TABLE 4-1
SUMMARY OF DEFAULT ASSESSMENT ENDPOINTS AND PRIMARY INDICATOR SPECIES FOR EACH ALASKAN ECOREGION

Default Assessment Endpoints	Ecoregions								Typical Tier I Assessment Method	Primary (bold) and Other Exposure Media
	Aleutian Islands	Arctic Slope	Interior	Northwest	Southcentral	Southeast	Southwest	Yukon-Kuskokwim Delta		
Primary Producers (Trophic Level 0)										
The potential for significant adverse effects on terrestrial soil plant species abundance, diversity, and primary production	**All plants that obtain nutrients primarily from soil** [a]	**All plants that obtain nutrients primarily from soil** [a]	**All plants that obtain nutrients primarily from soil** [a]	**All plants that obtain nutrients primarily from soil** [a]	**All plants that obtain nutrients primarily from soil** [a]	**All plants that obtain nutrients primarily from soil** [a]	**All plants that obtain nutrients primarily from soil** [a]	**All plants that obtain nutrients primarily from soil** [a]	Compare Media Concentrations with Lowest Available Phytotoxicity Benchmarks for Any Plant Species	**Surface Soil**
The potential for significant adverse effects on terrestrial air plant species abundance, diversity, and primary production	**All plants that obtain nutrients primarily from the air** [a]	**All plants that obtain nutrients primarily from the air** [a]	**All plants that obtain nutrients primarily from the air** [a]	**All plants that obtain nutrients primarily from the air** [a]	**All plants that obtain nutrients primarily from the air** [a]	**All plants that obtain nutrients primarily from the air** [a]	**All plants that obtain nutrients primarily from the air** [a]	**All plants that obtain nutrients primarily from the air** [a]	Not Evaluated under Normal Circumstances	**Air**
The potential for significant adverse effects on marine plant species abundance, diversity, and primary production	**All plants that obtain nutrients primarily from marine water** [a]	**All plants that obtain nutrients primarily from marine water** [a]	NA	**All plants that obtain nutrients primarily from marine water** [a]	**All plants that obtain nutrients primarily from marine water** [a]	**All plants that obtain nutrients primarily from marine water** [a]	**All plants that obtain nutrients primarily from marine water** [a]	**All plants that obtain nutrients primarily from marine water** [a]	Compare Media Concentrations with Available Adjusted Water Quality Criteria (Preference for Marine and Chronic Values)	**Marine Water**
The potential for significant adverse effects on marine semi-aquatic plant species abundance, diversity, and primary production	**All plants that obtain nutrients primarily from marine sediment** [a]	**All plants that obtain nutrients primarily from marine sediment** [a]	NA	**All plants that obtain nutrients primarily from marine sediment** [a]	**All plants that obtain nutrients primarily from marine sediment** [a]	**All plants that obtain nutrients primarily from marine sediment** [a]	**All plants that obtain nutrients primarily from marine sediment** [a]	**All plants that obtain nutrients primarily from marine sediment** [a]	Compare Media Concentrations with Available Adjusted Sediment Quality Criteria (Preference for Marine and Chronic Values); site-specific TOC adjustment when appropriate.	**Marine Sediment** Marine Water
The potential for significant adverse effects on freshwater plant species abundance, diversity, and primary production	**All plants that obtain nutrients primarily from fresh water** [a]	**All plants that obtain nutrients primarily from fresh water** [a]	**All plants that obtain nutrients primarily from fresh water** [a]	**All plants that obtain nutrients primarily from fresh water** [a]	**All plants that obtain nutrients primarily from fresh water** [a]	**All plants that obtain nutrients primarily from fresh water** [a]	**All plants that obtain nutrients primarily from fresh water** [a]	**All plants that obtain nutrients primarily from fresh water** [a]	Compare Media Concentrations with Available Adjusted Water Quality Criteria (Preference for Freshwater and Chronic Values)	**Fresh Water**
The potential for significant adverse effects on freshwater semi-aquatic plant species abundance, diversity, and primary production	**All plants that obtain nutrients primarily from freshwater sediment** [a]	**All plants that obtain nutrients primarily from freshwater sediment** [a]	**All plants that obtain nutrients primarily from freshwater sediment** [a]	**All plants that obtain nutrients primarily from freshwater sediment** [a]	**All plants that obtain nutrients primarily from freshwater sediment** [a]	**All plants that obtain nutrients primarily from freshwater sediment** [a]	**All plants that obtain nutrients primarily from freshwater sediment** [a]	**All plants that obtain nutrients primarily from freshwater sediment** [a]	Compare Media Concentrations with Available Adjusted Sediment Quality Criteria (Preference for Freshwater and Chronic Values); site-specific TOC adjustment when appropriate.	**Freshwater Sediment** Fresh Water
Herbivores and Detrivores (Primary Consumers - Trophic Levels 1 and 2)										
The potential for significant adverse effects on marine aquatic invertebrate community abundance and diversity	**All marine aquatic invertebrates** [a]	**All marine aquatic invertebrates** [a]	NA	**All marine aquatic invertebrates** [a]	**All marine aquatic invertebrates** [a]	**All marine aquatic invertebrates** [a]	**All marine aquatic invertebrates** [a]	**All marine aquatic invertebrates** [a]	Compare Media Concentrations with Available Adjusted Water Quality Criteria (Preference for Marine and Chronic Values)	**Marine Water**
The potential for significant adverse effects on marine benthic invertebrate community abundance and diversity	**All marine benthic invertebrates** [a]	**All marine benthic invertebrates** [a]	NA	**All marine benthic invertebrates** [a]	**All marine benthic invertebrates** [a]	**All marine benthic invertebrates** [a]	**All marine benthic invertebrates** [a]	**All marine benthic invertebrates** [a]	Compare Media Concentrations with Available Adjusted Sediment Quality Criteria (Preference for Marine and Chronic Values); site-specific TOC adjustment when appropriate.	**Marine Sediment** Marine Water
The potential for significant adverse effects on freshwater aquatic invertebrate community abundance and diversity	**All freshwater aquatic invertebrates** [a]	**All freshwater aquatic invertebrates** [a]	**All freshwater aquatic invertebrates** [a]	**All freshwater aquatic invertebrates** [a]	**All freshwater aquatic invertebrates** [a]	**All freshwater aquatic invertebrates** [a]	**All freshwater aquatic invertebrates** [a]	**All freshwater aquatic invertebrates** [a]	Compare Media Concentrations with Available Adjusted Water Quality Criteria (Preference for Freshwater and Chronic Values)	**Fresh Water**
The potential for significant adverse effects on freshwater benthic invertebrate community abundance and diversity	**All freshwater benthic invertebrates** [a]	**All freshwater benthic invertebrates** [a]	**All freshwater benthic invertebrates** [a]	**All freshwater benthic invertebrates** [a]	**All freshwater benthic invertebrates** [a]	**All freshwater benthic invertebrates** [a]	**All freshwater benthic invertebrates** [a]	**All freshwater benthic invertebrates** [a]	Compare Media Concentrations with Available Adjusted Sediment Quality Criteria (Preference for Freshwater and Chronic Values); site-specific TOC adjustment when appropriate.	**Freshwater Sediment** Fresh Water
The potential for significant adverse effects on soil invertebrate community abundance and diversity	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	Compare Media Concentrations with Lowest Available Toxicity Benchmarks for Earthworms or Other Soil Invertebrate Species	**Surface Soil**

TABLE 4-1 (cont.)
SUMMARY OF DEFAULT ASSESSMENT ENDPOINTS AND PRIMARY INDICATOR SPECIES FOR EACH ALASKAN ECOREGION

Default Assessment Endpoints	Ecoregions								Typical Tier I Assessment Method	Primary (bold) and Other Exposure Media
	Aleutian Islands	Arctic Slope	Interior	Northwest	Southcentral	Southeast	Southwest	Yukon-Kuskokwim Delta		
The potential for significant adverse effects on marine fish detritivore abundance and diversity	**All marine fish** [a]	**All marine fish** [a]	NA	**All marine fish** [a]	**All marine fish** [a]	**All marine fish** [a]	**All marine fish** [a]	**All marine fish** [a]	Compare Media Concentrations with Available Adjusted Water Quality Criteria (Preference for Marine and Chronic Values)	**Marine Water**
The potential for significant adverse effects on freshwater fish detritivore abundance and diversity	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	Compare Media Concentrations with Available Adjusted Water Quality Criteria (Preference for Freshwater and Chronic Values)	**Fresh Water**
The potential for significant adverse effects on freshwater semi-aquatic avian herbivore abundance and diversity	**green-winged teal**	**northern pintail**	**mallard**	**green-winged teal**	**mallard**	**mallard**	**mallard**	**mallard**	Model dose from ingestion of water, sediment, and sediment-associated plants; compare with appropriate toxicity reference value.	**Freshwater Sediment** Fresh Water
The potential for significant adverse effects on marine semi-aquatic avian herbivore abundance and diversity	NA	NA	NA	**brant**	**brant**	NA	NA	**brant**	Model dose from ingestion of marine sediment and marine-sediment-associated plants and compare with appropriate toxicity reference value.	**Marine Sediment** Marine Water
The potential for significant adverse effects on terrestrial avian herbivore abundance and diversity	**willow ptarmigan**	**common redpoll**	**dark-eyed junco**	**dark-eyed junco**	**dark-eyed junco**	**dark-eyed junco**	**dark-eyed junco**	**dark-eyed junco**	Model dose associated with soil ingestion, surface water ingestion, and ingestion of soil-associated plants.	**Surface Soil** Fresh Water
The potential for significant adverse effects on freshwater semi-aquatic mammalian herbivore abundance and diversity	NA	**Moose**	**northern bog lemming**	**muskrat**	**northern bog lemming**	**northern bog lemming**	**muskrat**	**muskrat**	Model dose associated with sediment ingestion, surface water ingestion, and ingestion of sediment-associated plants and compare with applicable toxicity reference value.	**Freshwater Sediment** Fresh Water
The potential for significant adverse effects on terrestrial mammalian herbivore abundance and diversity	**Arctic ground squirrel**	**brown lemming**	**tundra vole**	**tundra vole**	**tundra vole**	**long-tailed vole**	**tundra vole**	**tundra vole**	Model dose associated with soil ingestion, surface water ingestion, and ingestion of soil-associated plants and compare with applicable toxicity reference value.	**Surface Soil** Fresh Water
Secondary Consumers (Trophic Level 3)										
The potential for significant adverse effects on marine avian invertevore abundance and diversity	**least auklet**	**least auklet**	NA	**least auklet**	**parakeet auklet**	**black oystercatcher**	**least auklet**	**least auklet**	Model dose associated with sediment ingestion and ingestion of marine aquatic invertebrates and compare with applicable toxicity reference value.	**Marine Water**
The potential for significant adverse effects on freshwater avian invertevore abundance and diversity	**American dipper**	**ruddy turnstone**	**American dipper**	**American dipper**	**American dipper**	**American dipper**	**American dipper**	**American dipper**	Model dose associated with sediment ingestion and ingestion of freshwater aquatic invertebrates and compare with applicable toxicity reference value.	**Fresh Water**
The potential for significant adverse effects on marine semi-aquatic avian invertevore abundance and diversity	**least sandpiper**	**lesser golden plover**	NA	**black-bellied plover**	**semipalmated plover**	**semipalmated plover**	**rock sandpiper**	**rock sandpiper**	Model dose associated with sediment ingestion and ingestion of marine benthic invertebrates and compare with applicable toxicity reference value.	**Marine Sediment**
The potential for significant adverse effects on freshwater semi-aquatic avian invertevore abundance and diversity	**common snipe**	**common snipe**	**common snipe**	**common snipe**	**common snipe**	**common snipe**	**common snipe**	**common snipe**	Model dose associated with sediment ingestion and ingestion of freshwater benthic invertebrates and compare with applicable toxicity reference value.	**Freshwater Sediment**

TABLE 4-1 (cont.)
SUMMARY OF DEFAULT ASSESSMENT ENDPOINTS AND PRIMARY INDICATOR SPECIES FOR EACH ALASKAN ECOREGION

Default Assessment Endpoints	Ecoregions								Typical Tier I Assessment Method	Primary (bold) and Other Exposure Media
	Aleutian Islands	Arctic Slope	Interior	Northwest	Southcentral	Southeast	Southwest	Yukon-Kuskokwim Delta		
The potential for significant adverse effects on terrestrial avian invertevore abundance and diversity	**Lapland longspur**	**Lapland longspur**	**American robin**	**Lapland longspur**	**American robin**	**American robin**	**American robin**	**Lapland longspur**	Model dose associated with soil ingestion and ingestion of soil invertebrates and compare with applicable toxicity reference value.	**Surface Soil**
The potential for significant adverse effects on freshwater fish invertevore abundance and diversity	NA	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	Compare media concentrations with available adjusted water quality criteria (preference for freshwater and chronic values)	**Fresh Water**
The potential for significant adverse effects on marine fish invertevore abundance and diversity	NA	NA	NA	NA	**All marine fish** [a]	**All marine fish** [a]	**All marine fish** [a]	NA	Compare media concentrations with available adjusted water quality criteria (preference for marine and chronic values)	**Marine Water**
All terrestrial invertebrates [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	**All terrestrial invertebrates** [a]	Compare Media Concentrations with Lowest Available Toxicity Benchmarks for Earthworms or Other Soil Invertebrate Species	**Surface Soil**
The potential for significant adverse effects on freshwater amphibian invertevore abundance and diversity	NA	**wood frog**	**wood frog**	**wood frog**	**wood frog**	**spotted frog**	**wood frog**	**wood frog**	Compare Media Concentrations with Available Adjusted Water Quality Criteria or Model dose associated with ingestion of freshwater aquatic invertebrates and sediment and compare with applicable toxicity reference value.	**Fresh Water** Sediment
Terrestrial amphibian invertevore abundance and physical health	NA	NA	NA	NA	**western toad**	**western toad**	NA	NA	Model dose associated with soil ingestion and ingestion of soil invertebrates and compare with applicable toxicity reference value.	**Surface Soil**
The potential for significant adverse effects on marine mammalian invertevore abundance and diversity	**sea otter**	**bearded seal**[f]	NA	**bearded seal**[f]	**sea otter**	**sea otter**	**sea otter**	**sea otter**	Model dose associated with sediment ingestion and ingestion of marine aquatic invertebrates and compare with applicable toxicity reference value.	**Marine Water** Sediment
The potential for significant adverse effects on terrestrial mammalian invertevore abundance and diversity	**shrews**	**tundra shrew**	**masked shrew**	**tundra shrew**	**masked shrew**	**masked shrew**	**masked shrew**	**tundra shrew**	Model dose associated with soil ingestion and ingestion of soil invertebrates and compare with applicable toxicity reference value.	**Surface Soil** Fresh Water
Tertiary Consumers (Trophic Level 4)										
The potential for significant adverse effects on marine avian piscivore abundance and diversity	**pigeon guillemot**	**pigeon guillemot**	NA	**pigeon guillemot**	**pigeon guillemot**	**pigeon guillemot**	**pigeon guillemot**	**pigeon guillemot**	Model dose associated with fish ingestion and compare with applicable toxicity reference value.	**Marine Water**
The potential for significant adverse effects on freshwater avian piscivore abundance and diversity	**Belted kingfisher**	**Arctic loon**	**belted kingfisher**	**belted kingfisher**	**belted kingfisher**	**belted kingfisher**	**belted kingfisher**	**belted kingfisher**	Model dose associated with fresh water and fish ingestion and compare with applicable toxicity reference value.	**Fresh Water**
The potential for significant adverse effects on terrestrial avian carnivore abundance and diversity	**northern shrike**	**northern shrike**	**northern shrike**	**northern shrike**	**northern shrike**	**northern shrike**	**northern shrike**	**northern shrike**	Model dose associated with soil ingestion and ingestion of prey and compare with applicable toxicity reference value.	**Surface Soil**
The potential for significant adverse effects on terrestrial mammalian carnivore abundance and diversity	NA	**least weasel**	**least weasel**	**least weasel**	**least weasel**	**shorttail weasel**	**least weasel**	**least weasel**	Model dose associated with soil ingestion and ingestion of prey and compare with applicable toxicity reference value.	**Surface Soil**
The potential for significant adverse effects on freshwater semi-aquatic mammalian carnivore abundance and diversity	NA	NA	**mink**	**mink**	**mink**	**mink**	**mink**	**mink**	Model dose associated with fresh water, freshwater sediment, and fish ingestion and compare with applicable toxicity reference value.	**Fresh Water** Sediment Surface Soil

TABLE 4-1 (cont.)
SUMMARY OF DEFAULT ASSESSMENT ENDPOINTS AND PRIMARY INDICATOR SPECIES FOR EACH ALASKAN ECOREGION

Default Assessment Endpoints	Ecoregions								Typical Tier I Assessment Method	Primary (bold) and Other Exposure Media
	Aleutian Islands	Arctic Slope	Interior	Northwest	Southcentral	Southeast	Southwest	Yukon-Kuskokwim Delta		
The potential for significant adverse effects on freshwater mammalian piscivore abundance and diversity	NA	**river otter**	**river otter**	**river otter**	**river otter**	**river otter**	**river otter**	**river otter**	Model dose associated with fresh water and fish ingestion and compare with applicable toxicity reference value.	**Fresh Water**
The potential for significant adverse effects on marine mammalian piscivore abundance and diversity	**harbor seal**	**ringed seal**	NA	**northern fur seal**	**spotted seal**	**harbor seal**	**spotted seal**	**ringed seal**	Model dose associated with fish ingestion and compare with applicable toxicity reference value.	**Marine Water**
The potential for significant adverse effects on marine mammalian carnivore abundance and diversity	**Arctic fox**	**polar bear**	NA	**polar bear**	**sperm whale**	**sperm whale**	**sperm whale**	**sperm whale**	Model dose associated with marine bird or marine mammal ingestion and compare with applicable toxicity reference value.	**Marine Water**
The potential for significant adverse effects on freshwater fish piscivore abundance and diversity	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	**All freshwater fish** [a]	Compare Media Concentrations with Available Adjusted Water Quality Criteria (Preference for Freshwater and Chronic Values)	**Fresh Water**
The potential for significant adverse effects on marine fish piscivore abundance and diversity	**All marine fish** [a]	**All marine fish** [a]	NA	**All marine fish** [a]	**All marine fish** [a]	**All marine fish** [a]	**All marine fish** [a]	**All marine fish** [a]	Compare Media Concentrations with Available Adjusted Water Quality Criteria (Preference for Marine and Chronic Values)	**Marine Water**

Notes:
a Toxicity data currently available for use in Tier I ecological risk assessments (e.g., ambient water quality criteria, sediment quality benchmarks, phytotoxicity data, and soil invertebrate toxicity benchmarks) do not allow consideration of individual species within each of these functional groups.
NA = Not applicable