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Regional Forester,  
U.S. Forest Service  
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**Submitted via: <https://cara.fs2c.usda.gov/Public//CommentInput?Project=64745>**

**Re: Pacific Northwest and Pacific Southwest Regions of the U.S. Forest Service's proposed Amendments to the 1994 Northwest Forest Plan - *Federal Register*/Vol. 88, No. 241 December 18, 2023 Notices**

These comments are in response to the Notice of Intent published by Regions 5 & 6 of the United States Forest Service (USFS) to prepare an environmental impact statement for the Forest Plan Amendment for Planning and Management of Northwest Forests Within the Range of the Northern Spotted Owl (*Federal Register*/Vol. 88, No. 241, December 18, 2023, pp. 87393-87398) hereafter NWF Plan or NWFP and *FRN*)).

We are writing on behalf of Friends of the Kalmiopsis and Kalmiopsis Audubon Society, nonprofit grassroots organizations located in the southwest corner of Oregon and along the Wild Rivers Coast. Our area is relatively remote. Its landscapes and their forests are known for their exceptional biodiversity and botanical richness. Our rivers are legendary for the clarity of their waters and the quality and integrity of their native salmon and steelhead runs. The mountains that are the birthplace of these rivers and that sustain them are steep and rugged in the extreme.

We've participated in Forest Planning specific to the Siskiyou National Forest since 1987. Our knowledge is based on our long residence here and in actively participating in forest planning efforts since 1987. We've been part of interdisciplinary timber sale planning teams, Resource Advisory Committee, and forest collaboratives.

Our work spans forest and project level planning, including management plans for our five National Wild and Scenic Rivers and importantly in this case, the 1994 Northwest Forest Plan (NFP). We also participated in the USFS's Roadless Area Conservation Rule. As part of this work, we've documented this unique forest, with its diverse landscapes, exceptional rivers and big wild creeks, in words and photographs. Through the years we've archived numerous Forest Service publications and assessments and independent scientific articles about this relatively unknown but exceptional corner of Oregon.

For our general comments on the proposed NWFP amendment, we joined Portland Audubon, EPIC and others. However, we feel compelled to also provide comments focused on the Siskiyou National Forest (SNF). We are concerned that the way that this Forest has been characterized in the oversimplified dry/ wet forest framework of the NWFP and in the Bioregional Assessments that will inform forthcoming amendments—has potential to put its high conservation values at risk.

While we recognize that your amendments must function at a high-level across a large landscape of the Pacific Northwest's National Forest lands, we draw your attention to a single Forest that is "exceptional" in both senses of the word: it hosts "exceptional" aka outstanding conservation values; and, as a very wet and maritime-influenced forest, it is an "exception" to the dry-forest frame. As you consider amendments at the large landscape scale, we urge you to ensure that they don't harm and degrade the truly exceptional values of the Siskiyou National Forest.

### **Bioregional Setting: Klamath Mountain Province**

#### **Siskiyou National Forest: High Conservation Values at Stake**

While our comments are specific to the Siskiyou National Forest, we believe that the best available science supports breaking out the Klamath Mountain Province (aka Klamath-Siskiyou) forests in Oregon and California from the dry forest category they're currently lumped with into its own category management and conservation direction, appropriate to these highly diverse forests, landscapes and habitats.

It has been an over-simplification to class the SNF and other forests of the Klamath Siskiyou region as "dry forests." Owing to relatively low elevation and proximity to the Pacific Ocean, this region has a maritime-influenced climate, and mountains get an enormous amount of precipitation, primarily as rain rather than snow, with rain amounts reaching as high as 150-160 inches annually. These abundant rains nourish unique broad-leafed evergreens and rare conifers that grow into forests unlike any others in the Pacific Northwest. Consider that ecologist Reed Noss has described this region as,

*the most biologically important temperate forest ecoregion in all of western North America, in terms of concentrations of endemic species (i.e., found nowhere else in the world) and ancient lineages. It ranks as one of the four richest temperate coniferous forests in the world. Straddling southwestern Oregon and northwestern California, inland of the Northern California Coastal Forests ecoregion, the Klamath-Siskiyou derives its biological richness from its rugged terrain, complex geology and soils, and climatic stability moderated by proximity to the Pacific Ocean.<sup>1</sup>*

Beyond temperate climate, another reason the SNF stand apart is because of so much of it is underlain by the Josephine ophiolite, an extensive area of serpentine terrain—thought to be one of, if not, the largest exposure of serpentine geology in North America (See Figure 3 in the attachment). The Klamath-Siskiyou serpentines are stark and beautiful geological formations that make for unique recreation and exploration opportunities.

Even more, this unusual underlying geology supports high concentrations of rare and endemic plants and unique habitats.<sup>2</sup> The Josephine ophiolite in particular (found in Curry, Josephine and Del Norte counties) is home to one of the highest percentages of rare endemic plants in North America

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<sup>1</sup> Reed Noss, President and Chief Scientist, One Earth "Klamath-Siskiyou Forests," <https://www.oneearth.org/ecoregions/klamath-siskiyou-forests/>

<sup>2</sup> USDA Forest Service, Klamath-Siskiyou Serpentines - Stark and toxic, diverse and rare, serpentines are a land of contrasts. Formed within the earth's mantle, serpentine rocks found their way to the surface. On serpentine soils, a unique flora evolved especially adapted to survive the severe hardships of drought, heavy metals, and nutrient stress. Complex islands of endemism and rarity developed in isolated plant communities on the severe landscapes. <https://www.fs.usda.gov/wildflowers/beauty/serpentines/index.shtml>

—a number of which are found nowhere else in the world (See Figure \_\_\_). As such, the SNF “has one of the most diverse floras of any National Forest in the United States.”<sup>3</sup> Many of its rare plant and tree species are found nowhere else in the world. These endemics typically have very narrow ranges, often restricted to the area’s relatively rare serpentine soils. See Figure \_\_.

The SNF also has a high percentage of Inventoried Roadless Areas (IRA), which are subject to the U.S. Forest Service Roadless Area Conservation Rule. In 1993 there were 279,652 acres of IRA within the Siskiyou National Forest or approximately 25.6% of its 1,092, 302 acres (See Figures 1, 2 & 3 in the attachment). In addition, there are a number of smaller but important unroaded areas that are often contiguous with the IRAs and congressionally protected Wildernesses.

The high percentage of IRAs is indicative of the steep, rugged character of much of the forest and the extensive areas that are too steep and/or unstable to construct roads into and to log (i.e. lands classed as “unsuitable” for commercial logging). The number of IRAs is also indicative of the high percentage of lands with unusual soil types that are not capable of producing closed canopy forest, including expansive areas of serpentine that have their own unique plant communities and forest types—some of which are very old in their own right.

The SNF’s proximity to the Pacific Ocean plus its overall high stream density also make it unique and a high priority for conservation. The fact that many of its stream miles provide pristine to near-pristine salmon, steelhead and cutthroat trout habitat enhance its importance to the conservation of biological diversity. According to an analysis by K. Norman Johnson for the NWFP in 1993, the SNF has the 2nd highest stream density per square mile of the NWFP Forests with a high percentage of the total providing habitat for anadromous fish.<sup>4</sup> According to the SNF Plan, the Forest has some of the most valuable salmon and steelhead habitat in the United States.<sup>5</sup> Moreover, the watersheds of the SNF’s rivers and streams are made up of a high percentage of federal public lands (100 to 70%). Much of this is within Inventoried Roadless Areas, Wilderness and/or Late-Successional Forest Reserves and all of its streams, except for the Rogue River are free flowing.

The SNF is also well known for its National Wild and Scenic Rivers. There are five of them, each with nationally outstanding water quality, fisheries and recreation values. These values are dependent on the entire watershed not just a narrow half mile corridor along part of the river’s course. In 1994, 6 streams on the SNF were found eligible to be added to the Wild and Scenic River System - each with its own outstandingly remarkable values and five with exceptional water quality. In 2019, the Dingell Act added tributaries to the Wild and Scenic Rogue and the Elk rivers. The Wild and

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<sup>3</sup> USFS, 1989, Siskiyou National Forest Plan, FEIS, Appendix F, p. 1.

<sup>4</sup> K. Norman Johnson, et. al. 1993, Sustainable Harvest Levels and Short-Term Timber Sales for Options Considered in the Report of the Forest Ecosystem Management Assessment Team: Methods, Results, and Interpretations. Stream density for the SNF was estimated at 8.54 miles of stream per square mile. The SNF has 2,446 miles of Class I and II streams. The Mendocino National Forest with the highest stream density (8.94 miles/sq. mile) has only 319 miles of Class I and II streams.

<sup>5</sup> USFS, 1989, Siskiyou National Forest Plan Land and Resource Management Plan at p. IV-8 and Final Environmental Impact Statement at, p. I-15.

Scenic Rivers are important to local communities that identify as the Wild Rivers Coast and that have aimed to build a recreational economy based on this unique aspect of the SNF.

Moreover, the topography of the SNF is complex and highly dissected. This is especially true for its wild heart, the Kalmiopsis Wilderness, and its adjacent Inventoried Roadless Areas. This rugged area has acted as a climate refugia for millennia<sup>6</sup> and will likely serve in this capacity in the future.

Science tells us that topographically complex regions that serve as refugia from fire and climate change are hotspots of biodiversity, reflecting both geological influences and evolutionary processes that select for individuals that are adaptable to change, such as those coming with the climate crisis.<sup>7</sup> In addition, topographically complex areas are likely to act as refugia for species because they facilitate survival during regional climate stress.<sup>8</sup>

Although the qualities of the SNF don't exactly fit into the category of iconic moss draped cathedral forests, high snowcapped mountains and alpine lakes, or even high timber producing lands, over decades dedicated citizens have advocated for this unique National Forest with its high conservation values and exceptional rivers that produce some of the cleanest clearest water in the United States.

### **Amendments to NWFP: Management Considerations for a unique region**

The Siskiyou National Forest (SNF) lies in the heart of the Klamath Mountain Province and in Region 6 of the U.S. Forest Service (USFS). The SNF was joined with the Rogue River National Forest (RRNF) for management purposes in 2000. The forests are now known as the Rogue River-Siskiyou National Forest (RSNF). Although the Rogue River and Siskiyou National Forests are very different in ecology, geology, soil types, vegetation types, botanical diversity, elevation, weather, precipitation, fire-regimes, and maritime climate, the Bio-Regional Assessment of Northwest Forests (BA) lumps the two forests together. We're concerned that lumping these two exceedingly different forests in the upcoming forest plan amendment process and its environmental impact statement will eclipse important nuances that are necessary to understand as the basis for management and could well lead to counterproductive and inappropriate management direction for both forests.

#### ***Fire risk reduction***

For example, a graph on p. 70 of the BA characterizes the majority of acres of LSR on both the RRNF and the SNF as being "frequent fire-dependent." We're not experts on the RRNF, but a recent *Fire Science Brief* characterizes the fire regime of the Klamath-Siskiyou Region as mixed-severity and quite honestly there is wide diversity within the SNF with regards to fire regime.<sup>9</sup> Many species of trees in the Siskiyou Mountains are dependent on mixed severity fire that derives from the unique

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<sup>6</sup> R. H. Whittaker, Vegetation of the Siskiyou Mountains, Oregon and California, *Ecological Monographs*, Vol. 30, No. 3, July 1960 pp. 279-407

<sup>7</sup> <https://pubmed.ncbi.nlm.nih.gov/28196688/>

<sup>8</sup> <https://www.frontiersin.org/articles/10.3389/fcsc.2022.833766/full>

<sup>9</sup> [https://www.firescience.gov/projects/briefs/03-1-4-11\\_FSBrief14.pdf](https://www.firescience.gov/projects/briefs/03-1-4-11_FSBrief14.pdf)

mix of geology and climate. Mis-characterizing the nature of the forest has important ramifications for fire management. The thinning management that Forest Service managers often promote as a means to reduce fire risk in pine stands on the dry East side are not suited to the ecosystems of the Klamath-Siskiyou where thinning or wildfire, along with the high precipitation, has the effect of producing dense brush fields, when fire adapted species root sprout or grow back from stumps.

The use of controlled burns may be an important tool to manage fire risk, however it's important to recognize that anthropogenic fire has also been overused as a fire suppression method, with unfortunate consequences for biodiversity. For example, we are aware of an isolated pocket of old growth forest that had been acting as fire refugia. It was surrounded by sparsely vegetated serpentine and was intentionally burned as part of fire suppression activities even though fire really had no where to go. During the 2002 Biscuit Fire, a study found that 106,000 acres of the SNF were blackened as part of burnout operations on just the south side of the fire. These extensive fire suppression activities, including often repeat burns can counter-productive to preserving biodiversity and to encouraging adaptation to climate change

It will be important for any plan amendments dealing with fire risk reduction to take the nuanced ecology of the Klamath-Siskiyou forests into careful account rather than to expect that approaches used on the east side or truly dry forests can work here.

***Preserve all primary forest, including early successional forest and unique species***

We encourage continued preservation of mature and old growth forests, which have important values for OG dependent species of birds and wildlife, but the importance of protecting young primary forests is equally critical. These early successional primary forests are reservoirs of forest diversity and of species genetically adapted to unique site conditions. They're naturally established, making them more resilient to climate change.

Some of the oldest trees on the Siskiyou National Forest are found in Jeffrey pine savannas on serpentine terrain or along ridges and watershed divides. They're not what one thinks of as an old growth forest but with their native grasses and rare plants are ecologically important. The SNF also harbors the water loving Port- Orford Cedar, often the only or primary conifer found along streams, especially those flowing through serpentine terrain. These amazing conifers are foundational riparian species, but they and the ecosystem services they provide are threatened by the spread of a non-native pathogen that's fatal to Port-Orford cedar.

Brewer spruce, a graceful paleo endemic tree of the Klamath-Siskiyou bioregion, has survived in micro climates provided by the diverse topography of the region. However, this ancient but very rare conifer, with its thin bark, is now increasingly threatened by fire, including fires set by the Forest Service as fire suppression strategies, as well as the warming climate. Brewer spruce and Port-Orford cedar, and the Jeffrey pine found on the serpentine terrain of the Siskiyou National Forest must be given special protections and management considerations and all primary forest should be provided with protections similar to mature and old-growth forest.

***Greater emphasis on conservation is needed on our National Forest not logging***

The Siskiyou National Forest Plan was finalized in 1989. It was in part amended in 1994 by the NWFP. The NWFP reduced the annual probable sale quantity (PSQ) on the SNF from 166 mmbf

in 1989 to 29 mmbf in 1994.<sup>10</sup> This reduction in PSQ reflected the recognition of the high conservation values of the SNF, including its high quality rivers and streams, with their exceptionally clear waters and pristine to near-pristine fresh water habitat for native, naturally reproducing salmon and steelhead runs; the high percentage of Inventoried Roadless Areas (IRA) within its boundaries; and its exceptional botanical diversity.

The reduction in PSQ and the establishment of the SNF's LSR was in recognition of the unique character of the forest, its high conservation value, and its habitats that are not entirely associated with Northern Spotted Owls or mature and old growth forest. In addition, many areas of the SNF are simply "unsuitable" for commercial timber production and there are LSRs that encompass extensive areas of serpentine or other soil types that do not support timber. For example, according to the Southwest Oregon Late Successional Reserve Assessment, only approximately 6% of the West Illinois Valley LSR had the potential to produce older forest conditions and only 1% was managed stands.<sup>11</sup> However, it includes much of the watershed of the National Wild and Scenic North Fork Smith River, Oregon's first Outstanding Resource Waters designated under the State's Clean Water Act authority.<sup>12</sup>

However, the BA, with its emphasis on active management, has identified what's framed as a problem in need of attention—an apparent "Matrix-LSR imbalance," claiming that the RR-SNF has almost 40% more LSR than Matrix (p 53). If such an imbalance exists, there's good reasons for it. Not all ecologically important federal public lands grow big trees and most don't sustainably. Due to its steep slopes and inner gorges, skeletal unproductive soils and/or serpentine soils that are toxic to most plants, there's a lot of the SNF that simply no good at growing trees suitable for sending to the mill. There's also the high number of Inventoried Roadless Areas acres. They've remained roadless for a reason. It cost too much and is too ecologically destructive to punch in roads for the little timber volume available. And there's other reasons. They have very high conservation values including but not limited to being home to some of the most productive and pristine steelhead habitat in the United States and some of the highest concentrations of rare and endemic plants in North America. (See for example figures 4, 5, & 6 in the attachment)

So on the SNF you have a lot of LSR with acres not capable of producing old forest but they're producing prized steelhead from pristine waters and contributing to some of the finest, most beautiful whitewater in the nation or that have unparalleled biodiversity. There's also LSR on the Siskiyou or adjacent BLM land that were moonscapes—roaded and clearcut almost to death—in 1994.

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<sup>10</sup> K. Norman Johnson, et. al. 1993, Sustainable Harvest Levels and Short-Term Timber Sales for Options Considered in the Report of the Forest Ecosystem Management Assessment Team: Methods, Results, and Interpretations.

<sup>11</sup> See *Supra* at note 1.

<sup>12</sup> Outstanding Resource Waters are high quality waters that constitute an outstanding state resource due to their extraordinary water quality or ecological values, or where special protection is needed to maintain critical habitat areas. <https://www.oregon.gov/deq/wq/Pages/WQ-Standards-Policies.aspx>

We're concerned that what the BA identifies as a problem is a misguided, theoretical deduction that is not based on an actual understanding of the land and its values. If anything, the unique forests and ecological communities of the SNF need more, not less, conservation.

The 1995 Southwestern Oregon Late-Successional Reserve Assessment describes the SNF's LSRs this way:

*The Siskiyou, much older and more varied in climate and geology than either the Cascade or Coast Ranges, still provide a diversity of source material for the surrounding areas and act as a sink or refuge for species during climate extremes. Today this area remains central to the continued health and development of the Pacific Northwest flora, like a busy intersection in the migratory crossroads.<sup>13</sup>*

Beyond LSRs, of course, Wilderness, Wild and Scenic Rivers, Special Management Areas, Research Natural Areas are all important conservation designations of our National Forest System. In a recent hearing of a subcommittee of the Senate Energy and Natural Resources Committee, the Deputy Chief of the Forest Service testified that:

*The USDA recognizes the importance of Wilderness areas and wild and scenic rivers, and the USDA Forest Service embrace its mission to steward and safeguard Wilderness character in Wilderness areas, and the free-flowing condition, water quality, and outstandingly remarkable values of wild and scenic rivers.*

And that:

*The USDA further recommends caution anytime that Congress is considering releasing WSAs as they are a critical component of the nation's public lands conservation legacy. WSAs located on Forest Service land play a key role in carrying out the agency's multiple-use mandate and provide important opportunities for solitude, scientific discovery, quiet recreation, hunting and fishing, retention of biodiversity, and a host of other values the American people hold dear.*

We believe this not only applies to Wilderness Study Areas but also to Wilderness Areas in general and that greater emphasis in forest planning must be given to protecting Roadless Areas and to studying and recommending additional Wilderness Areas and Wild and Scenic Rivers in general as well as in the SNF.

In addition, concurrent with the BLM's greater emphasis on Areas of Critical Environmental Concern, the USFS must dramatically expand its special management area designations, provide these areas with greater protections and emphasis on conservation. They must be additionally withdrawn from location and entry under the mining laws of the United States.

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<sup>13</sup> Siskiyou National Forest and Medford District, Bureau of Land Management, 1995, Southwest Oregon Late-Successional Reserve Assessment, October 1995, p. 14.

In short, we urge that any proposed amendments to the NWFP increase protections and acres of LSR on the SNF as opposed to reducing it. There needs to be a comprehensive conservation alternative that addresses the protection of National Forest landscapes as complex and with highly varied ecosystems.

### ***Special consideration needed for biodiversity beyond OG forest species***

Given the remarkable biodiversity and botanical diversity of the Siskiyou National Forest, with its rare endemic trees and also its unique *Darlingtonia* wetland fens, we urge you to ensure continued conservation of unique plants and trees as you consider amendments to the NWFP. It has been suggested that paying attention on a fine scale will be needed to provide climate change refugia for the biodiversity of the Klamath Siskiyou Mountains.<sup>14</sup>

While, the 1989 SNF Plan established a number of Botanical and Research Natural areas to protect its rare plants and their habitat, more recent information and surveys indicate the need to expand existing areas and to establish new ones. They all need to be withdrawn from entry and location under the mining laws of the United States. Moreover, all USFS sensitive plant species--and especially those in the SNF and other Klamath Mountain forests -- need continued monitoring, research, and protection.

As you consider fire management in particular, you must ensure continued conservation of unique endemic plants and trees.

### ***Surface and Groundwater Protections***

Finally, it's critical to understand and fully protect the complex ground and surface water systems that sustain life on and off our National Forests. As indicated, the SNF has a unique maritime influence and hydrologic regime, with large amounts of precipitation in winter months that nourish forests. These rains also recharge rivers and groundwater systems that feed back into springs and rivers year-round. Rivers, streams, and springs of the SNF provide habitat for unique wetland dependent plant communities and for salmon and steelhead streams as well as for drinking water for communities and for outstanding recreation.

As you consider amendments, we urge that you consider strengthening the Aquatic Conservation Strategy (ACS) to help ensure that aquatic habitats can be more resilient into the future. Rivers and aquatic habitats are literally the lifelines of the land. We urge you to increase Key Watersheds to include basin-wide key watershed, as with the Smith River Watershed in Oregon and California and greater protection within the Key Watersheds.

These protections should include the initiation mineral withdrawals for Key Watersheds, LSRs, Administratively Withdrawn Areas, Botanical and Research Natural Areas and Inventoried Roadless Areas from entry and location under the mining laws of the United States.

Further, under the George W. Bush Administration the Forest Service effectively eliminated an important protection from mining in Riparian Reserves found in the NWFP's Aquatic Conservation Strategy (ACS) and its standards and guidelines—namely MM-1. At the same time, the USFS

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<sup>14</sup> David Olson, et al. 2012, Climate Change Refugia for Biodiversity in the Klamath-Siskiyou Ecoregion, in *Natural Areas Journal*, 32(1):65-74 (2012)



weakened surface mining regulations at 36 CFR §228. Now miners no longer have to even notify the Forest Service before conducting mining activities, unless the miner believes their activities will create significant surface resource disturbance. To better protect aquatic habitats, regulations should be strengthened not weakened.

In addition, in considering amendments, it's important to keep in mind the importance of groundwater resources, which are inextricably connected to surface water flows. Because of the unique hydrological conditions of the SNF, we are aware that ground disturbance from mining and logging can have impacts on groundwater.

According to the USDA Forest Service's Technical Guide to Managing Ground Water Resources (2007), FS-881:

*"Ground water and surface water are interconnected and interdependent in almost all ecosystems. Ground water plays significant roles in sustaining the flow, chemistry, and temperature of streams, lakes, springs, wetlands, and cave systems in many settings, while surface waters provide recharge to ground water in other settings. Ground water has a major influence on rock weathering, streambank erosion, and the headward progression of stream channels. In steep terrain, it governs slope stability; in flat terrain, it limits soil compaction and land subsidence. Pumping of ground water can reduce river flows, lower lake levels, and reduce or eliminate discharges to wetlands and springs. It also can influence the sustainability of drinking-water supplies and maintenance of critical ground water-dependent habitats."*<sup>15</sup>

This USFS document and the USEPA's *Connectivity of Streams and Wetlands to Downstream Waters: A Review & Synthesis of the Scientific Evidence*, EPA/600/R-14/475F January 2015<sup>16</sup> should inform the management of rivers, lakes, streams, wetlands and groundwater on the National Forest System, including in the region covered by the Northwest Forest Plan and must be a part of the proposed Northwest Forest Plan revision or amendment.

## **Conclusion**

Our National Forests have tremendously important values that merit careful stewardship into the future, especially in face of climate change risks. As citizens who care about the very unique and special Siskiyou National Forest, we thank you for the opportunity to provide these comments regarding the management of our National Forest.

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A separate file is attached with the referenced figures.

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<sup>15</sup> [https://www.fs.usda.gov/geology/FINAL\\_Ground\\_Water\\_Technical\\_Guide\\_FS-881\\_March2007.pdf](https://www.fs.usda.gov/geology/FINAL_Ground_Water_Technical_Guide_FS-881_March2007.pdf)

<sup>16</sup> <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=296414>