporadically	316
24. Primary nonbreeding range (dark gray) of the Buff -breasted Sandpiper excluding small areas of northwestern Argentina and southwestern Bolivia.....	317
25. Location of Buff-breasted Sandpiper sightings in Alaska from 1883 to 2001	318