WASHINGTON STATE DEPARTMENT OF HEALTH

# Environmental Justice Assessment Report

## On-Site Sewage Systems Setbacks Rulemaking

Washington State Department of HEALTH

DOH 337-180 June 2026

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# Environmental Justice Reporting Overview

**Table 1: Environmental Justice Assessment and Budgeting & Funding Overview**

| | |
|---|---|
| **Primary agency responsible for this action** | Washington State Board of Health |
| **Agency staff contact(s)** | Shay Bauman, shay.bauman@sboh.wa.gov, Policy Advisor, State Board of Health<br><br>Kseniya Efremova, kseniya.efremova@doh.wa.gov, Rules Coordinator, Environmental Public Health, Department of Health<br><br>Heather Watts-Goodfellow, heather.watts-goodfellow@doh.wa.gov, OSS Program Supervisor, Environmental Public Health, Department of Health |
| **Description of proposed significant agency action** | The State Board of Health is proposing to amend WAC 246-272A-0210 to clarify the minimum horizontal separations (setbacks) for surface was used as a public and nonpublic drinking water source. |
| **Date environmental justice assessment was initiated** | April 2026 |
| **Date environmental justice assessment was completed** | June 2026 |
| **Type of significant agency action** | The development and adoption of significant legislative rules as defined in RCW 34.05.328 |
| **Link(s) to initial notification with Office of Financial Management and/or other postings, such as publicly available results, materials, or reports related to the assessment.** | • Public Notification<br>• Program Site<br>• Rulemaking Site |

# Background Information

## What is the purpose of the rulemaking?

Among other technical changes and clarifications, this rulemaking intends to revert the minimum setback distances for septic systems to what they were prior to March 2024.

**Table 2: Changes in Minimum Setback Distances before and after March 2024**

| **Septic system component** | **Previous setback** – prior to March 2024 | **Current setback** – adopted March 2024 |
|---|---|---|
| From edge of soil dispersal component and reserve area | 100 feet | 200 feet |
| From sewage tank and distribution box | 50 feet | 200 feet |
| From building sewer and nonperforated distribution pipe | 50 feet | 100 feet |

## Why?

In 2024, the State Board of Health (board) adopted revisions to WAC 246-272A-0210, amending the setback requirement for surface water used as a public drinking water source. The setback requirement was changed from 100 feet to 200 feet from the drainfield/reserve area, 50 feet to 200 feet from the sewage tank or distribution box, and 50 feet to 100 feet from the building sewer or piping. These changes were made to proactively protect source water around surface water intakes. Intakes are the first physical point in the water supply chain where raw water is safely withdrawn from the source before treatment.

The current rule requires a 200-foot setback along many miles of rivers, regardless of where the drinking water intake is located. This was not the intent of the rule change. In November 2025, the board received a petition for rulemaking from the Vice Chair of the Northeast Tri County Board of Health, who also serves as a Pend Oreille County Commissioner, requesting that the board consider reverting the setbacks for surface water used as a public drinking water source to what it was in the previous version of the rule. The petitioners stated that the new rule impacts the development of lots along the Pend Oreille River system. The board accepted the petition.

## What are On-site Sewage Systems? [1]

On-site sewage systems (OSS), also known as septic systems, treat wastewater from private residences and restaurants and are used extensively statewide. Defined in Chapter 246-272A WAC, OSS are sewage systems that are designed to treat less than 3,500 gallons of domestic sewage per day and discharge treated effluent[2] below the surface of the ground. There are about

[1] https://doh.wa.gov/community-and-environment/wastewater-management/site-sewage-systems-oss

[2] WAC 246-272A-0010 (26) "Effluent" means liquid discharged from a sewage tank or other OSS component.

950,000 OSS in Washington.

OSS that are properly designed, installed, and maintained effectively treat residential wastewater for a long time. However, system failures can and do occur. When this happens, both public health and the environment are threatened. An OSS failure can be caused by bad system design, improper maintenance, or simply because the system has reached the end of its usable life. System owners are not always aware when their OSS stops functioning properly and failing OSS can be undetected. There are many documented cases where failing OSS have polluted surrounding areas.

## What are setbacks?

A setback is the minimum horizontal separation required between two important features present on a site. Setbacks are a foundational public health tool and, for OSS, serve two main functions:

- They ensure that there is enough land available for the OSS to do its job of treating sewage to a level that it can safely be returned to the environment.
- They provide a buffer between sensitive site features, such as wells and surface water, and untreated sewage for times when the OSS malfunctions or fails.

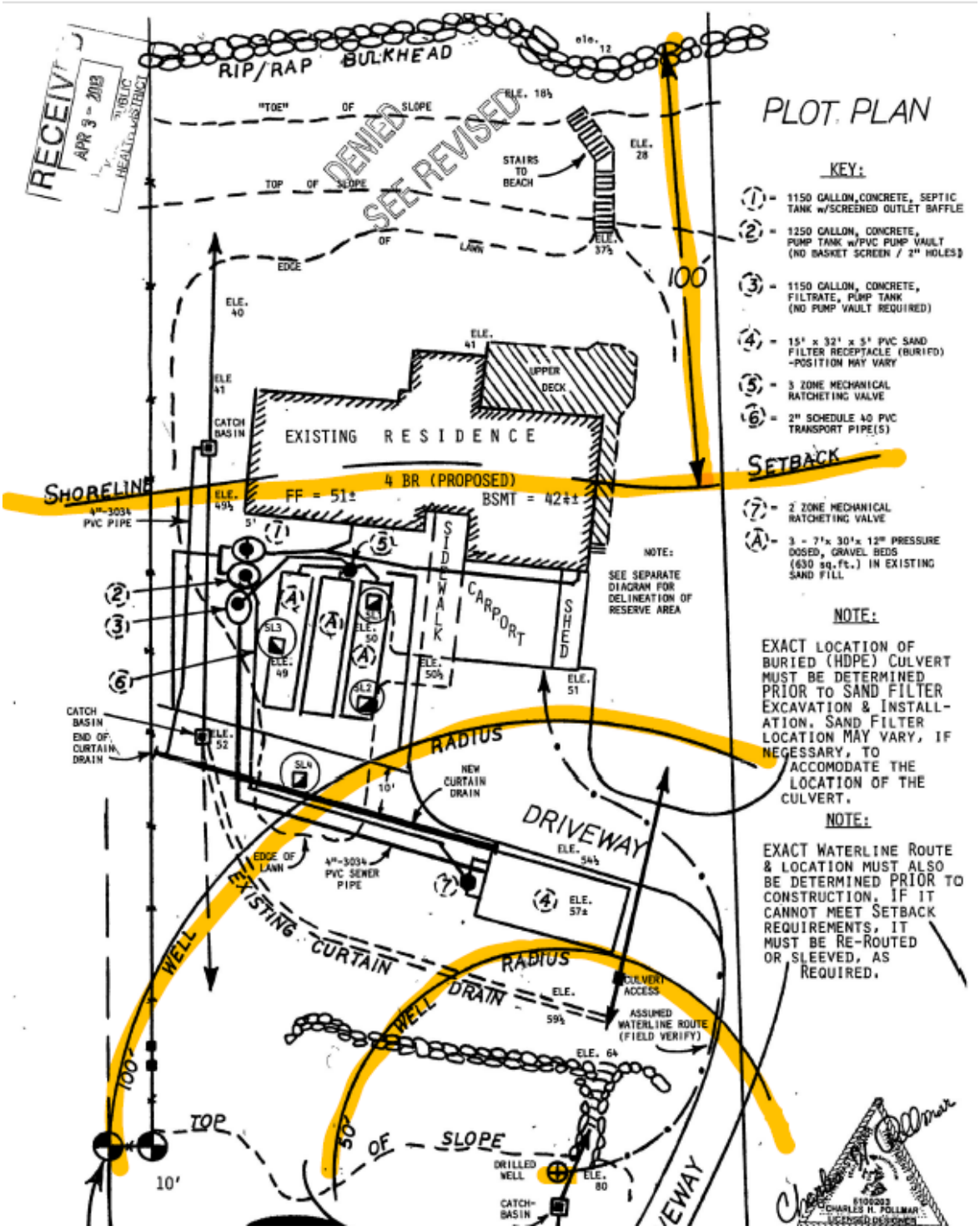
OSS malfunction from time to time and all OSS eventually fail. When they do, it is important to be able to contain and manage any untreated sewage before it threatens public health through direct contact with people or animals, contaminates drinking water, or pollutes the environment. The most common contaminants of concern are:

- Bacteria (e.g., *E.coli*, *Salmonella spp., Shigella spp., Campylobacter spp*.),
- Viruses (e.g., norovirus, Hepatitis A), and
- Parasites (e.g., *Giardia*, *Cryptosporidium*).

Setbacks are one of many OSS design features that serve to protect public health and environmental health and mitigate impacts from failing OSS. Furthermore, public drinking water systems treat and remove these pathogens when present.

For a visual representation of what a setback is, see the site plan for an OSS development in Figure 1 on the following page. Note the existing well at the center of the concentric circles. The inner circle is marked as 50 feet from the well, while the outer circle is marked as 100 feet from the well. These distances are what are referred to as “setbacks”.

## Figure 1: On-Site Sewage System Plot Plan



# Section 1: Analyze Environmental Benefits and Harms

1. **Describe likely environmental benefits[3] for overburdened communities, vulnerable populations, and tribes associated with this action.**

   This action reduces minimum horizontal separations of specific on-site sewage system (OSS) components from surface water used as a public drinking water source. The action is unlikely to provide a benefit for overburdened communities, vulnerable populations, and tribes.

2. **Describe likely environmental harms[4] for overburdened communities, vulnerable populations, and tribes associated with this action.**

   The action is unlikely to create environmental harms for overburdened communities, vulnerable populations, and tribes. Current setbacks for surface water not used as a public drinking water source have the same proposed setbacks for surface water used as a public drinking water source in this action (100', 50', and 50', respectively). Scientific evidence demonstrates these distances are protective of public and environmental health. There is no scientific data measuring the difference in impact between setback distances, and there is not scientific consensus that the proposed setbacks for this action are insufficient to protect public drinking water sources. The board did not originally amend the setbacks in response to negative public health or environmental impacts associated with the previous setbacks. They amended them to proactively protect drinking water sources.

   The original 100-foot setback between drainfields and features needing protection was established in the 1960s and has been reinforced scientifically since then. In good soil, many contaminants are deactivated in the first 20 feet. Some contaminants are highly soluble and mobile – such as nitrates, PFAS, and caffeine – but there is not scientific consensus that a 200-foot setback is measurably more protective of surface water used as drinking water.[4, 5]

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[3] **Environmental benefits** mean activities that: (a) Prevent or reduce existing environmental harms or associated risks that contribute significantly to cumulative environmental health impacts; (b) Prevent or mitigate impacts to overburdened communities or vulnerable populations from, or support community response to, the impacts of environmental harm; or (c)meet a community need formally identified to a covered agency by an overburdened community or vulnerable population that is consistent with the intent of chapter 70A.02 RCW.

[4] **Environmental harm** means the individual or cumulative environmental health impacts and risks to communities caused by historic, current, or projected: (a) Exposure to pollution, conventional or toxic pollutants, environmental hazards, or other contamination in the air, water, and land; (b) Adverse environmental effects, including exposure to contamination, hazardous substances, or pollution that increase the risk of adverse environmental health outcomes or create vulnerabilities to the impacts of climate change;(c) Loss or impairment of ecosystem functions or traditional food resources or loss of access to gather cultural resources or harvest traditional foods; or (d) Health and economic impacts from climate change.

[4] See Yates, M. V., & Yates, S. R, "Virus Survival and Transport in Ground Water," *Water Science and Technology* 20, no. 2 (1988): 301–307. This foundational study established that horizontal setbacks function primarily as travel-time buffers rather than mechanical filtration barriers, relying on natural virus inactivation over time. The authors' transport modeling demonstrated that a 100-foot distance is typically required to achieve a safe 7-log (99.99999%) reduction in pathogen levels under standard groundwater flow conditions, though they note this buffer can fail if accelerated by nearby pumping wells or highly permeable soils. Virus Survival and Transport in Ground Water | Water Science & Technology | IWA Publishing

[5] See A. P. Blaschke et al., "Setback distances between small biological wastewater treatment systems and drinking water wells against virus contamination in alluvial aquifers," *Science of The Total Environment* 573 (2016): 278–289. Utilizing advanced numerical transport modeling in alluvial aquifers, this study demonstrates that a 100-foot setback represents the lower boundary of safety for preventing viral contamination. Setback distances between small biological wastewater treatment systems and drinking water wells against virus contamination in alluvial aquifers - ScienceDirect

The 100-foot setback from drainfields, the infiltrative area where effluent is released into the environment for final treatment, is widely accepted across many states' standards. Some states and municipalities have higher standards, typically where there is a need for greater protection due to more sensitive environmental conditions or hydrogeologic conditions.

Additionally, robust data are unavailable on the geographic distribution of OSS at risk of failure or needing maintenance. Some jurisdictions in Washington State have data, but most don't.

Data are currently insufficient to evaluate the potential impact of climate change in relation to contamination risk from OSS. Relevant climate change factors include flooding, increased precipitation, rising sea levels, and rising water tables. There are currently efforts at DOH to begin mapping OSS that are at risk of flooding around the Puget Sound; however, these are in early stages of development and several years out from providing conclusive information.

There is no scientific evidence demonstrating that this action will negatively impact an individual's or community's access to clean water. If the OSS malfunctions, the setbacks provide sufficient distance to protect the surface water intake. Also, the drinking water is treated by the drinking water system prior to distribution.

This action is unlikely to impact access to cultural foods and water recreation areas. Setbacks for other surface waters not used as a public drinking water source are currently the same as the setbacks proposed in this action. Additionally, local health jurisdictions (LHJs) in the Puget Sound region track OSS in relation to shellfish and water recreation areas. Tracking can include identifying focus areas where OSS are suspected to be contributing to water quality issues. In these areas, LHJs attempt to assess OSS that are out of compliance with inspection requirements to identify and correct failing systems. This map demonstrates how LHJs track compliance: https://clallam-county-portal-clallam.hub.arcgis.com/apps/81db3d6f0fbf4b8fbbba77643df49611/explore.

If the rulemaking action provides the needed clarification on the setbacks for surface water used for a public or non-public drinking water supply, a downstream consequence could be increased housing development along impacted river systems. Development along any shoreline results in increased human activity, which can cause environmental harm, but as noted above, there is no evidence that the setback requirement itself would have negative environmental impacts. Increased development may also have an unintended consequence of impacting property values and taxes, and pricing individuals out of geographic areas. Finally, development along shorelines can impact environmental health through the risks and impacts of flooding. While these downstream impacts are important to consider, they are not within the scope of this rulemaking project.

3. **Describe likely associated positive health impacts for overburdened communities, vulnerable populations, and tribes associated with this action.**

   The proposed setbacks to OSS components are expected to maintain water quality based

on current scientific evidence. It is unlikely that overburdened communities, vulnerable populations, and tribes will experience any positive health impacts related to this action. The setbacks established in 2024 have not been proven to provide additional health protection but are likely to increase monetary and opportunity costs for developers and property owners. This action reduces the potential for increased costs.

4. **Describe likely associated negative health impacts for overburdened communities, vulnerable populations, and tribes associated with this action.**

   The proposed setbacks to OSS components are expected to maintain water quality based on current scientific evidence. It is unlikely that overburdened communities, vulnerable populations, and tribes will experience any negative health impacts related to this action.

# Section 2: Identify Overburdened Communities and Vulnerable Populations

1. **Identify the geographic area(s) where there may be environmental and health impacts as a result of the agency action.**

   The reduced setbacks impact areas along rivers and around lakes where surface water is used as a public drinking water source. Scientific evidence demonstrates the action is protective of public and environmental health. Therefore, cities and towns using surface water as a public drinking water source that are downstream from land developed after the action are unlikely to experience health impacts to their drinking water supply related to this action.

2. **Describe overburdened communities[5] and vulnerable populations[6] identified within the geographic area(s) where there may be environmental and health impacts as a result of the agency action.**

   Overburdened communities and vulnerable populations may live in the cities and towns described in the previous answer. These communities may be socioeconomically disadvantaged rural communities.

   Geospatial data to support this analysis is limited such that meaningful visualization is not currently possible. Washington State has an abundance of surface water, and locations for intakes for surface water used as a public drinking water source are not publicly available. Additionally, spatial data for parcels available for development are not readily available either. To extend that further, spatial data for parcels that may have new OSS installed are similarly not available. Robust, systematic geospatial data collection at the jurisdictional and state level would be required to make this analysis and data visualization possible.

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[5] **Overburdened community** means a geographic area where vulnerable populations face combined, multiple environmental harms and health impacts, and includes, but is not limited to, highly impacted communities as defined in RCW 19.405.020.

[6] **Vulnerable populations** means population groups that are more likely to be at higher risk for poor health outcomes in response to environmental harms, due to: (i) Adverse socioeconomic factors, such as unemployment, high housing and transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes and increase vulnerability to the effects of environmental harms; and (ii) sensitivity factors, such as low birth weight and higher rates of hospitalization.

**Vulnerable populations** include but are not limited to:

(i) Racial or ethnic minorities;

(ii) Low-income populations;

(iii) Populations disproportionately impacted by environmental harms; and

(iv) Populations of workers experiencing environmental harms.

# Section 3: Tribal Engagement and Consultation

1. **Summarize tribal engagements and invitations for tribal consultation to date.**

   The State Board of Health Tribal Liaison sent Tribal leaders a Dear Tribal Leader Letter (DTLL) on March 9, 2026. Tribal organizations were alerted by email in March, April, and May. The American Indian Health Commission received updates during the board's monthly meetings in March, April, and May. There was a response to the Dear Tribal Leader Letter from the Quileute Tribe on March 10, 2026. Quileute Natural Resources were forwarded the DTLL and followed up directly with the Tribal Liaison. No other requests were made for information, workshops, or listening sessions.

   Tribal Leaders and Tribal representatives were invited to collaborate on the proposed rule. A Tribal workshop was not held, due to no further expressed comments. The board continued to share on-site sewage system updates and workshop information with all Tribal liaisons and identified Tribal representatives throughout the rulemaking process.

2. **Describe likely impacts to tribal rights and resources associated with this action.**

   A member of the board is a public health official of a federally recognized Tribe in Washington State. The Tribal Liaison spoke with this member on the potential impact of on-site septic systems near waterways, including risk to salmon, shellfish, and other natural resources, due to septic systems installed close to waterways.

3. **Summarize how information received from tribes and tribal organizations informed decision-making about this action.**

   The Quileute Tribe responded to the Dear Tribal Leader Letter sent March 9, 2026 by the Tribal Liaison. Tribal leaders are concerned about the removal of unintended water protections along a river's length instead of only drinking water source areas. They spoke about the cumulative effects of septic systems within a watershed and along river corridors. The Tribal Liaison and board policy advisor responded to Quileute with historical information.

4. **Describe any plans for ongoing and/or future tribal engagement after the publication of the EJ Assessment.**

   The Tribal Liaison will continue to engage with the Tribal representative assigned to the board, as well as the American Indian Health Commission, Governor's Office of Indian Affairs, and Tribes regarding on-site sewage systems and the environmental impact of these systems, such as setbacks and other developments. These ongoing conversations can drive future policy conversations related to on-site sewage systems.

# Section 4: Community Engagement Summary

1. **Summarize engagement with people from overburdened communities and vulnerable populations to date.**

   The board and department held a rules workshop on April 9, 2026 to solicit feedback on the draft rule language. All interested parties who subscribed to the OSS Program's GovDelivery listserv, as well as those who signed up for the board's listserv created for this rulemaking project, received an invitation to the workshop. The workshop was attended by members of the public, local health jurisdiction staff, a county commissioner, representatives of organizations such as the Washington On-Site Sewage Association and the Lower Hood Canal Watershed Coalition, as well as industry members.

   After the workshop, the board sent out a survey to all workshop participants to further gauge their preferences for the different rule language alternatives presented at the workshop.

   An informal comment period was held from May 6-20, 2026 to further gather feedback on the draft rules.

2. **Summarize information received from people from overburdened communities and vulnerable populations.**

   During the rules workshop, some of the workshop participants commented that all surface water, regardless of whether it is used as a drinking water source, should be treated the same in Table IV. Others expressed concern with this option, stating that doing so could be problematic and may create undesirable outcomes. This option would eliminate the existing 10-foot building sewer setback that currently applies to surface water not used as a drinking water source.

   The board determined that this option would be outside the scope of this rulemaking, as this project is scoped to address setbacks for surface water used as a public or non-public drinking water source.

   Additionally, during the workshop, the board presented a draft of the rule that would have listed the setbacks for surface water used as a public drinking water source on a separate row from the non-public drinking water source. The setback distances would have been the same. Survey results showed that interested parties preferred to combine the two rows into one.

3. **Summarize how information received from people from overburdened communities and vulnerable populations informed decision-making about this action.**

   As a result of the survey feedback, the proposed rules add one new row in Table IV, for surface water used as drinking water (public and nonpublic) measured from the ordinary high-water mark.

   No action was taken on treating all surface water the same, regardless of whether it is used as a drinking water source, since this was outside the scope of the rulemaking project. The comments that the board received on this topic have been retained for future rulemaking consideration.

4. **Describe any plans for ongoing engagement with people from overburdened communities and vulnerable populations after publication of the EJ Assessment.**

   There are no plans to engage overburdened communities and vulnerable populations after publication of this assessment.

# Section 5: Strategies to Address Environmental Harms and Equitably Distribute Environmental Benefits

1. **Which of the following strategies will the agency pursue to eliminate, reduce, or mitigate environmental harms and equitably distribute environmental benefits (check all that apply):**

   ☐ Eliminating the disparate impact of environmental harms on overburdened communities and vulnerable populations.

   ☐ Reducing cumulative environmental health impacts on overburdened communities or vulnerable populations.

   ☐ Preventing the action from adding to the cumulative environmental health impacts on overburdened communities or vulnerable populations.

   ☐ Providing opportunities for equitable participation and meaningful engagement of vulnerable populations and overburdened communities in the development of the significant agency action.

   ☐ Prioritizing equitable distribution of resources and benefits to overburdened communities.

   ☐ Promoting positive workforce and job outcomes for overburdened communities.

   ☐ Meeting community needs identified by the affected overburdened community.

   ☐ Modifying substantive regulatory or policy requirements

   Any other mitigation techniques, including those suggested by any one of the following:

   ☐ Environmental Justice Council

   ☐ Office of Equity

   ☐ Representatives of overburdened communities and/or vulnerable populations.

2. **Briefly describe the proposed method/approach for each strategy selected in Section 5, Question 1.**

   The action is unlikely to produce environmental harms or benefits. None of the strategies listed apply.

3. **Describe additional strategies the program has identified to eliminate, reduce, and/or mitigate harms and equitably distribute benefits.**

   The action is unlikely to produce environmental harms or benefits.

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