
HOUSE BILL 1381

State of Washington

68th Legislature

2023 Regular Session

By Representatives Dye, Lekanoff, and Pollet

Read first time 01/17/23. 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 2027 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.

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