



## Chapter WAC 246-366A Environmental Health and Safety Standards for Schools

### Summary of June 2009 Cost/ Benefit Analysis

The current framework in chapter 246-366 WAC Primary and Secondary Schools has been in place since 1971 when the last comprehensive revisions to the rules were made. These rules apply to 295 public school districts with approximately 2,300 school facilities as well as approximately 450 private schools. This chapter revision would repeal the current chapter 246-366 WAC and replace it with new chapter 246-366A, when allowed by the Legislature.

Children are more vulnerable to hazards in the environment than adults. Children spend approximately 1,300 hours a year in school, which is why it is critical that schools are designed and maintained to protect children.

### Highlights of the new rule requirements

Indoor air quality. According to the "Burden of Asthma in Washington State," there are 120,000 children with asthma in Washington. Poor indoor air quality means higher levels of allergens and asthma triggers leading to increased respiratory symptoms as well as lost school days. The new rules include several measures to help improve indoor air quality: (1) A new section on moisture and mold prevention; (2) Upgrading carpets, if used, to tightly woven, water impervious backed carpet that is easily cleanable and helps prevent mold; (3) Revised heating and ventilating standards.

Water quality testing. From December 2004 until June 2005, the Office of Superintendent of Public Instruction and Department of Health administered a grant program to partially reimburse Washington elementary schools for the cost of testing for lead in their drinking water. A total of 7,728 samples were submitted by 455 different schools. Of the 7,728 samples collected, 559 or 7.2 percent were at or above 20 parts per billion. In sampling by Seattle schools, copper levels were found to exceed the action level of 1.3 milligrams per liter one percent of the time. The new rules require sampling drinking water fixtures for lead and copper, and when excessive levels are found, schools must address the problems.

Safety on playgrounds, laboratories, and shops. National data indicate an estimated 2.2 million children ages 14 or younger sustain school-related injuries each year with 200,000 emergency room visits for playground injuries. Further, laboratories and shops pose a risk to older children. Information from Utah indicates that approximately 7 percent of school injuries occur in shops. The new rules include requirements that playgrounds, laboratories, and shops are constructed and maintained to minimize these risks.

### Costs

The new rules are reorganized compared to the old rules to make a clear distinction between construction requirements, required for new and remodeled facilities, and operation requirements, required for all schools.

### Construction costs for the new requirements

School Type	Size of Representative School (sq/ft)	Total Additional Cost	Additional Cost per Square Foot
Elementary	65,000	\$317,850	\$4.89
Middle/Junior	95,000	\$519,650	\$5.47
Senior High	225,000	\$960,750	\$4.27

According to *Construction Bid Summaries from 1989 - 2007* available on the OSPI website, the average new school construction costs in 2007 for each type of school were:

Elementary: \$16,033,725 or \$274.91 per square foot;  
 Middle/Junior High: \$21,278,427 or \$225.94 per square foot; and  
 Senior High: \$26,299,133 or \$249.91 per square foot

Comparing the assumed cost increases of the proposed rule for new schools to the average 2007 cost results in increases for each type of school as follows:

Elementary: 1.8 percent cost increase per square foot;  
 Middle/Junior High: 2.4 percent cost increase per square foot; and  
 Senior High: 1.7 percent cost increase per square foot.

### Operation & maintenance costs for the new requirements

School Type	Start-up Cost per School	Start-up Cost per Student	Annual Ongoing Costs per School	Annual Ongoing Costs per Student
Elementary	\$13,400	\$27.40	\$9,042	\$18.49
Middle/Junior High	\$11,812	\$17.17	\$7,239	\$10.52
Senior High	\$14,838	\$10.29	\$9,868	\$6.84

According to School District and ESD *Financial Reporting Summary for Fiscal Year 06-07*, available on the OSPI website, the average operation and maintenance cost in 2007 for all school types was \$750.35 per student.

Comparing the assumed operation and maintenance start-up cost increases of the proposed rule to the average 2007 costs results in increases for each type of school as follows:

Elementary: 3.7 percent cost increase per student;  
 Middle/Junior High: 2.3 percent cost increase per student; and  
 Senior High: 1.4 percent cost increase per student.

Comparing the assumed operation and maintenance ongoing cost increases of the proposed rule to the average 2007 costs results in increases for each type of school as follows:

Elementary: 2.5 percent cost increase per student;  
 Middle/Junior High: 1.4 percent cost increase per student; and  
 Senior High: 0.9 percent cost increase per student.

### Benefits

The three major problems identified by the rule review and the School Rule Development Committee included: Indoor air quality; safety for playgrounds, laboratories and shops; and drinking water quality.

The benefits related to the rule changes that address these problems are:

Improved indoor air quality: \$25,296,000 annually;  
 Increased safety: \$43,000,000 annually; and  
 Improved water quality: Improved mental development measured in I.Q. points.