



Physical Environment

Community Health Assessment Priority Seven: Mason County's physical environment supports healthy people and vibrant economies that honor culture and heritage.

Rationale: The health of Mason County residents as well as the local economy is dependent upon the health of our physical environment. Aquaculture is one of the leading industry sectors in this community, and it is dependent upon healthy marine waters. These same healthy marine waters provide quality recreational activities for citizens. Access to physical activity opportunities, both indoors and outdoors, also play a role in creating health for individual citizens. (1)

Moving Mason Forward Goals

Our marine environment supports a healthy aquaculture economy

The commercial shellfish industry is a critical contributor to Mason County's economic health. The Washington State Department of Health monitors 300 marine water stations in 18 classified commercial shellfish growing areas in Mason County.

Status of Commercial Shellfish Harvest Areas 2002-2017 (2)

Growing area Status	# acres in 2002	# acres in 2005	# acres in 2010	# acres in 2015	# acres in 2017	% Change 2002-2017
Approved	18,502	19,971	21,359	23,036	25,311	↑ 37%
Conditional	1,516	1,452	1,540	824	2,108	↑ 39%
Prohibited	2,054	2,177	1,598	1,325	1,832	↓10%
Total Area	22,072	23,600	24,497	25,195	29,251	↑ 33%

Notes: Starting in 2015 the Prohibited category includes " Prohibited" and "Restricted"

A vibrant aquaculture is dependent upon marine water quality. Mason County Environmental Health implemented an O&M (Operations and Management) program in 2004. The purpose of the O&M program is to assist homeowners with proper maintenance of individual on-site septic systems.

Mason County's O&M program activities and On-site Sewage Permits (3)

Activity	# in 2010	# in 2015	# in 2016	# in 2017	% Change 2010-2017
Participation in O&M Program	25,297	25,768	25,857	26,074	↑ 3%
On-site systems maintained	3,913	11,524	7,442	6,260	↑ 60%
On-site sewage permits issued	301	314	389	407	↑ 35%

Our citizens enjoy healthy recreational activities

Mason County provides 218 miles of marine shoreline. In 2017, there were a total of 29 public beaches available to recreational shellfish harvesting.

Status of Recreational Shellfish Harvest Areas 2005-2017 (4)

Status	% in 2005	% in 2010	% in 2015	# in 2017	% in 2017
Open	30%	66%	43%	20	69%
Conditional	20%	22%	3%	4	14%
Closed	3%	13%	54%	5	17%

The built environment has an important role in encouraging physical activity. Individuals who live closer to sidewalks, parks, and gyms are more likely to exercise.

Percent of Population that has Easy Access* to Exercise Opportunities (1)

Area	2014	2015	2016	2017
Mason County	62%	69%	68%	68%
Washington State	82%	89%	88%	88%

Notes: * Easy access to exercise opportunities measures the % of individuals who live within a half mile of a park or 3 miles of a recreational facilities.

Our citizens have safe drinking water and food

Mason County residents receive their drinking water from three sources: Community Group A systems, Community Group B systems, or private wells. The state requires Community Group A to meet regular water quality monitoring standards. Homeowners, who rely on Group B and private wells, are responsible for monitoring their own drinking water systems.

Community Group A Drinking Water Systems Testing Results 2003-2017⁽⁵⁾

Parameter	2003	2005	2010	2015	2017
Number of systems	98	220	232	264	228
# of Green Permit systems	91	153	180	193	179
% of all Group A systems with Green Permits	93%	70%	78%	73%	79%
# of Yellow Operating Permit systems	NA	63	1	1	N/A
# of Blue Operating Permit systems	NA	4	51	66	48
# of Red Operating Permit systems	4	0	0	4	1

Notes:
Green Operating Permit: in substantial compliance with ALL state requirements
Yellow Operating Permit: in compliance with all requirements, except water system has not satisfied planning requirement and/or has a state significant non-complier violation
Blue Operating Permit: in compliance with requirements, except system does not meet design approval requirements
Red Operating Permit: substantial non-compliance with state water quality requirements.

Mason County Public Health ensures food safety by inspecting food service establishments and temporary event food booths as well as making sure food workers have obtained the state required food worker card. A total of 2,963 food worker cards were issued to Mason County citizens in 2017.

Outcomes of Food Safety Activities, 2004-2017 (3)

Activity	# in 2004	# in 2005	# in 2010	# in 2015	# in 2016	# in 2017
Routine Food Inspections	401	343	258	361	414	394
Temporary Food Inspections	128	136	173	78	100	129
Investigated Complaints for food-related Illnesses	22	35	5	6	18	15
Confirmed Outbreaks	0	0	0	0	0	0

Our citizens benefit from clean air

The relationships between air pollution and poor health outcomes have been well documented. Unsafe levels of air pollution have can lead to decreased lung function, chronic bronchitis, asthma and other adverse pulmonary effects. In Mason County, the main source of particulate matter is wood burning fire emissions. Forest fires are also a source of particulate matter.

Air Pollution – Particulate Matter Density (6)

Area	2013	2014	2015	2016	2017*
Mason County	7.6	5.7	6.0	5.3	6.3
Washington State	6.7	6.0	7.0	5.0	7.3

Notes: Particulate Matter is the average daily density of fine particulate matter in micrograms per cubic meter (PM2.5%).
*Higher values in 2017 are largely due to wildfire events

Air Pollution – Particulate Matter Days (6)

Area	2010	2011	2012	2013	2014	2015	2016	2017*
Mason County	4	7	9	11	1	3	1	7
Washington State	4	8	9	11	7	10	3	16

Notes: This is a measure of the annual number of days that air quality was unhealthy for sensitive populations due to fine particulate matter (FPM, < 2.5 µm in diameter)
*Higher values in 2017 are largely due to wildfire events

Data Sources for Physical Environment

- (1) County Health rankings, University of Wisconsin. www.countyhealthrankings.org
- (2) WA Department of Health – Commercial Shellfish Program.
<https://fortress.wa.gov/doh/eh/maps/OSWPViewer/index.html>
- (3) Mason County Department of Health Services – Environmental Health
<http://www.co.mason.wa.us/health/environmental/index.php>
- (4) WA Department of Health – Recreational Shellfish Program.
<https://fortress.wa.gov/doh/eh/maps/biotoxin/biotoxin.html>
- (5) Washington State Water Quality Program.
<https://fortress.wa.gov/doh/eh/portal/odw/si/ReportParameter.aspx?RptId=24>
- (6) Olympic Regional Clean Air Agency. <https://www.orcaa.org/>

Questions about the data can be directed to
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