

**Salt and Ecosystems Case Studies — Answers**

|                    | <b>List at least two organisms that live in this ecosystem.</b>  | <b>How will changing salt levels affect the organisms that live in this ecosystem?</b>  |
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| <b>FOREST</b>      | <ul style="list-style-type: none"> <li>• <i>Mountain Holly</i></li> <li>• <i>Tamarack Tree</i></li> <li>• <i>Seed eating birds</i></li> <li>• <i>Moose</i></li> <li>• <i>Elk</i></li> <li>• <i>Deer</i></li> </ul> | <p><i>Too Much Salt Will:</i></p> <ul style="list-style-type: none"> <li>• <i>Kill Mountain Holly and Tamarack</i></li> <li>• <i>Interfere with water absorption, root growth and seed sprouting in plants</i></li> <li>• <i>Increase the risk that seed-eating birds will ingest road salt crystals</i></li> <li>• <i>Increase the risk of moose, elk, &amp; deer being killed by traffic</i></li> </ul> |
| <b>FRESH-WATER</b> | <ul style="list-style-type: none"> <li>• <i>Small freshwater plants and animals</i></li> <li>• <i>Rainbow Trout</i></li> <li>• <i>Frogs</i></li> </ul>   | <p><i>Too Much Salt Will:</i></p> <ul style="list-style-type: none"> <li>• <i>Kill small freshwater plants and animals at 226 mg/L.</i></li> <li>• <i>Kill frogs at 400 mg/L.</i></li> <li>• <i>Kill rainbow trout at 1,000 mg/L.</i></li> <li>• <i>Begin to taste badly. Government guidelines do not allow people to drink water with salt levels of 250mg/L.</i></li> </ul>                            |
| <b>SWAMP</b>       | <ul style="list-style-type: none"> <li>• <i>Cedar Trees</i></li> <li>• <i>Tamarack trees</i></li> </ul>  | <p><i>Tamarack and cedar trees will die at high salt concentrations.</i></p>  |
| <b>MARSH</b>       | <ul style="list-style-type: none"> <li>• <i>Reedy grasses</i></li> </ul>   | <p><i>Reedy grasses grow in brackish water.</i></p>   |
| <b>ESTUARY</b>     | <ul style="list-style-type: none"> <li>• <i>River Otter</i></li> <li>• <i>Alewife</i></li> <li>• <i>Atlantic Sturgeon</i></li> </ul>   | <p><i>These organisms are adapted to live in a wide range of salt levels, so they will be unaffected by salt fluctuations.</i></p>  |
| <b>OCEAN</b>       | <ul style="list-style-type: none"> <li>• <i>Great White Shark</i></li> <li>• <i>Loggerhead Sea Turtle</i></li> <li>• <i>Horseshoe Crab</i></li> <li>• <i>North Atlantic Right Whale</i></li> </ul>                 | <p><i>It is not possible for people to affect salt levels in the open ocean. However, these organisms will not be able to survive in freshwater tanks.</i></p>  |