## Ecoregions of Idaho

volcanic plateaus, forested mountains, woodland- and shrubland-covered hills, glaciated

depicts revisions and subdivisions of earlier level III ecoregions that were originally

Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and America into 15 ecological regions. Level II divides the continent into 52 regions Literature Cited: quantity of environmental resources; they are designed to serve as a spatial framework for the (Commission for Environmental Cooperation Working Group, 1997). At level III, the research, assessment, management, and monitoring of ecosystems and ecosystem continental United States contains 104 ecoregions and the conterminous United States has 84 components. By recognizing the spatial differences in the capacities and potentials of ecoregions (United States Environmental Protection Agency [USEPA], 2000). Level IV is a ecosystems, ecoregions stratify the environment by its probable response to disturbance further subdivision of level III ecoregions. Explanations of the methods used to define the implementing ecosystem management strategies across federal agencies, state agencies, and others (1994), and Gallant and others (1989). nongovernment organizations that are responsible for different types of resources within the

same geographical areas (Omernik and others, 2000). The approach used to compile this map is based on the premise that ecological regions can be peaks, lava fields, and wetlands. Ecological diversity is enormous. There are 10 level III identified through the analysis of the spatial patterns and the composition of biotic and ecoregions in Idaho and many continue into ecologically similar Gallant, A.L., Whittier, T.R., Larsen, D.P., Omernik, J.M., and Hughes, R.M., 1989, Regionalization abiotic phenomena that affect or reflect differences in ecosystem quality and integrity parts of adjacent states. (Wiken, 1986; Omernik, 1987, 1995). These phenomena include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology.

The relative importance of each characteristic varies from one ecological region to another compiled at a smaller scale (USEPA, 2000; Omernik, 1987). This poster is part of a

regardless of the hierarchical level. A Roman numeral hierarchical scheme has been adopted collaborative project primarily between USEPA Region X, USEPA National Health and for different levels of ecological regions. Level I is the coarsest level, dividing North Environmental Effects Research Laboratory (Corvallis, Oregon), Idaho Division of nvironmental Quality (IDEQ), United States Department of Agriculture-Forest Service (USFS), United States Department of Agriculture–Natural Resources Conservation Service United States Department of the Interior-Geological Survey (USGS)-Earth Resources 49° - CANADA - 49° Observation Systems (EROS) Data Center.

The project is associated with an interagency effort to develop a common framework of ecological regions. Reaching that objective requires recognition of the differences in the conceptual approaches and mapping methodologies applied to develop the most common

U.S. Department of Agriculture-Soil Conservation Service, 1981, Land resource regions and major ecoregion-type frameworks, including those developed by the USFS (Bailey and others, 1994), the USEPA (Omernik, 1987, 1995), and the NRCS (U.S. Department of Agriculture-Soil Conservation Service, 1981). As each of these frameworks is further refined, their differences are becoming less discernible. Regional collaborative projects such as this one in Idaho, where agreement has been reached among multiple resource management agencies, are a step toward attaining consensus and consistency in ecoregion Wiken, E., 1986, Terrestrial ecozones of Canada: Ottawa, Environment Canada, Ecological Land frameworks for the entire nation.

10 Columbia Plateau 10f Dissected Loess Uplands

101 Lower Snake and Clearwater Canyons

11e Wallowas/Seven Devils Mountains

11g Canyons and Dissected Uplands

11i Continental Zone Foothills

111 Mesic Forest Zone

11m Subalpine–Alpine Zone

11f Canyons and Dissected Highlands

10h Palouse Hills

11d Melange

10i Nez Perce Prairie

11 Blue Mountains

Bailey, R.G., Avers, P.E., King, T., and McNab, W.H., eds., 1994, Ecoregions and subregions of the United States (map) (supplementary table of map unit descriptions compiled and edited by McNab, W.H. and Bailey, R.G.): Washington, D.C., USFS, scale 1:7.500,000. (Bryce and others, 1999). These general purpose regions are critical for structuring and USEPA's ecoregions are given in Omernik (1995), Omernik and others (2000), Griffith and Bryce, S.A., Omernik, J.M., and Larsen, D.P., 1999, Ecoregions – a geographic framework to guide risk characterization and ecosystem management: Environmental Practice, v. 1, no. 3, p. 141-155. Commission for Environmental Cooperation Working Group, 1997, Ecological regions of North Idaho is made up of semiarid shrub- and grass-covered plains, irrigated agricultural valleys, America – toward a common perspective: Montreal, Commission for Environmental Cooperation,

12 Snake River Plain

12e Upper Snake River Plain

12h Mountain Home Uplands

13i Malad and Cache Valleys

15 Northern Rockies

15f Grassy Potlatch Ridges

15m Kootenai Valley

15y Selkirk Mountains

15n Weippe Prairie

15h High Northern Rockies

15j Lower Clearwater Canyons

15p St. Joe Schist–Gneiss Zone

15q Purcell–Cabinet–North Bitterroot

15s Spokane Valley Outwash Plains

15w Western Selkirk Maritime Forest

Level III ecoregion

———— Level IV ecoregion

**— — — International boundary** 

———— County boundary

**—--** State boundary

15i Clearwater Mountains and Breaks

150 Coeur d'Alene Metasedimentary Zone

15u Inland Maritime Foothills and Valleys

15v Northern Idaho Hills and Low Relief

12j Unwooded Alkaline Foothills

13 Central Basin and Range

13b Shadscale-Dominated Saline Basins

13c Sagebrush Basins and Slopes

13d Woodland- and Shrub-Covered Low

12d Dissected Plateaus and Teton Basin

12g Eastern Snake River Basalt Plains

12a Treasure Valley

12c Camas Prairie

12f Semiarid Foothills

12i Magic Valley

12b Lava Fields

as a tool for managing environmental resources: Corvallis, Oregon, U.S. Environmental Protection The level III and IV ecoregion map on this poster was compiled at a scale of 1:250,000 and

Griffith, G.E., Omernik, J.M., Wilton, T.F., and Pierson, S.M., 1994, Ecoregions and subregions of Iowa – a framework for water quality assessment and management: Journal of the Iowa Academy of Science, v. 101, no. 1, p. 5-13. Omernik, J.M., 1987, Ecoregions of the conterminous United States (map supplement): Annals of the Association of American Geographers, v. 77, no. 1, p. 118-125, scale 1:7,500,000. (NRCS), United States Department of the Interior–Bureau of Land Management (BLM), and Omernik, J.M., 1995, Ecoregions – a framework for environmental management, in Davis, W.S. and Simon, T.P., eds., Biological assessment and criteria-tools for water resource planning and decision making: Boca Raton, Florida, Lewis Publishers, p. 49-62.

> Omernik, J.M., Chapman, S.S., Lillie, R.A., and Dumke, R.T., 2000, Ecoregions of Wisconsin: Transactions of the Wisconsin Academy of Sciences, Arts, and Letters, v. 88, p. 77-103. land resource areas of the United States: Agriculture Handbook 296, 156 p. S. Environmental Protection Agency, 2000, Level III ecoregions of the continental United States (revision of Omernik, 1987): Corvallis, Oregon, USEPA - National Health and Environmental Effects Research Laboratory, Map M-1, various scales. Classification Series no. 19, 26 p.

> > 16 Idaho Batholith

Canyons

16j Hot Dry Canyons

17 Middle Rockies

17e Barren Mountains

17n Cold Valleys

16h High Idaho Batholith

16c Lochsa–Selway–Clearwater Canyons

16e Glaciated Bitterroot Mountains and

16g High Glacial Drift-Filled Valleys

16i South Clearwater Forested Mountains

17h High Elevation Rockland Alpine Zone

171 Gneissic–Schistose Forested Mountains

17aa Dry Intermontane Sagebrush Valleys

17ab Dry Gneissic–Schistose–Volcanic Hills

16d Dry, Partly Wooded Mountains

16f Foothill Shrublands–Grasslands

16k Southern Forested Mountains

17i West Yellowstone Plateau

170 Partly Forested Mountains

18 Wyoming Basin

18d Semiarid Bear Hills

19f Semiarid Foothills

18c Wet Valleys

17ad Western Beaverhead Mountains

19 Wasatch and Uinta Mountains

**80 Northern Basin and Range** 

80a Dissected High Lava Plateau

80c High Elevation Forests and

80f Owyhee Uplands and Canyons

80h Saltbush-Dominated Valleys

80i Sagebrush Steppe Valleys

80j Semiarid Uplands

Albers equal area projection

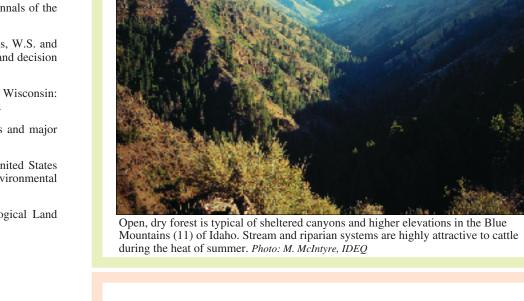
Standard parallels 43° N and 48° N

80k Partly Forested Mountains

80e High Desert Wetlands

80b Semiarid Hills and Low Mountains

16b Lochsa Uplands



11. Blue Mountains

10. Columbia Plateau

Only its highest ranges, particularly the Wallowa and Elkhorn mountains in Oregon, consist of intrusive rocks that rise above the dissected lava surface of the region. Much of Ecoregion 11 is grazed by cattle in contrast to Ecoregions 4 and 15. The dissected mountains of the **Melange** ecoregion are mostly blanketed in Tertiary basalt but have a core of mixed metamorphic, metavolcanic, metasedimentary, and sedimentary rocks. Forests dominated by Douglas-fir, ponderosa pine, and lodgepole pine, as well as shrublands and grasslands occur. Lithology affects soil, vegetation, and the quantity and quality of surficial water. Grazing is common but logging is limited by the difficulty of reforesting droughty soils such as those that are derived from metamorphic rocks.

Ecoregion 10 is an arid grassland and sagebrush steppe that is surrounded by moister, predominantly forested, mountainous ecoregions. It

The unforested hills and plateaus of the **Dissected Loess Uplands** ecoregion are cut by the canyons of Ecoregion 10l and are disjunct.

much of the original plant cover. Nevertheless, Ecoregion 10f is not as suited to farming as Ecoregions 10h and 10j because it has thinner soils.

Soils, rich in organic matter and very productive, support extensive wheat farming but are easily eroded. Dry stream channels may be tilled.

many perennial streams are impacted by agricultural land use, negatively impacting the water quality of downstream canyon reaches.

transportation corridors, Ecoregion 10l's canyons provide good habitat for bighorn sheep and game birds.

The largely unforested, loess-covered **Palouse Hills** ecoregion abuts the Rocky Mountains and has more available moisture than other parts of Ecoregion 10. Mountain fed perennial streams occur and intermittent, loess-bottomed streams rise within Ecoregion 10h.

The Nez Perce Prairie is a loess-covered plateau. It is higher, cooler, less hilly, and has shallower soils than Ecoregion 10h. Idaho fescue and bluebunch wheatgrass are native. Cropland is now extensive and grows wheat, barley, peas, and hay. The headwaters of

The Lower Snake and Clearwater Canyons cut through the basalts of the Columbia Plateau (10). Canyon depths exceed 1,400 feet

and create drier conditions than in Ecoregions 10f or 10h; mean annual precipitation is only 12 to 25 inches. Outside of towns and

Pure grasslands dominate lower elevations. Mountain brush grows on higher, moister sites. Grazing and farming have eliminated

underlain by thick basalt. In the east, where precipitation is greater, deep loess soils have been extensively cultivated for wheat.

In Idaho, the Wallowas/Seven Devils Mountains ecoregion ranges in elevation from about 4,000 to 9,200 feet. Lowest elevations support a dry forest community. Douglas-fir and ponderosa pine forests are widespread and have a shrub understory. Streams follow fault lines, have steep gradients and have eroded deep canyons. Land uses include grazing, logging, recreation, and wildlife habitat. The Canyons and Dissected Highlands ecoregion includes the southern Seven Devils Mountains and pieces of the uplifted Columbia Plateau. Elevations range from 4,000 to 6,400 feet. Ecoregion 11f is lower, drier, and less maritime-influenced than the Mesic Forest Zone (111). Douglas-fir and ponderosa pine forests are common and contrast with the grassland of the lower, drier Ecoregion 11g. In the Canyons and Dissected Uplands ecoregion, the Snake and Salmon river systems have cut into the Columbia Plateau to depths of over 3,000 feet. Basalt and metamorphosed rocks are typically exposed in the canyon walls; the rock assemblage differs from the salts of the Lower Snake and Clearwater Canyons (101). The depth of the canyons and the exposed metamorphic rocks result in stony soils on canyon slopes that retain little moisture. Bluebunch wheatgrass and Sandberg's bluegrass are adapted to grow under these hot, dry conditions. Land use includes grazing and recreation in the Hells Canyon National Recreation Area.

support endemic fish and mollusc species. Shoshone Falls is a major zoogeographic barrier and different species occur above and below it.

longer than in Ecoregions 12e and 12i. Population density is much greater than in nearby, rangeland-dominated ecoregions.

(12a). Wet bottomlands support meadow grasses and sedges. Alluvial fans and terraces are covered by grasses and sagebrush.

unlike the forests of the higher, more rugged Ecoregion 17. Wet meadows occur in the poorly-drained, relatively cold Teton Basin.

irrigation diversions, channelization, dams, sewage treatment, nonpoint pollution, food processing, and phosphate processing.

The **Treasure Valley** ecoregion has irrigated cropland, pastureland, and rapidly growing cities, suburbs, and industries. Many canals, reservoirs, and diversions occur. Aridic soils predominate and require irrigation to grow commercial crops. Surface water quality has

been significantly affected by channel alteration, dams, irrigation return flow, and urban, industrial, and agricultural pollution. Crops include

The Lava Fields ecoregion contains basalt flows, cinder cones, and spatter cones. Exposed basalt or very shallow loessial soils over

Surface water availability is very limited. Ecoregion 12b includes the Craters of the Moon National Monument and parts of the Idaho National

The Dissected Plateaus and Teton Basin ecoregion is used as cropland and rangeland. Potatoes are an important cash crop.

and are subject to wind erosion. Loess is far more extensive than in Ecoregion 12e. Potential natural vegetation is sagebrush steppe and is

The nearly level Upper Snake River Plain contains cropland, pastureland, cities, suburbs, and industries. Extensive surface-irrigated

Ecoregions 12a and 12i. Ecoregion 12e is lower and less rugged than Ecoregions 12d and 80b. Aquatic resources have been degraded by

Sprinkler-irrigated land supports potatoes, alfalfa, and pasture; surface irrigation is far less common than in Ecoregion 12e which is

small grain, sugar beet, potato, and alfalfa farming occurs. Frost-free season is shorter and crop variety is less than downstream in

Engineering Laboratory. Lithology, depth to bedrock, stock carrying capacity, and water availability are unlike neighboring ecoregions.

volcanics are characteristic and are either barren or sparsely covered by hardy shrubs and grasses. Livestock carrying capacity is low.

Ecoregion 11 is a complex of mountain ranges that are lower and much more open than the neighboring Cascades (4), but unlike the Northern Rockies (15) and the Idaho Batholith (16), the Blue Mountains (11) is mostly volcanic in origin The Continental Zone Foothills ecoregion lies between Oregon's Blue and Wallowa mountains and the northwestern Snake River Plain (12). The combined masses of the Cascade Range and the Blue and Wallowa mountains block any maritime influence, creating

and was inundated by Lake Bonneville unlike Ecoregion 80i. The Cache Valley has a shorter growing season than the Malad Valley.

wheatgrass of the less saline Ecoregion 13c. Ecoregion 13b is mostly rangeland. Irrigated farming is rarer than in Ecoregions 13i and 80h.

13. Central Basin and Range

Livestock grazing is the primary land use.

a continental climate. As a result, plants are subject to wide temperature ranges, high evapotranspiration, and high early-season moisture stress. The vegetation is characterized by a diverse bunchgrass and shrub community that varies according to soil depth, texture, and elevation. The shrublands provide valuable winter habitat for wildlife. Only a few perennial streams occur and originate in the surrounding mountain ranges. The **Mesic Forest Zone** is found between 6,000 and 7,400 feet in the western Seven Devils Mountains. It is influenced by maritime air coming through Oregon's Columbia River Gorge. Precipitation mostly falls as snow that persists late into the spring. The soils typically retain moisture during the dry season because they often contain volcanic ash and are not rocky. As a result, forests are highly productive and diverse. Vegetation includes Douglas-fir, grand fir, ponderosa pine, subalpine fir, mountain big sagebrush, and mountain brush. The **Subalpine–Alpine Zone** includes the highest areas of the Seven Devils Mountains. It begins near tree line at an elevation of 6,500 feet, where the forest cover becomes broken by alpine meadows, and continues through alpine meadowland to include the exposed rock, snowfields, and glacial ice of the highest mountain peaks. Cold soils, deep snowpack, and a very short growing season are characteristic and support very open, non-commercial stands of subalpine fir, Engelmann spruce, and whitebark pine. Historically, green fescue and sedges covered the high alpine meadows, but, following intense grazing pressure by sheep early in the 20th century, many high elevation plant associations reverted to seral or exotic species.

The shrub- and grass-covered **Semiarid Foothills** ecoregion is higher and more rugged than nearby Ecoregions 12a, 12c, and 12h. A

Shallow, clayey soils are common and often support medusahead wildrye, cheatgrass, and scattered shrubs. Wildfire frequency is high. Lan

capacity and still contains native plants unlike Ecoregion 12h. Eastern parts of Ecoregion 12g are higher and more continental than the west.

few perennial streams flow across the ecoregion but are absent on the lacustrine deposits of the Unwooded Alkaline Foothills (12j)

The Eastern Snake River Basalt Plains ecoregion typically has shallow, stony soils that are unsuitable for cultivation. Only small

areas have soils deep enough to be farmed under sprinkler irrigation. Rangeland is widespread and contrasts with the cropland of

The Magic Valley ecoregion is underlain by alluvium, loess, and basalt flows. Its aridic soils require irrigation to grow commercial

developments. Small grains, alfalfa, sugar beets, potatoes, and beans are grown. Livestock and dairy farms occur; dairying is more common

irrigated portions of Ecoregion 12g has raised ground water levels and created artificial wetlands. Natural vegetation is mostly sagebrush and

The shrub- and grass-covered Unwooded Alkaline Foothills ecoregion is higher and more rugged than Ecoregion 12a. Sandy

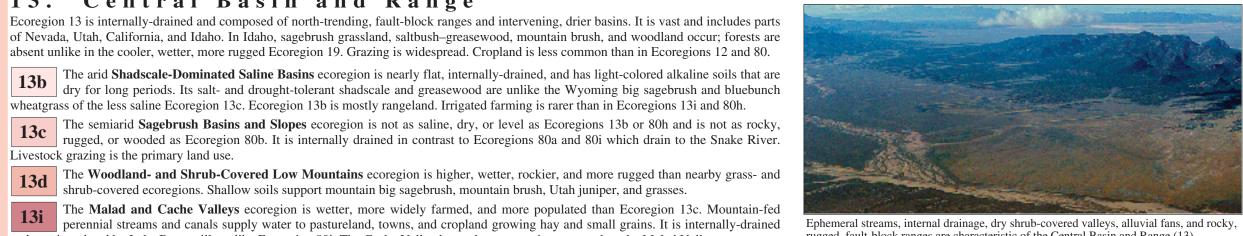
saltbush—greasewood and sagebrush steppe. Today, cheatgrass and crested wheatgrass are also common and the ecoregion is used for livestock

🗸 alkaline lacustrine deposits occur unlike in other ecoregions and support a unique flora. Potential natural vegetation is

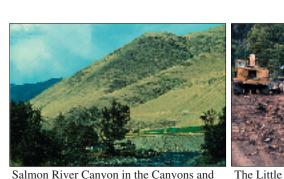
bunchgrass but low terraces have salt tolerant plants. Population density is greater than in the rangeland-dominated Ecoregions 12g and 12h.

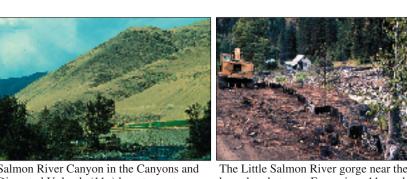
grazing. Land use is unlike that of Ecoregions 12a and 12i. Perennial streams are rare and are much less common than in Ecoregion 12f.

crops. Many canals, reservoirs, and diversions supply water to its pastureland, cropland, and residential, commercial, and industrial

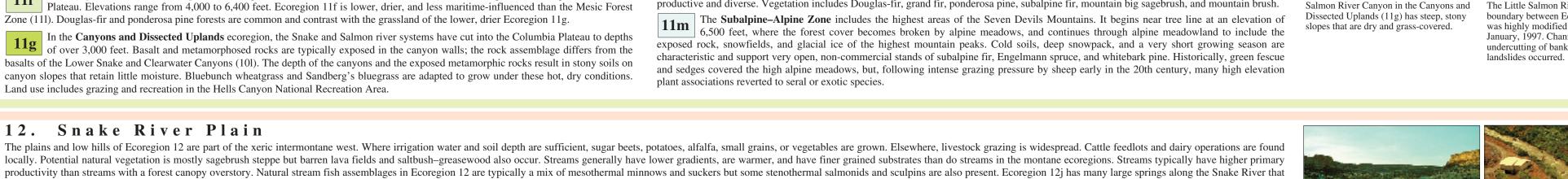


rugged, fault-block ranges are characteristic of the Central Basin and Range (13).

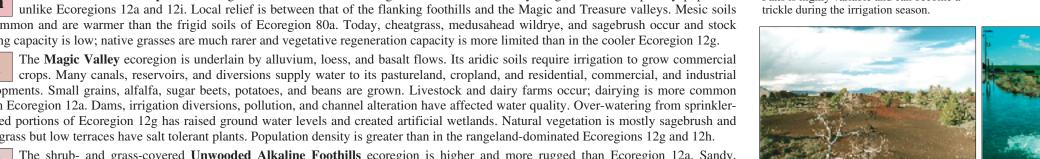




ected Uplands (11g) has steep, stony boundary between Ecoregions 11e and 16k was highly modified by the storm of anuary, 1997. Channel migration. undercutting of banks and roads, and

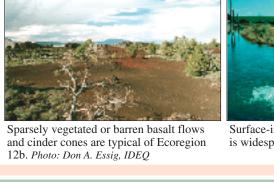


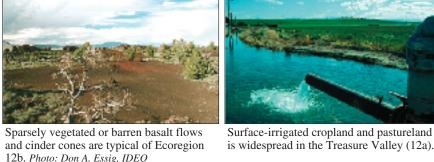
ock Creek with the Snake River in the on the Snake River that affects fish c Valley (12i) is pictured here. Fine distribution. Downstream of Shoshone ediment in streams can bury breeding sites Ecoregions 12d, 12e, and 12i. Potential natural vegetation is mostly sagebrush and bunchgrass. It is cool enough to have some regeneration Falls, parts of Ecoregion 12 had strong runs and reduce the effectiveness of sightof silver salmon, chinook, and steelhead prior to dams. Discharge over Shoshone The Mountain Home Uplands ecoregion is arid and shrub- and grass-covered. It is mostly rangeland and is sparsely populated Falls is highly variable and can become a

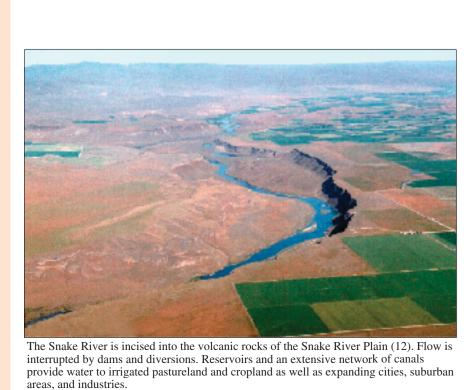












The rolling Nez Perce Prairie (10j) is covered in loess. Its potential natural vegetation is

fescue-wheatgrass. Today, the ecoregion is dominated by extensive wheat farming.

15. Northern Rockies Ecoregion 15 is mountainous and rugged. Climate, trees, and understory species are characteristically maritime-influenced. Douglas-fir, subalpine fir, Englemann spruce, western larch, lodgepole pine, and ponderosa pine as well as Pacific indicators such as western redcedar, western hemlock

12. Snake River Plain

The Grassy Potlatch Ridges ecoregion is underlain by volcanics and mantled by loess and volcanic ash. Idaho fescue, bluebunch wheatgrass, bluegrass, snowberry, and, on cooler, moister sites, scattered ponderosa pine occur and contrast with the forests of Ecoregion 15v and the forests and savannas of Ecoregion 15j. Today, small grain farming, hay operations, and livestock grazing are extensive. 15h The High Northern Rockies ecoregion traps large amounts of Pacific moisture and is characterized by mixed high elevation vegetation, rock outcrops, deep winter snow pack, a short growing season, tarns, and talus. Soils are very stony but often contain volcanic ash. Above treeline, tundra, alpine grassland, meadows, and wetlands occur. Subalpine fir, lodgepole pine, whitebark pine, mountain hemlock, and alpine larch grow in rocky glacial cirques or on exposed sites as scattered trees, very open-canopied parklands, or krummholz. The Clearwater Mountains and Breaks ecoregion is exposed to substantial maritime influence, mantled by thick volcanic ash, and underlain by granitics. It is lithologically unlike Ecoregions 150 and 15p and higher than Ecoregions 15n and 15v. Its moist coniferous forests lack western hemlock and are transitional between those of the Idaho Panhandle and the drier forests of the southern Idaho Batholith. The deep, narrow Lower Clearwater Canyons are lower, drier, warmer, and have been more developed than Ecoregion 16c or the physiographically distinct hills and mountains of Ecoregions 15i, 15n, 15p, and 15v. Savanna, Douglas-fir–ponderosa pine forest, and,

in riparian areas, western redcedar-western white pine-grand fir forest occur. Forests are more widespread on canyon bottoms than on slopes. The broad, glacial-scoured **Kootenai Valley** is drier than the valleys of Ecoregion 15u because it lies in the rain shadow of the Selkirk Range. Tree species diversity is high; representatives of both moist and dry gradients occur. The Kootenai River winds across a wide flood plain that has been reclaimed with levees and intensively farmed. Logging is common in the east near the mountainous Ecoregion 15q. The Weippe Prairie ecoregion is a gently sloping basalt plateau that is mantled by loess and volcanic ash. It is lithologically unlike Ecoregions 15i and 15p. Maximum elevations are lower than in the more rugged Ecoregions 15i, 15p, and 15v. Its mixed coniferous est contains ponderosa pine, Douglas-fir, grand fir, western redcedar, and western larch. Hay farming, grazing, and logging are common.

The Coeur d'Alene Metasedimentary Zone is forested and underlain by fractured quartzite and argillaceous rock. It is more rugged than Ecoregions 15s, 15u, and 15v and lithologically unlike Ecoregions 15i and 15p. Slope instability and channel sedimentation is usually less than in Ecoregions 15p or 15y but fault crush zones are notably unstable. Douglas-fir, grand fir, western redcedar, western hemlock, and, at higher elevations, mountain hemlock, subalpine fir, Engelmann spruce, and whitebark pine occur. Smelter emissions have denuded some slopes. Acid drainage from mine tailings have left some streams nearly devoid of aquatic life. Massive restoration efforts are now underway. The St. Joe Schist-Gneiss Zone is mountainous, mantled by volcanic ash, and prone to landslides. Rocks are more weathered and lopes are more unstable than in Ecoregion 15o. High gradient streams dissect the region and receive episodic sedimentation from slides. Streams were used to transport logs to mills; log drives greatly altered aquatic ecosystems and stream morphology. Pacific influence is greater than to the south. Potential natural vegetation is mapped as cedar-hemlock-pine but hemlock is absent in the south. Near treeline, mountain hemlock, subalpine fir, Engelmann spruce, and whitebark pine occur.

mountain hemlock, and grand fir occur. Pacific tree species are more numerous than in the Idaho Batholith (16) and are never dominant in the Middle Rockies (17). Western white pine was once common but has been decimated by blister rust, early to mid-20th century logging, and fire suppression. Whitebark pine is also undergoing a massive population decline due to the effects of white pine blister rust, mountain pine beetle, and fire. Ecoregion 15 is not as high nor as extensively snow- and ice-covered as the Canadian Rockies (41). Granitic rocks and associated management problems are less extensive than in the Idaho Batholith (16). Thick volcanic ash deposits are more widespread than in Ecoregion 16. Logging and mining are common and have caused stream water quality problems in the region. Natural stream fish assemblages have low diversity and seldom have more than four native species present. Streams have a nearly universal cold-water adapted fish assemblage of salmonids, sculpin, sucker and dace. Salmon, steelhead, and lamprey formerly occurred in Ecoregion 15i prior to dam construction. The Purcell-Cabinet-North Bitterroot Mountains ecoregion is mantled by volcanic ash and glacial deposits and is underlain by quartzite and argillaceous rocks. Continental ice shaped its terrain but did not extend further south. Potential for natural and management-induced slope instability exists where water tables are perched in compacted tills and glacio-fluvial deposits. However, in general, slopes yield less sediment to streams after disturbance than in nearby granitic and schistic areas. Cedar-hemlock-pine forest and, at higher elevations, western spruce-fir forest occur. Birch and aspen grow on floodplains and are seral species on moist, low to mid-elevation uplands. The Spokane Valley Outwash Plains ecoregion is gently rolling and includes the southern end of the Purcell Trench and the Spokane Valley. It once served as the main outlet for the Pleistocene Missoula Floods. In the northern valleys, coarse, gravelly soils the Inland Maritime Foothills and Valleys mountain pastures of Ecoregion 15 during

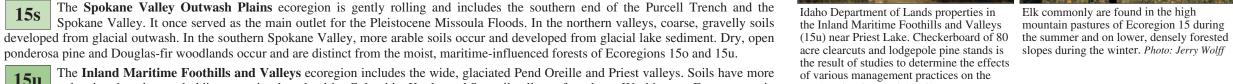
ponderosa pine and Douglas-fir woodlands occur and are distinct from the moist, maritime-influenced forests of Ecoregions 150 and 15u.

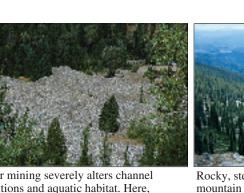
volcanic ash and water holding capacity than the drier Columbia, Kettle, and Sanpoil valleys of northeast Washington. Forests contain area's volcanic ash-rich soils. Photo: Don A. western hemlock, western redcedar, grand fir, Douglas fir, ponderosa pine, lodgepole pine, and an unusually large proportion of western larch. Birch and aspen grow on floodplains and are also common seral species on moist, low to mid-elevation uplands. These upland hardwoods may reflect boreal influence; they also occur in Ecoregion 15q but are not widespread elsewhere in the Northern Rockies (15) of Idaho. The Northern Idaho Hills and Low Relief Mountains ecoregion is not as rugged nor as high as Ecoregions 150 and 15p. It is mantled by volcanic ash and loess and has rich, forest-type soils that are unlike the grassland-type soils of Ecoregion 10. Grand fir. western redcedar, Douglas fir, and ponderosa pine are common. Western hemlock is less widespread than in Ecoregions 150 and 15p, never abundant, and absent from the south. Its productive forests are widely logged; logging is easier and cheaper than in more rugged terrain.

The mountainous Western Selkirk Maritime Forest ecoregion is more rugged than Ecoregion 15v. Douglas-fir dominates or co-

dominates most overstories. Maritime species such as grand fir, western redcedar, and western hemlock are more common than in the rain shadow of the North Cascades in Washington's Okanogan Highland. Boreal influence is absent in contrast to northern Ecoregion 15y. The dissected, partly glaciated **Selkirk Mountains** ecoregion is rugged, covered in mixed coniferous forest, and mantled by volcanic ash that increases forest productivity. Both Pacific species (grand fir, western redcedar, and western hemlock) and Rocky Mountain species (western larch, western white pine, and lodgepole pine) are common. Ecoregion 15y is wetter and has more maritime influence than Ecoregion 15w. A combination of weather patterns, high relief, and very narrow valleys result in more summer precipitation, fog, and relative humidity at low and mid-elevations than elsewhere in northern Idaho. Boreal influence is stronger, subalpine fir–spruce forests are lower, and Rockies (15); placer mining tailings are (in Ecoregion 16c) and the Lochsa Uplands whitebark pine forests are more extensive than in the rest of the Northern Rockies (15). Boreal influence increases toward the north and some more common in the Idaho Batholith (16), (16b) where logging is common. north-facing valleys have extensive peatlands. Ecoregion 15y includes the largest contiguous old growth cedar–hemlock forest in the interior particulary in Ecoregion 16i. U.S., extensive peatlands, and important lynx and grizzly bear habitat. It supports the only woodland caribou herd in the conterminous U.S. Erosion hazards can be high where road beds intercept perched water tables above subsurface compacted tills. Avalanche chutes are common.



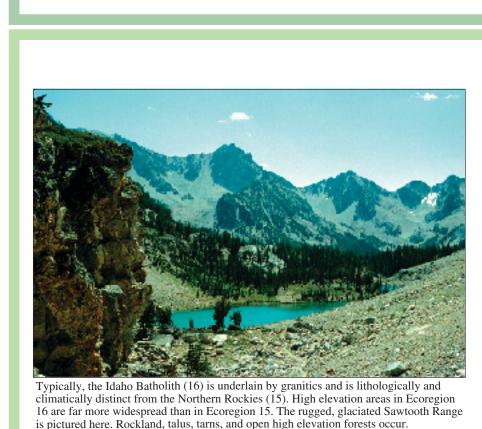




Placer mining severely alters channel conditions and aquatic habitat. Here,



tailings cover a valley floor in the Northern foreground. Beyond is the Lochsa Canyon



e Northern Rockies (15) ecoregion is rugged and forested. Precipitation is often

prographically controlled but, generally, Ecoregion 15 receives more Pacific climatic

influence than Ecoregions 16 and 17. Granitic rocks and associated management

problems are much less extensive than in Ecoregion 16.

16. Idaho Batholith Ecoregion 16 is mountainous, deeply dissected, and characteristically underlain by granitic rocks. The lithological mosaic and related slope stability and water quality issues are different from Ecoregions 15 and 17. Soils derived from granitics are droughty and have limited fertility, and therefore provide only limited amounts of nutrients to aquatic ecosystems. They are highly erodible when vegetation is removed. Maritime influence is slight and lessens toward the south. Grand fir, Douglas-fir, western larch, and, at higher elevations, Engelmann spruce and subalpine fir occur; ponderosa pine, shrubs, and grasses grow in deep canyons. Pacific tree species are less numerous than in Ecoregion 15; western hemlock is absent and western redcedar is limited to the north. Overall, the vegetation is unlike that of Ecoregions 15 and 17. Land uses include logging, grazing, and recreation. Streams are likely to suffer from increased loads of fine sediments after disturbance by humans. Declining anadromous fish runs once brought much needed nutrients but are now in danger of extirpation due to dams on the Columbia and lower Snake rivers, hatchery operations, and habitat degradation. Fish assemblage composition is similar to Ecoregion 15. Macroinvertebrate assemblages are more similar to those found in Ecoregions 12, 17, and 80 than to those found in Ecoregion 15.

wheat, barley, alfalfa, sugar beets, potatoes, and beans. Crop diversity is greater, temperatures are warmer, and the mean frost free season is use is primarily livestock grazing and is distinct from the irrigated agriculture of the Treasure Valley (12a).

The Camas Prairie ecoregion is a cold, wet valley used for small grain and alfalfa farming, pasture, range, and wildlife refuge. It is flanked by the foothills of Ecoregions 12f and 16f. These foothills trap mountain runoff in Ecoregion 12c. Resultant wet soils and are warmer than the frigid soils of Ecoregion 80a. Today, cheatgrass, medusahead wildrye, and sagebrush occur and stock

flooding occur and are local and seasonal problems. Frigid Mollisols are common and are colder than the soils of the lower Treasure Valley carrying capacity is low; native grasses are much rarer and vegetative regeneration capacity is more limited than in the cooler Ecoregion 12g.

lower, flatter, and adjacent to the Snake River. Non-irrigated land grows small grains, Mollisols developed in thick loess deposits or alluvium than in Ecoregion 12a. Dams, irrigation diversions, pollution, and channel alteration have affected water quality. Over-watering from sprinkler-

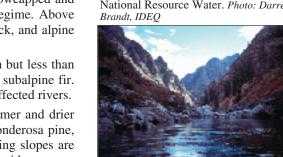
The mountainous **Lochsa Uplands** ecoregion is dissected but not as deeply as Ecoregion 16c. It is mostly underlain by granitic rocks and mantled by volcanic ash deposits that increase the fertility and water retention of upland soils. Grand fir, Douglas-fir, and western larch are common, Engelmann spruce and subalpine fir grow at high elevations, and redcedar occurs on north-facing slopes and in canyons. Maritime influence is less than to the north but greater than to the south. Logging and road building cause landslides and stream sedimentation. The deeply dissected **Lochsa–Selway–Clearwater Canyons** ecoregion contains cold, fast-flowing rivers. Local relief is greater than in the nearby mountains. Canyons become warmer and drier with increasing depth. Ecoregion 16c is dominated by Douglas-fir, grand western redcedar, western larch, and western white pine. Ponderosa pine grows on lower, drier sites. The forest canopy is more closed than in the warmer and drier Ecoregion 16j. Extensive wilderness occurs and includes the Selway River watershed. Elsewhere, logging is common. The **Dry, Partly Wooded Mountains** ecoregion is largely underlain by sedimentary and extrusive rocks; granitics are less common than in other parts of the Idaho Batholith (16). Ecoregion 16d is in the rain shadow of high mountains. Winter precipitation is less than in Ecoregions 16h and 16k and maritime influence is absent. A mosaic of shrubland, open Douglas-fir forest, and aspen occurs and is unlike other parts of Ecoregion 16. Mining has affected water quality. Rapid residential and commercial growth is occurring near Ketchum.

The Glaciated Bitterroot Mountains and Canyons ecoregion is underlain by granitic rocks and mantled by volcanic ash and glacial till. Peaks, lakes, wetlands, and deep glaciated valleys occur. Landforms and lithology are different from nearby ecoregions. Summits are high enough to trap Pacific moisture. Grand fir, Douglas-fir, and western larch are common and Engelmann spruce and subalpine fir occur elimatically distinct from the Northern Rockies (15). High elevation areas in Ecoregion at high elevations and on north-facing slopes. Ecoregion 16e is mostly roadless or designated wilderness and recreation is an important land use. The Foothill Shrublands-Grasslands ecoregion is in the rain shadow of high mountains. Its hills and benches are dry, treeless, and overed by shrubs and grasses. The vegetation mosaic is unlike the open forests of Ecoregion 16k and the mountain sagebrush/forest mosaic of the lithologically distinct Ecoregion 16d. Land use is mostly grazing but rural residential development is expanding near Boise. subalpine fir occur at higher elevations, and ponderosa pine grows in canyons. Mountain sagebrush and forest are found in the south. Streams are subject to high sediment loading when soils are disturbed. Macroinvertebrate assemblages are distinct from those of Ecoregion 16i.

The High Glacial Drift-Filled Valleys ecoregion contains terraces, outwash plains, moraines, wetlands, and hills that are much less rugged and less forested than Ecoregion 16k. Originally, sedges and rushes were common on wet soils, bunchgrasses and mountain big sagebrush occurred on drier soils, and lodgepole pine and ponderosa pine grew on valley floors. Winters are cold and snowy. Ecoregion 16g receives large amounts of spring runoff from mountain snow pack. It is summer pasture for large numbers of livestock; cropland and growing residential and recreational developments also occur. Flood irrigation and grazing have raised sediment and phosphorus levels in streams. The wet, severely exposed, glaciated **High Idaho Batholith** contains jagged peaks, tarns, and rockland. It is often snowcapped and annual precipitation is greater than in nearby, lower ecoregions. Soils are very stony and have a cryic temperature regime. Above treeline, tundra, alpine grassland, meadows, and wetlands occur. Subalpine fir, lodgepole pine, whitebark pine, mountain hemlock, and alpine larch grow in rocky glacial cirques or on exposed sites as scattered trees, very open-canopied parklands, or krummholz.

The South Clearwater Forested Mountains ecoregion receives more maritime influence than ecoregions to the south but less than those to the north. Grand fir is usually the sole maritime tree species in the elevational zone between Douglas-fir and subalpine fir Logging has caused slope instability (especially in granitic areas) and stream sedimentation. Placer gold mining has also heavily affected rivers. The Hot Dry Canyons ecoregion is deeply dissected. Local relief can approach 5,000 feet and canyons become warmer and drier with increasing depth. Overall, it is warmer and drier than Ecoregions 16i and 16k. There is little winter snowfall. Ponderosa pine mountain sagebrush, and grasses are widespread; Douglas-fir also occurs but is less common than in Ecoregion 16c. South-facing slopes are drier and less wooded than north-facing slopes. Mining has affected canyon bottoms some of which now serve as transportation corridors. The **Southern Forested Mountains** ecoregion is mantled by droughty soils derived from granitic rocks and is only marginally

affected by maritime influence. Forest diversity is less than in wetter Ecoregion 16b. Open Douglas-fir is common, grand fir and

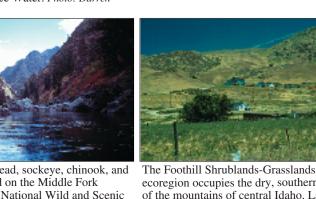


has been nominated as an Outstanding

Camas Creek in Ecoregions 16i and 16k The High Glacial Drift-Filled Valleys (16g

and is excellent habitat for aquatic life. It numbers of livestock. Associated surficial

drains wilderness, has high water quality, ecoregion is summer pasture for large

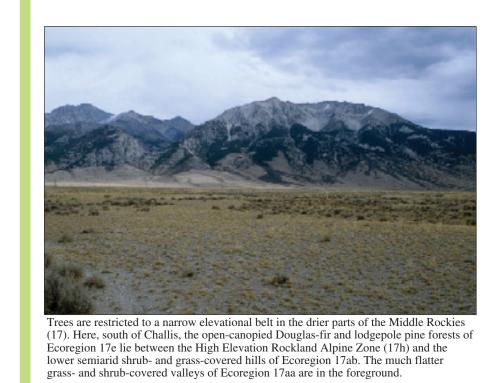


bull trout depend on the Middle Fork ecoregion occupies the dry, southern fringe Salmon River, a National Wild and Scenic of the mountains of central Idaho. Land use

development is expanding near Boise.

water quality problems occur.

River flowing through Impassable Canyon. is primarily grazing but residential



17. Middle Rockies

The climate of Ecoregion 17 lacks the strong maritime influence of Ecoregion 15. Mountains have Douglas-fir, subalpine fir, and Engelmann spruce forests are never dominant and forests can have open canopies. Foothills are partly wooded or shrub- and grass-covered. Intermontane valleys are grass- and/or shrub-covered and contain a mosaic of terrestrial and aquatic fauna that is distinct from nearby mountain-fed streams occur. Granitics and associated management problems are less extensive than in Ecoregion 16. Recreation, logging, mining, and summer livestock grazing are common land uses. Stream fish assemblages are similar to those found in Ecoregions 15 and 16 and are dominated by salmonids and cottids. The Lost Streams of Idaho constitute an unique set of isolated lotic environments that are separated from other systems by the Eastern Snake River Basalt Plains (12g). Fish populations may also be seasonally isolated by the intermontane valleys of Ecoregion 17aa. The Pahsimeroi and Lemhi rivers are important chinook salmon spawning streams.

ir-lodgepole pine-subalpine fir forests, aspen groves, sagebrush, mountain brush, and grasses occur. Forests are limited to a narrow elevational band and are most widespread on north-facing slopes. Pacific forest elements are absent and barrens are common. 17h The wet, severely exposed, glaciated High Elevation Rockland Alpine Zone contains jagged peaks, tarns, rockland, and talus deposits. It is often snowcapped and maximum annual precipitation is greater than in surrounding, but lower, ecoregions. Soils are

stony and have a cryic temperature regime. Alpine tundra, alpine grassland, subirrigated meadows, and wetlands occur above timberline. Krummholz vegetation occupies windswept areas near timberline. Subalpine fir and whitebark pine are found in glacial cirques. The West Yellowstone Plateau ecoregion contains rhyolite and basalt flows, lakes, springs, outwash plains, moraines, canyons, and wetlands. Its terrain is generally subdued in contrast to the more mountainous portions of Ecoregion 17 but scattered ridges and buttes occur. Ecoregion 17j has a coniferous forest–shrubland mosaic. Forests dominated by Douglas-fir, lodgepole pine, and aspen are most common on north-facing slopes and flatter uplands. Recreation is a very important land use but mining, grazing, and logging also occur. The rugged Gneissic-Schistose Forested Mountains ecoregion is glaciated, wet, and lithologically unlike nearby ecoregions. Its streams have flashy hydrographs; they experience only a short delay between rainfall and runoff peaks and have low flows during drought and freezing periods. Douglas-fir, lodgepole pine, and subalpine fir are common. Land uses include recreation, logging, and grazing.

The Cold Valleys contain bottomlands, terraces, marshlands, alluvial fans, and foothills that are nestled below the Partly Forested Mountains (170). Mean annual frost-free season is brief, 40 to 90 days, and shorter than in the Sagebrush Steppe Valleys (80i). Potential natural vegetation is mostly sagebrush steppe. Wet bottomlands support sedges, rushes, and willows. Pastureland, rangeland, and small grain, alfalfa, and potato farming occur. Fields, streams, and marshes are important habitat for both nesting and migratory birds.

The Barren Mountains ecoregion is largely underlain by quartzite and carbonate-rich rocks and is drier than mountainous ecoregions to the north. Elevations are higher than those of Ecoregion 17ab and range from about 6,800 to 10,000 feet. Open-canopied Douglas-fir, lodgepole pine, and aspen are most common on north-facing slopes and gently sloping uplands while mountain big sagebrush and mountain brush dominate southfacing slopes. Its vegetation is distinct from surrounding ecoregions. Ecoregion 170 is used as summer range and for timber production. The Dry Intermontane Sagebrush Valleys ecoregion contains stream terraces, floodplains, saline areas, and alluvial fans. Water availability and potential for cropland agriculture are low because Ecoregion 17aa is in the rain shadow of high mountains, receives Ecoregion 17e is in the background. little mountain runoff, and is underlain by highly permeable valley fill deposits. Its deep gravels are unlike the basalts of Ecoregion 12 Sagebrush grassland is widespread and contrasts with the open-canopied forests of the more rugged and higher Ecoregion 17e. Shadscale and greasewood grow on alkaline soils that receive less than 8 inches of precipitation annually. Grazing is the dominant land use. Both the

> Pahsimeroi and Lemhi rivers were once important salmon and steelhead fisheries. The semiarid Dry Gneissic-Schistose-Volcanic Hills ecoregion is shrub- and grass-covered and is underlain by Quaternary and Tertiary volcanics. It is less rugged and drier than the higher Barren Mountains (17e) but is more rugged and receives more precipitation than the lower Dry Intermontane Sagebrush Valleys (17aa). Its sagebrush-grassland vegetation contrasts with the open-canopied forest-shrubland-grassland mosaic of Ecoregion 17e. Grazing is the most common land use in Ecoregion 17ab. The Western Beaverhead Mountains ecoregion occupies the elevational band between the High Elevation Rockland Alpine Zone

(17h) and the lower, less rugged Ecoregion 17ab. It is underlain by quartzite and argillite; the lithologic mosaic and related slope stability and water quality issues are unlike those of Ecoregion 16k. Vegetation is affected by elevation and slope aspect. Mountain big Black bears inhabit the forests of the sagebrush, mountain brush, and understory grasses grow on south-facing slopes and Douglas-fir, lodgepole pine, aspen, and subalpine fir occur Middle Rockies (17). Photo: Jerry Wolff on north-facing slopes. Land uses include grazing, mining, recreation, and logging.

Ecoregion 19 contains a core area of high, precipitous mountains with narrow crests and valleys. At middle elevations, Douglas-fir and aspen

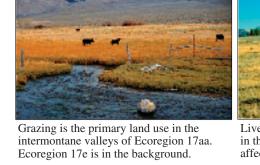
ivestock grazing is an important land use and is more common than in Ecoregion 17. Bear Lake supports three endemic species of fish.

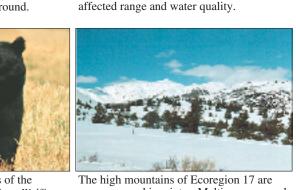
Wasatch Montane Zone (19d). Livestock grazing is common. Some rangeland has been cleared of trees and reseeded to grasses

19. Wasatch and Uinta Mountains

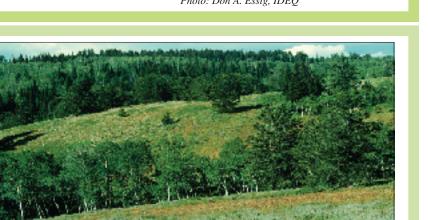
junipers of the lower Semiarid Foothills (19f).

Pleistocene Lake Bonneville in contrast to Ecoregion 13b.





snow-covered in winter. Melting snow pack provides water to lower, drier valleys.



Douglas-fir forests and aspen parkland are found on north-facing slopes and flatter areas in the Wasatch Montane Zone (19d).

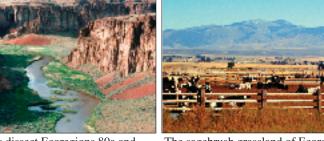
parkland are common. At highest elevations and on steep, north-facing slopes, Engelmann spruce and subalpine fir occur. Semiarid foothills support widely spaced juniper in a matrix of sagebrush grassland. Perennial streams provide water to lower, more arid regions. Summer The Wasatch Montane Zone is found above about 7,400 feet elevation. Its mountains are covered in a mixture of mountain big sagebrush, mountain brush, and conifer forests. Douglas-fir and aspen parkland are common on north-facing slopes and many less sloping areas. Mountain big sagebrush, snowberry, and understory grasses grow on south-facing slopes. Engelmann spruce and subalpine fit grow at highest elevations and on steep, north-facing slopes. The vegetation mosaic is unlike the sagebrush grassland and widely spaced The Semiarid Foothills ecoregion ranges in elevation from about 5,500 to 8,200 feet. Widely spaced junipers occur in a matrix dominated by mountain big sagebrush and bluebunch wheatgrass. Overall, the vegetation is distinct from that of the higher, wetter

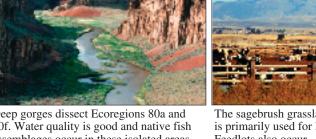


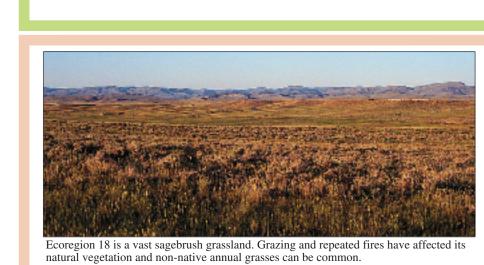
Declining numbers of sage grouse are

plains and summer in the foothills. *Photo:* 

mosaic of bunchgrasses and Wyoming ig sagebrush are native to Ecoregion 80a. found amid the sagebrush of the Northern Cool season grasses are more common in Basin and Range (80). They winter on the Ecoregion 80 than in Ecoregion 13.







Bunchgrass and sagebrush typically dominate the valleys, alluvial fans, and mountain

flanks of the Northern Basin and Range (80). Much of the region is used as rangeland.

Scattered junipers are found amid bunchgrasses and sagebrush in higher, more rocky

18. Wyoming Basin Ecoregion 18 is a broad intermontane basin containing rolling plains, high hills, and mesas. It is most extensive in Wyoming but also extends into other states including Idaho. Ecoregion 18 is dominated by arid grasslands and shrublands and lacks the extensive forests of neighboring, mountainous Ecoregions 17 and 19. Land use is primarily livestock grazing but irrigated hayland also occurs.

The Wet Valleys ecoregion is characterized by wetlands, lakes, canals, cold winters, and a short growing season. Nearly flat, poorlydrained floodplains and low terraces are widespread and support sedges, rushes, cattails, marsh grasses, annual bluegrass, and clover. Vell-drained alluvial fans and foothills covered in sagebrush grassland act as a transition to the surrounding and much more rugged Partly orested Mountains (170), Semiarid Bear Hills (18d), and Semiarid Foothills (19f). Mollisols occur and have a frigid temperature regime. Land use is irrigated hayland, meadow pastureland, and rangeland. Land use and drainage conditions are all different from neighboring ecoregions. The Semiarid Bear Hills ecoregion is located in the rain shadow of high mountains. Its terrain is hilly and is distinct from the nearly flat Wet Valleys (18c) and the much more rugged Wasatch and Uinta Mountains (19). Bunchgrasses and mountain big sagebrush occur and contrast with the forests of nearby, mountainous ecoregions. Land use is primarily grazing and is unlike the mosaic of irrigated hayland, meadow pastureland, and rangeland of Ecoregion 18c.

80. Northern Basin and Range

Ecoregion 80 consists of dissected lava plains, rolling hills, alluvial fans, valleys, and scattered mountains. It is higher and cooler than Ecoregion 12 and has more available moisture than Ecoregion 13. Basins support sagebrush grassland or saltbush greasewood vegetation; cool season grasses and Mollisols are more common in the basins of Ecoregion 80 than in the hotter and drier basins of Ecoregion 13 where Aridisols support sagebrush, mountain sagebrush, mountain brush, Idaho fescue, Douglas-fir, or aspen. Juniper woodlands occur on rugged, stony uplands. Both rangeland and cropland occurs. Ecoregion 80 lies between Ecoregion 13 to the north; its southern boundary is the highest shoreline of Pleistocene Lake Bonneville which once inundated much of Ecoregion 13 but not Ecoregion 80. Stream fish communities share features of Ecoregions 12 and 17. In the Owyhee Mountains, Ecoregions 80j and 80k, isolated by the surrounding lower, warmer regions, once supported anadromous fish. The Saltbush-Dominated Valleys ecoregion is arid, gently sloping, and dominated by shadscale and greasewood. Light-colored soils The Dissected High Lava Plateau ecoregion has alluvial fans, rolling plains, and shear-walled canyons that are cut into extrusive with high salt and alkali content are common; they are dry for extended periods and may be leached of salt by irrigation water. rocks. Sagebrush grassland is common and scattered woodland grows on rocky uplands. Overall, Ecoregion 80a is less wooded,

lower, and more arid than Ecoregions 80b, 80c, 80i, or 80k. Ecoregion 80a has more cool season grasses than Ecoregion 13c and lacks the saltbush–greasewood of Ecoregion 80h. Frigid and mesic Aridisols and Mollisols occur. Grazing is the primary land use. Cropland is much less ommon than in Ecoregions 12a and 12i. Areas of high water quality and native fish assemblages occur in isolated canyons. The Semiarid Hills and Low Mountains ecoregion occupies the elevational band between Ecoregion 80c and the lower, less rugged Ecoregions 12e, 80a, and 80i. Potential natural vegetation is mostly sagebrush steppe. Cool season grasses are more common than in the drier Ecoregion 13c which has less available moisture and has a potential natural vegetation of Great Basin sagebrush. Forest components are much less common than in Ecoregion 80c. Juniper woodland grows on rock outcrops but is not as common as in Ecoregion 13d. Land use is primarily livestock grazing.

characterized by a mix of conifers, mountain brush, and sagebrush grassland. North-facing slopes and many flatter areas support open tands of Douglas-fir, aspen and lodgepole pine; overall, forest components are more common than in Ecoregions 80a and 80b which are ninated by sagebrush grassland or juniper woodland. Winters are colder and mean annual precipitation is greater than in lower ecoregions. The High Desert Wetlands ecoregion is critical habitat for nesting and migratory birds. Sedges, meadow barley, creeping wildrye, and Nevada bluegrass are found in wetter areas. Water levels in its lakes and wetlands fluctuate seasonally and annually. The Owyhee Uplands and Canyons ecoregion contains deep, precipitous river canyons, barren lava fields, badlands, and tuffaceous outcrops that are riddled by caves. Lithology is more varied, stream density is higher, and water availability is greater than in Ecoregion 80a. Ecoregion 80f is important wildlife habitat. Sagebrush grassland occurs; it is unlike the saltbush–greasewood of Ecoregion 12j.

The **High Elevation Forests and Shrublands** ecoregion is mountainous and occupies the elevational band above Ecoregion 80b. It is Sagebrush Steppe Valleys (80i) ecoregion is less suitable for cropland agriculture and has less available water than many parts of the Snake

The disjunct Semiarid Uplands ecoregion includes mid-elevation zones in the Owyhee and Jarbidge mountains and hills, volcanic cones, buttes, and rocky outcrops that rise out of neighboring, drier lava plains. Mountain sagebrush, western juniper, mountain brush, and grasses grow in the ecoregion. In the Jarbidge Mountains, juniper woodland can be of limited extent or entirely absent. Elsewhere, density and extent of juniper woodland varies with long term climate changes, grazing pressure, and fire suppression. The Partly Forested Mountains ecoregion occupies the elevational belt above the Semiarid Uplands (80j). Elevations exceed 6,500

Potential natural vegetation is saltbush-greasewood; it is distinct from that of surrounding ecoregions. The primary land use is grazing but

irrigated cropland occurs and is much more common than in Ecoregion 13b. Ecoregion 80h drains to the Snake River and was not flooded by

of Ecoregions 13b and 80h. Perennial bunchgrasses are more abundant than in the Sagebrush Basins and Slopes (13c) in Utah. Valleys mostly

drain to the Snake River and fish assemblages are unlike those of the internally-drained basins to the south in Ecoregion 13. Grazing is the

dominant land use but non-irrigated wheat and barley farming is much more common than in the semiarid basins of Ecoregion 13. The

The Sagebrush Steppe Valleys ecoregion is flanked by the hills and mountains of Ecoregions 80b and 80c. It is dominated by

sagebrush grassland and lacks the woodland of Ecoregion 80b, the open conifer forest of Ecoregion 80c, and the saltbush–greasewood

feet. Annual precipitation is sufficient to support Douglas-fir, ponderosa pine, mountain big sagebrush, and mountain brush. The vegetation mosaic is unlike the western juniper woodland and sagebrush steppe of Ecoregion 80j.

Deep gorges dissect Ecoregions 80a and The sagebrush grassland of Ecoregion 80b 80f. Water quality is good and native fish is primarily used for livestock grazing. assemblages occur in these isolated areas. Feedlots also occur.



Map Source: USEPA, 2000

Level III Ecoregions of the Conterminous United States



5 Sierra Nevada

0 Columbia Plateau

2 Snake River Plain

16 Idaho Batholith

18 Wyoming Basin

7 Middle Rockies

20 Colorado Plateaus

1 Southern Rockies

4 Chihuahuan Deserts

25 Western High Plains

26 Southwestern Tableland

7 Central Great Plains

19 Wasatch and Uinta Mou

22 Arizona/New Mexico Plateau

3 Arizona/New Mexico Mountains

3 Central Basin and Ran

4 Mojave Basin and Range

6 Southern and Central Californ

8 Southern California Mountain

Eastern Cascades Slopes and

Central California Valle

Chaparral and Oak Woodland



29 Central Oklahoma/Texas Plain

31 Southern Texas Plains

5 South Central Plains

6 Ouachita Mountains

Arkansas Valley 38 Boston Mountains

40 Central Irregular Plains

42 Northwestern Glaciated

46 Northern Glaciated Plains

47 Western Corn Belt Plains

49 Northern Minnesota Wetlan

50 Northern Lakes and Forest

51 North Central Hardwood

53 Southeastern Wisconsin Till

54 Central Corn Belt Plains

Indiana Drift Plains

Eastern Corn Belt Plain

56 Southern Michigan/Northern

1 Canadian Rockies

44 Nebraska Sand Hills

48 Lake Agassiz Plain

52 Driftless Area

39 Ozark Highland

32 Texas Blackland Prairie

B East Central Texas Plain

34 Western Gulf Coastal Plair

30 Edwards Plateau



57 Huron/Erie Lake Plains

61 Erie Drift Plain

58 Northeastern Highlands

59 Northeastern Coastal Zon

62 North Central Appalachia

64 Northern Piedmont

65 Southeastern Plains

67 Ridge and Valley

71 Interior Plateau

77 North Cascades

78 Klamath Mountains

79 Madrean Archipelago

80 Northern Basin and Range

31 Sonoran Basin and Range

84 Atlantic Coastal Pine Barrens

2 Laurentian Plains and Hills

83 Eastern Great Lakes and Hudson

66 Blue Ridge

63 Middle Atlantic Coastal Plan

58 Southwestern Appalachia

70 Western Allegheny Platea

72 Interior River Lowland

73 Mississippi Alluvial Plair

74 Mississippi Valley Loes

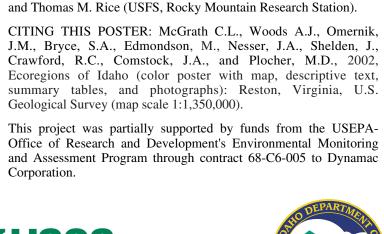
75 Southern Coastal Plain

76 Southern Florida Coastal 1

9 Central Appalachians

60 Northern Appalachian Plateau





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PRINCIPAL AUTHORS: Chad L. McGrath (NRCS), Alan J. Woods

(Dynamac Corporation), James M. Omernik (USEPA), Sandra A

Nesser (USFS), James Shelden (USFS), Rex C. Crawford

(Washington Department of Natural Resources), Jeffrey A.

Comstock (Indus Corporation), and Milton D. Plocher (Dynamac

COLLABORATORS AND CONTRIBUTORS: Erwin Cowley

(USFS), Pat Green (USFS), Glenn Griffith (NRCS), Jimmy Kagan

(Oregon Natural Heritage Program), Scott Lambert (Washington

State University), Duane A. Lammers (USFS), John Lott (USFS),

Thomas R. Loveland (USGS), Terry Maret (USGS), Michael

McIntyre (IDEQ), Christopher Mebane (IDEQ), Neil Peterson

REVIEWERS: Arthur C. Zack (USFS, Idaho Panhandle National

Forest), Gerald J. Niehoff (USFS, Idaho Panhandle National Forest),

(NRCS), Thor D. Thorson (NRCS), and Bill Ypsilantis (BLM).

(BLM), Carl Davis (USFS), Don A. Essig (IDEQ), Jerry Freeouf

Bryce (Dynamac Corporation), Mike Edmondson (IDEQ), John A