

---

**HOUSE BILL 1211**

---

**State of Washington**

**67th Legislature**

**2021 Regular Session**

**By** Representatives Dye, Graham, Walsh, Eslick, Chambers, Jacobsen, Schmick, Stokesbary, and Chase

Read first time 01/15/21. Referred to Committee on Environment & Energy.

1 AN ACT Relating to salmon-safe communities; adding a new section  
2 to chapter 90.48 RCW; and creating a new section.

3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

4 NEW SECTION. **Sec. 1.** (1) The legislature acknowledges the  
5 scientific consensus that there is a well-documented problem of urban  
6 heat islands. The buildings, roads, and infrastructure that make up  
7 urban environments make cities hotter than surrounding rural areas.  
8 The impervious surfaces used for roofs, streets, sidewalks, and  
9 parking lots can get much hotter than vegetated areas, causing  
10 surface temperatures in cities to be several degrees hotter in the  
11 midday than in rural areas. At night, these same materials release  
12 heat more slowly, keeping urban air temperatures higher than  
13 overnight temperatures in most rural areas.

14 (2) Cities tend to have fewer trees and less vegetation resulting  
15 in a deficit of shade to keep areas cool. Cities also have more  
16 industrial heat sources, including cars and air conditioners. Cities  
17 tend to have many more extremely hot days each year, on average, than  
18 nearby rural areas. According to one recent study, over the past 10  
19 years, cities had an average of at least eight more days over 90  
20 degrees Fahrenheit each summer, compared to nearby rural areas. The  
21 difference between urban and surrounding rural temperatures is also

1 widening; temperatures have been rising in urban areas faster than in  
2 the surrounding rural areas since 1970.

3 (3) The legislature finds that the phenomenon of urban heat  
4 island impact is detrimental to several significant and long-standing  
5 state policy goals, including the promotion of human health, energy  
6 conservation, and the preservation of water quality that sustains  
7 salmon. It is well understood that higher urban summer temperatures  
8 pose serious human health risks, and these health risks are  
9 inequitably distributed. Hotter urban summers can lead to increased  
10 energy demands to cool buildings, which runs counter to long-standing  
11 state policy of promoting energy conservation. Studies have also  
12 documented the impact of urban heat island on the temperature of  
13 streams. Streams draining through urban heat islands tend to be  
14 hotter than rural and forested streams because of warmer urban air  
15 and ground temperatures, paved surfaces, and decreased riparian  
16 canopy. Urban infrastructure routes runoff over hot impervious  
17 surfaces and through storm drains directly into streams and can lead  
18 to rapid, dramatic increases in temperature, which can be lethal to  
19 aquatic life.

20 (4) The legislature recognizes that this problem poses a threat  
21 that impacts the environment of our state. The Pacific Northwest,  
22 with its reputation for rain, is not immune to the urban heat island  
23 effect. Seattle is among the top 10 cities for most intense urban  
24 heat island effect, with greater than four degrees Fahrenheit  
25 difference between the city and nearby rural areas. Portland, Oregon  
26 was among the top 10 cities with the most intense summer nighttime  
27 urban heat island over the past 10 years.

28 (5) Therefore, the legislature intends with this act to utilize  
29 the existing framework of general municipal stormwater permits to  
30 encourage a comprehensive strategy to measure and reduce the impact  
31 of urban heat island effect on salmon, with cobenefits of energy  
32 conservation and improved equity in human health.

33 NEW SECTION. **Sec. 2.** A new section is added to chapter 90.48  
34 RCW to read as follows:

35 (1) The national pollutant discharge elimination system municipal  
36 stormwater general permit issued by the department to a permittee  
37 described in subsection (4) of this section must require the  
38 permittee subject to that permit to monitor and report annually on  
39 the impact of the urban heat island effect on the temperature of

1 salmon-bearing streams, rivers, and waterbodies in the permit  
2 jurisdiction including, at a minimum, the following information as  
3 part of the permittee's ongoing reporting obligation under the  
4 permit:

5 (a) Using data obtained from the department of fish and wildlife,  
6 the amount of the land base within the permittee's jurisdiction, on  
7 both a percentage basis and an overall acreage basis, that is an  
8 impervious surface, and how that percentage and overall acreage has  
9 changed since the issuance of the previous permit;

10 (b) Using data obtained from the department of fish and wildlife,  
11 the amount of the land base within the permittee's jurisdiction, on  
12 both a percentage basis and an overall acreage basis, that is covered  
13 by tree or other vegetation canopy, and how that percentage and  
14 overall acreage has changed since the issuance of the previous  
15 permit;

16 (c) Using the formula developed by the department, which must be  
17 designed to cost-effectively capture a representative range of stream  
18 temperatures, the monthly median temperature of all waterbodies  
19 within the permittee's jurisdiction that have been designated as  
20 critical habitat under the federal endangered species act for salmon,  
21 steelhead, or bull trout, and how those monthly median temperatures  
22 have changed since the issuance of the previous permit;

23 (d) A narrative description of factors in addition to urban heat  
24 islands that may have had a measurable impact on the temperature of  
25 all waterbodies within the permittee's jurisdiction that have been  
26 designated as critical habitat under the federal endangered species  
27 act for salmon, steelhead, or bull trout in the report year; and

28 (e) A description of the permittee's approach to reducing the  
29 impact of the urban heat island effect on waterbodies within the  
30 permittee's jurisdiction.

31 (2) Within three months subsequent to an annual report submitted  
32 in compliance with this section, the department shall issue the  
33 following awards in recognition of the permittee or permittees whose  
34 work over the course of the year to address the urban heat island  
35 effect best demonstrates innovation and achievement in each of the  
36 individual award areas:

37 (a) An award for innovative urban forest conservation and  
38 sustainability programs designed to reduce power loads during peak  
39 heat and cold weather events, and documenting greenhouse gas  
40 emissions reductions, reduced stormwater runoff, and water quality

1 improvements as a result of new urban forestry design and implemented  
2 practices;

3 (b) An award for the most effective vertical garden installation,  
4 or programs that produce significant adoption of vertical gardens,  
5 with focus on stormwater capture and use and the reduction of  
6 greenhouse gas emissions due to reduced power demand;

7 (c) An award to recognize the implementation of innovative green  
8 roof programs that increase the adoption of green roof technology  
9 emphasizing stormwater runoff reductions, stormwater reuse, and local  
10 and sustainable fresh produce and fruit production in the most  
11 impacted areas of urban heat islands;

12 (d) An award for the newest and most innovative development of  
13 reflective roof technology based on effectiveness of reducing  
14 stormwater runoff temperature and reductions in greenhouse gas  
15 emissions based on reduced energy usage;

16 (e) An award for the most innovative use of permeable pavement  
17 technology and adoption of permeable surfaces in locations most  
18 impactful to water quality improvements needed to improve salmon  
19 habitat; and

20 (f) An award for restoring streams from pipes and buried  
21 locations under the urban core to natural channels, restoring natural  
22 environments within urban canyons, and providing natural cooling and  
23 filtration of water within those streams.

24 (3) Beginning in 2025 and continuing every year thereafter, the  
25 department, in consultation with the department of fish and wildlife,  
26 may award one or more permittees with the designation of "salmon-safe  
27 community" for that year, based on the permittee's achievements  
28 within the following performance metrics:

29 (a) The permittee's reporting and monitoring comply with the  
30 letter and spirit of this section;

31 (b) The permittee has made objectively quantifiable progress with  
32 regard to implementing the urban heat island mitigation strategies  
33 identified in subsection (2) of this section; and

34 (c) The permittee has achieved measurable gains toward salmon  
35 recovery in the waterbodies within its jurisdiction.

36 (4) The requirements of this section apply to local governments  
37 operating under the national pollutant discharge elimination system  
38 phase I municipal stormwater permit administered by the department.

--- END ---