

BOARD OF EDUCATION

Portland Public Schools

REGULAR MEETING**MONDAY, February 6, 2017****Board Auditorium**

Blanchard Education Service Center

501 N. Dixon Street

Portland, Oregon 97227

Note: Those wishing to speak before the School Board should sign the public comment sheet prior to the start of the meeting. No additional speakers will be accepted after the sign-in sheet is removed, but testifiers are welcome to sign up for the next meeting. While the School Board wants to hear from the public, comments must be limited to three minutes. All those testifying must abide by the Board's Rules of Conduct for Board meetings.

Public comment related to an action item on the agenda will be heard immediately following staff presentation on that issue. Public comment on all other matters will be heard during the "Public Comment" time.

This meeting may be taped and televised by the media.

AGENDA

- | | | |
|----|-----------------------------------------------------------------------------------------------|----------|
| 1. | <u>STUDENT TESTIMONY</u> | 7:00 pm |
| 2. | <u>PUBLIC COMMENT</u> | 7:15 pm |
| 3. | <u>RECOGNITION: TRANSPORTATION SERVICES</u> | 7:35 pm |
| 3. | <u>UPDATE: MAKER SPACE</u> | 7:45 pm |
| 4. | <u>SUPERINTENDENT'S BOUNDARY CHANGE RECOMMENDATION:
PENINSULA AND CHIEF JOSEPH</u> | 8:15 pm |
| 6. | <u>ENVIRONMENTAL HEALTH AND SAFETY GAP ANALYSIS</u> | 9:00 pm |
| 7. | <u>BUSINESS AGENDA</u> | 9:45 pm |
| 8. | <u>ADJOURN</u> | 10:00 pm |

Portland Public Schools Nondiscrimination Statement

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Office of Teaching & Learning

Chris Russo, Assistant Superintendent

To: Portland Public Schools Board of Directors
From: Glennon T. Stratton
Sponsor: Vân Truong
Date: 12/7/16
Subject: MakerSpace

SUMMARY:

Current Status of Bond MakerSpaces:

There are three bond funded makerspaces that are currently operating at PPS schools. **Faubion School** is operating in the Tubman Campus, **Franklin High School** is operating in the Marshall Campus, and **Roosevelt High School** in the new building. To support the system wide STEAM curriculum, each makerspace has been equipped with tools and technology that are not found in a typical classroom. Examples of this equipment are Computer Numeric Coding Machines, Laser Cutters, 3-D Printers, Vinyl Cutters, computing devices with software, hand tools, and more.

The new makerspaces at the **Faubion School** and **Franklin High School** are on track to open on time at the beginning of the 2017-18. Additionally, the **Grant High School** Makerspace and the **District MakerSpace Hub at Roosevelt High School** projects are currently on schedule.

The goals for the **District MakerSpace Hub** are to serve as a hub for all PPS MakerSpaces, to serve as a location for the 7th Grade Maker Experience, to provide district-wide makerspace training, and to support the local community.

The three existing makerspaces are currently serving Pre-K through 12th grade students with immersive hands on learning experiences that are tied to the standards of their core classrooms while infusing STEAM concepts. Each makerspace is led by an Industrial Technical Assistant and supported by a Project Manager.

MakerSpace Professional Development:

Three Industrial Technical Assistants were hired during the 2015-16 school year and each have received introductory equipment training, guidance on the implementation of makerspace theories, practices, and culture that enable students to have STEAM hands on learning experiences that infuse the design cycle and processes.

The MakerSpace Project Manager has coordinated several of training opportunities for a variety of staff members including the Industrial Technical Assistants, Teachers, Teachers on Special Assignment, and Administrators during the fall of 2016. These trainings have included an introduction to the Roosevelt High School MakerSpace for all RHS staff, equipment specific training for the Industrial Technical Assistants, and a MakerSpace Professional Development cohort that is focused pedagogy for 24 teachers, six from each of the four makerspace campuses. Due to the importance of these trainings, the Project Manager has collaborated with staff from the offices of Teaching and Learning, Instruction, Curriculum, and Assessment and Career and Technical Education to ensure that all trainings align to the vision and instructional needs of the district staff. Additionally, there are online resources for all PPS staff to share, collaborate, and learn from each other via Google+. Lastly, senior staff and board members are participating in site visits of makerspaces to learn best practices, make contacts, and to improve our spaces.



Office of Teaching & Learning

Chris Russo, Assistant Superintendent

BACKGROUND INFO:

The Board of Directors adopted the PPS MakerSpace Vision: MakerSpace is a place for students to experiment, model, discover, construct, and design with the support of tools and technology not found in a typical classroom. Additionally, the Board of Directors approved the creation of four school site makerspaces and one District Hub Makerspace as part of the 2012 Bond.

The MakerSpace Vision was designed to support the implementation of the district wide STEAM Vision: PPS believes dynamic problem-solving and contextualized learning experiences that require a deep level of thinking will optimize student engagement and be a catalyst critical for closing the racial, linguistic, and economic opportunity gaps. Integrative STEAM emphasizes a transformative approach to instruction that provides hands-on, experiential, and cross-curricular teaching and learning opportunities for all students. The PPS STEAM Framework was created by the STEAM Advisory Committee. The beauty of the makerspaces is that the spaces are being used to infuse STEAM practices into non-traditional STEAM classes including language arts, foreign languages, Special Education, AVID, culinary arts, ceramics, history, theatre and others. Additionally, these hands-on design projects are giving the students an opportunity to explore potential career paths that could be supported by Career and Technical Education.

As a point of clarity, the MakerSpaces discussed in this report are not directly associated with the 7th Grade Maker Experience which is an initiative being led by Office of Career and Technical Education.

Financial Implications:

Based on the information above and the data gathered, we recommend the following to continue the success of the makerspaces that were supported by the 2012 bond:

1. Continued MakerSpace Professional Development
2. Hiring a MakerSpace TOSA
3. Creating a cohesive strategy to incorporate supplemental makerspace uses (summer, after-school)
4. Develop an Advisory Committee to further develop the plans and vision for the MakerSpace Hub



Office of Teaching & Learning

Chris Russo, Assistant Superintendent

Comprehensive MakerSpace Budget Summary	2016/17	2017/18	2018/19	Assumptions
Grand Total	\$369,490	\$1,384,587	\$1,453,180	
Funding Source: Bond				
Budget ITEM Summary	2016/17	2017/18	2018/19	
Staff	\$12,500	\$12,500	\$12,500	
Facilities	\$0	\$465,325	\$89,817	Assumes MakerSpace Hub in 2017/18 and Grant HS in 2018/19
Bond Total	\$12,500	\$477,825	\$102,317	
Funding Source: General Fund				
Budget ITEM Summary	2016/17	2017/18	2018/19	
Staff (Project Managers, TOSAs, and ITAs)	\$261,243	\$639,515	\$1,062,532	Assumes increased staffing to support MakerSpaces
PD Subs/Hrs (sub-total)	\$25,747	\$72,247	\$69,997	
Professional Development Facilitation (sub-total)	\$18,000	\$32,000	\$32,000	
Travel (site visits)	\$40,000	\$40,000	\$83,333	
Other (sub-total)	\$12,000	\$43,000	\$103,000	
Supplemental MakerSpace Uses	\$0	\$80,000	\$100,000	Assumes 4 summer/after-school programs in 17/18 and 5 programs in 18/19
General Fund Total	\$356,990	\$906,762	\$1,350,863	



Board of Education Informational Report

MEMORANDUM

Date: January 31, 2017

To: Members of the Board of Education

From: Interim Superintendent Robert McKean

Subject: Boundary change recommendation for Chief Joseph and Peninsula Elementary Schools

This memo contains a recommendation for a boundary change between Chief Joseph and Peninsula elementary schools. The change would begin at the start of the 2017-18 school year for incoming kindergartners and other new students. The boundary change will complete implementation of the Ockley Green Middle School which opened in August 2016. There is strong potential for additional boundary changes and program shifts in future years, and this proposed boundary change would be very probable even if it were postponed to a later year. Implementing the change in 2017 will make a positive difference at three schools:

- Chief Joseph Elementary School will have enough space to hold 5th grade next year, returning the school to a K-5 configuration.
- Peninsula Elementary School will grow and be able to sustain programming for its students with less reliance on non-formula district funding.
- Ockley Green will not have to house Chief Joseph 5th grade next year, making more space for students in grades 6-8.

Background

PPS is in the second year of implementing a district-wide enrollment balancing initiative intended to improve equitable access to programs and make room for our growing population. The first phase of the plan included opening Ockley Green Middle School in August 2016 and reconfiguring four feeder schools to K-5 structures. Additional middle schools will convert and open across the eastside of the district beginning in 2018, creating over the coming years a mostly K-5 and middle school structure. Detailed plans for reconfigurations, boundary changes and program locations are developed with the assistance of the District-wide Boundary Review Advisory Committee (DBRAC), a volunteer group who receive training in enrollment balancing issues and report their recommendations to the superintendent.

During fall 2016, DBRAC considered several options to address enrollment challenges at Ockley Green and elementary feeder schools: Beach (which includes both a neighborhood English-only and a Spanish Dual Language Immersion program), Chief Joseph, Peninsula and Woodlawn. The committee met nine times, including three Saturday work sessions, and held eight listening sessions before offering their written recommendation to me on January 13, 2017. I am extremely grateful for their diligence, commitment and well thought out advice.

In their January 13th memo, DBRAC describes a dilemma for their work and for the district: the desire to make one sweeping, holistic set of changes across the eastside of the district versus addressing immediate issues to complete the changes begun at Ockley Green and feeder schools last year. The committee chose to defer a number of major enrollment changes to the next round of enrollment balancing, including the possible relocation of the Beach Spanish Immersion program and conversion from a boundary system to an individual student assignment system. DBRAC would like to begin working on the next major round of enrollment balancing and middle school implementation in Spring 2017. That work should be timed to start after the outcome of a potential school modernization bond is known.

Analysis of DBRAC options

DBRAC offered two ways to address the most urgent issues left unresolved when Ockley Green and feeder schools opened this school year. Chief Joseph and Ockley Green had been a combined K-8 school split across two campuses, with grades K-3 housed at Chief Joseph and grades 4-8 at Ockley Green. The transition to K-5 and 6-8 structures was phased in this year, with Chief Joseph 5th graders remaining on the Ockley Green campus. Both options proposed by DBRAC moved the Chief Joseph 5th grade out of Ockley Green and added students to Peninsula, the smallest elementary school in the Ockley Green feeder pattern, but through different methods:

- Boundary change: Shift the portion of the Chief Joseph boundary north of Lombard Street to Peninsula Elementary School. Beginning the change at kindergarten next year would cause only a small adjustment in enrollment, but would free up one classroom and make space for the 4th graders currently at Chief Joseph to remain for 5th grade. Over five years Peninsula would grow by approximately 64 students.
- Grade-level change: Chief Joseph 5th grade would be held at Peninsula next year, doubling the size of 5th grade at Peninsula. Chief Joseph would remain a K-4 next year. The grade level move would likely be for one year only, until more comprehensive changes could be implemented as part of the overall east side process.

There are benefits and risks with both options. The grade level change would allow 5th graders from both schools to get to know each other before moving to Ockley Green the following year. However, the Chief Joseph students would be at Peninsula for only one year so wouldn't contribute to the long-term growth of that small school. Transportation costs would be higher with this option and student nutrition programs at Peninsula, such as free breakfast for all, would be jeopardized.

The proposed boundary change would directly impact only a small group of students next year and would allow both Chief Joseph and Peninsula to move toward the grade structures and sizes they were planned to be. However, many DBRAC members felt that any boundary lines in this area could be potentially redrawn next year, causing additional upheaval for the same families who already experienced change. They noted, as well, that Chief Joseph would become less racially and economically diverse with the boundary shift, while Peninsula would maintain higher rates of historically underserved students. Some saw the concentration of poverty at Peninsula as a concern, while others noted that the change may help the school maintain Title I funding.

Recommendation

After weighing the advice of DBRAC, as well as reviewing input from school principals, community members and district staff, I have decided to forward the boundary change option as my recommendation. While I see some advantages of moving the 5th grade, I am concerned

about the short-term nature of the change. Chief Joseph 5th grade students would have an additional school transition, and Peninsula would adjust programming to welcome and serve a cohort of students for only one year. All the while the same boundary change—or one very close to it—would very probably be implemented the following year. Making the boundary change now will set both Chief Joseph and Peninsula on more sustainable paths, and does not prevent either school from being involved in the larger set of changes that will be considered in the future

Boundary change details

The attached map shows the location of the boundary change area. This neighborhood has been part of the Chief Joseph and Ockley Green boundaries since Kenton Elementary School closed in 2004. Ockley Green will remain the middle school serving the Kenton neighborhood. Students will have a choice of enrolling in either Roosevelt or Jefferson Middle College for Advanced Studies for high school.

PPS policy directs that boundary change begins with new students only, that is, kindergartners or students in other grades who are new to the neighborhood. I am not recommending a change from that implementation plan. Proposed enrollment impacts of the boundary change are described on the accompanying tables.

This proposal allows Ockley Green to operate as a standard middle school, serving grades 6 through 8 only next year. Community members and DBRAC raised concerns that Ockley Green will continue to be crowded in the future. To try and mitigate this concern, we are investigating facility adjustments to maximize use of instructional space. We will also limit transfers into Ockley Green for students who do not live in the feeder pattern, giving priority to those who were formally neighborhood students and those who are affected by the closure of SEI Academy.

Next steps

I will formally present this recommendation to you on February 6, 2017. You are scheduled to vote on the recommendation February 13, 2017. This timeline allows for the final changes you decide to be included in the school staffing process, and for other implementation planning, including transportation routes, program scheduling and nutrition services changes.

Staff will send notification of the boundary change proposal and timeline for decision through a variety of methods: regular mail, school e-mail listserves, the PPS website, student backpacks, phone calls to families who speak another language at home and through childcare providers and community partners. Target audiences are families who live in the Kenton neighborhood, as well as the broader Chief Joseph, Peninsula and Ockley Green communities.

Please forward questions about this proposal at your earliest convenience, so that you receive information in time to assist your decision-making.

Attachments:

- Recommendations map
- Key Performance Indicators
- Expected Kindergarten Enrollment
- Geographic Subsection Demographics
- Boundary Change Impacts



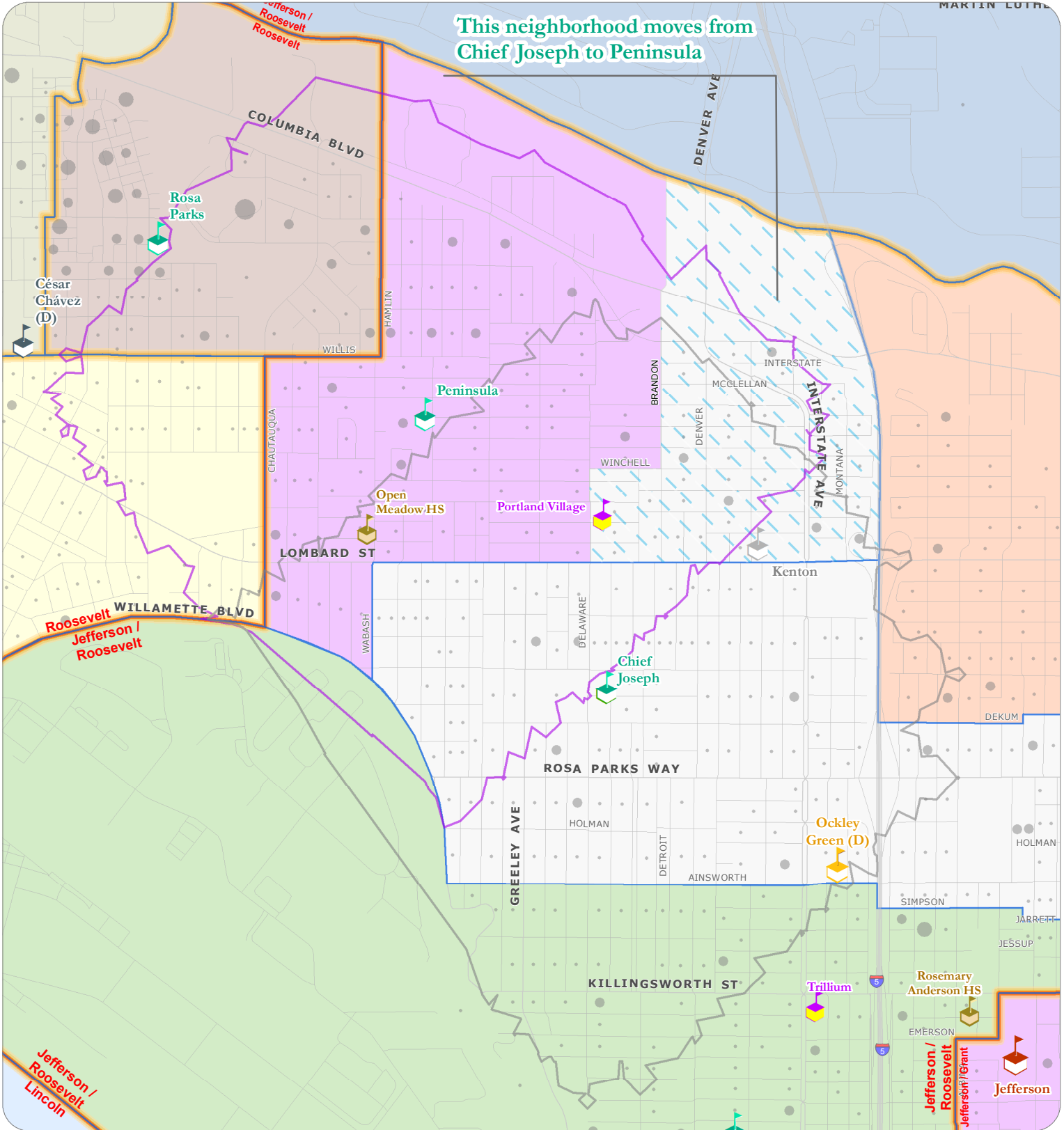
Interim Superintendent's Boundary Change Option for Chief Joseph and Peninsula Elementary Schools

DRAFT

This neighborhood moves from Chief Joseph to Peninsula

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Legend

School Types Shown by Grade

- High
- Middle
- K-5
- K-8
- Other Use

- Alternative Schools
- Charter Schools
- Focus Option
- Dual Language Immersion Site

- K-5 Boundaries
- K-5 boundary proposed for change
- 6-8 Boundaries
- HS Boundaries

Current K-5/K-8 boundaries color-blocked for comparison

K-5 Student Counts 2016-17

- 1 - 5
- 6 - 20
- 21 - 50
- 51 - 80
- 81 - 123

1-Mile Walking Radius

- Chief Joseph
- Peninsula

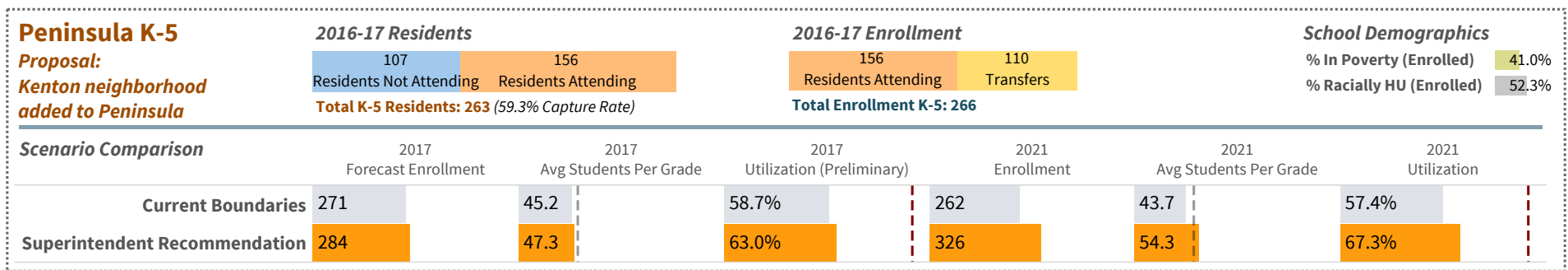
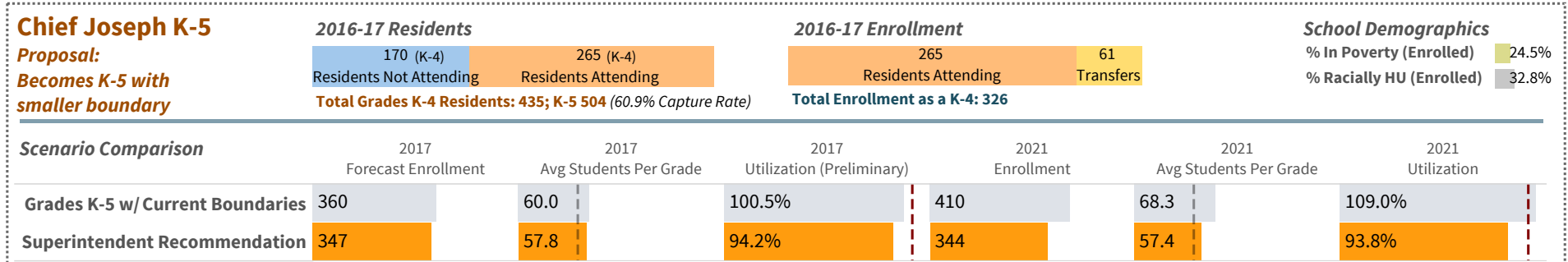
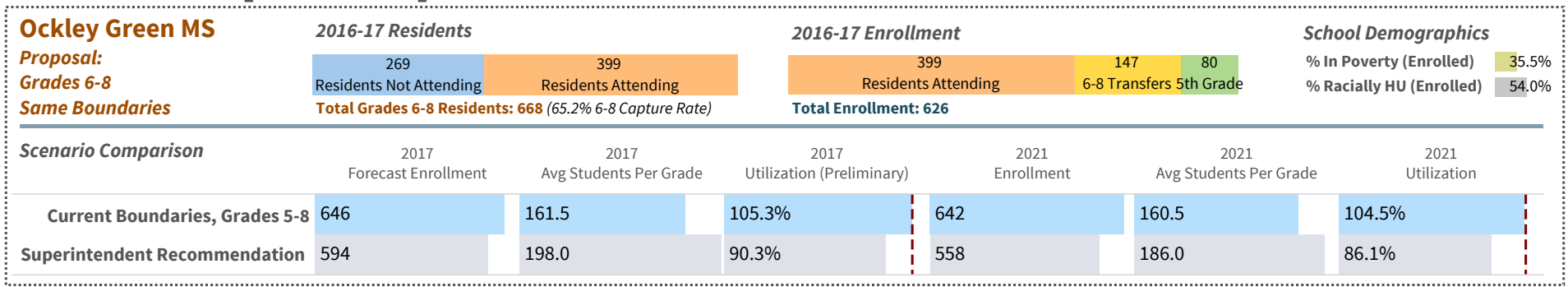


Miles

0

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Enrollment Comparison - Superintendent's Recommendation - DRAFT FOR DISCUSSION 1.30.17



Neighborhood Demographic Comparison

	Chief Joseph - K-5		Kenton Neighborhood Current Boundaries	Peninsula K-5	
	Neighborhood Current Boundaries (Includes Kenton)	Superintendent Recommendation		Neighborhood Current Boundaries	Superintendent Recommendation (Includes Kenton)
Historically Underserved Race	32.8%	30.1%	42.7%	46.8%	45.6%
Free Meals by Direct Certification	23.3%	20.2%	34.5%	26.6%	29.0%
Special Education	16.8%	14.1%	26.4%	16.3%	19.3%
English Language Learners	6.1%	5.8%	7.8%	7.2%	7.2%

Notes.
 - % Racially HU is Historically Underserved by race/ethnicity, including Black, Latino, Native American, Pacific Islander, and students identifying as multiple races including one of the above in the neighborhood, including students not attending their neighborhood school.
 % in Poverty is the number of students in the neighborhood who qualify for free meals through direct certification by the State of Oregon in 2016-17.
 - 2021 enrollment is the approximate enrollment if the boundary change had been fully implemented for the 2021-22 school year. As PPS policy and DBRAC recommendations support allowing students to remain at their current school until the highest grade, this number is for comparative purposes, not a projection of actual enrollment for the upcoming school year.
 - 2017 enrollment is based on PSU Population Research Center forecasts (updated December 16, 2016) for 2017-18 and assumes implementation beginning at KG. Assumes Ockley Green serves grades 6-8 and transfers remaining with cohort but limited to hardship requests including former neighborhood students and siblings. Resident/enrollment bars are not to scale.

Expected Kindergarden Enrollment by Draft Option

Table 1: 2017-18 Kindergarden neighborhood enrollment forecasts by geographic subsection

Subsection	1	2	3	4	5	6
2017-18 KG Enrollment	38	2	30	13	5	7

Table 2: Expected Kindergarden transfers (2017-18)

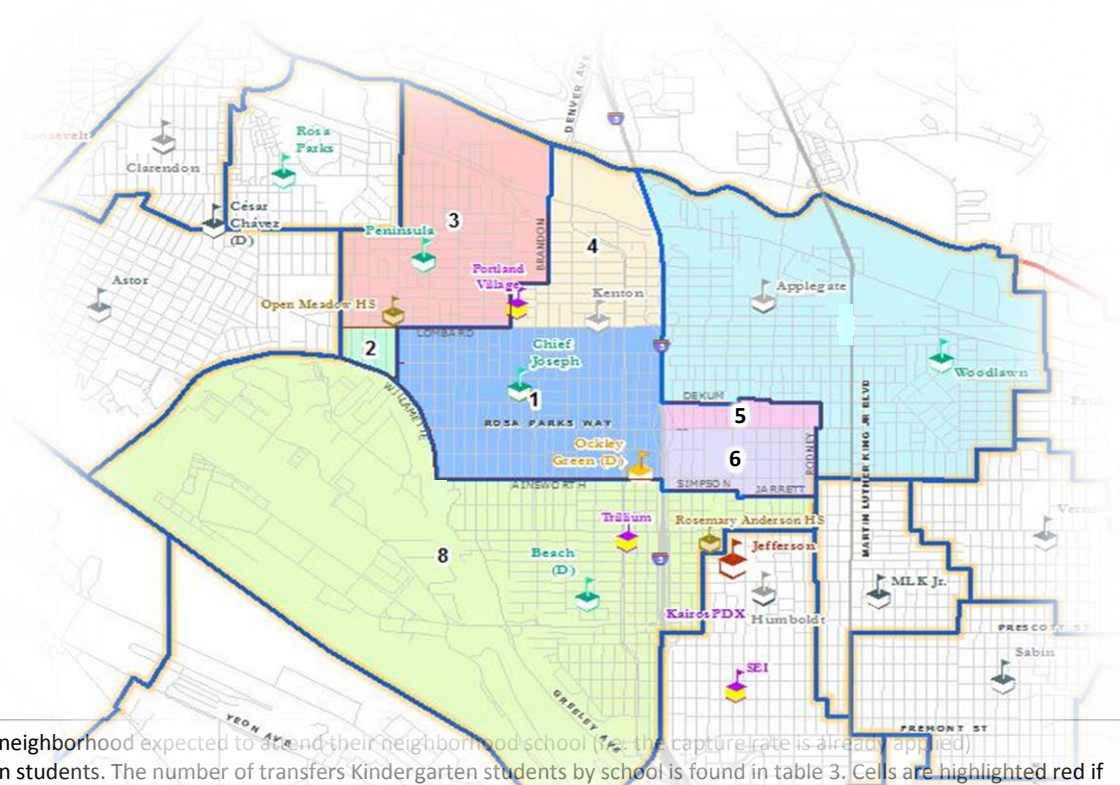
	Chief Joseph	Peninsula
KG Transfers	3	16

Draft Option: No Change

	Geographic Subsections	KG Neighborhood ¹	KG Transfers	Total KG Enrollment ²
Chief Joseph	1,4,5,6	63	3	66
Peninsula	2,3	32	16	48

Draft Option: A-5 (moderate change)

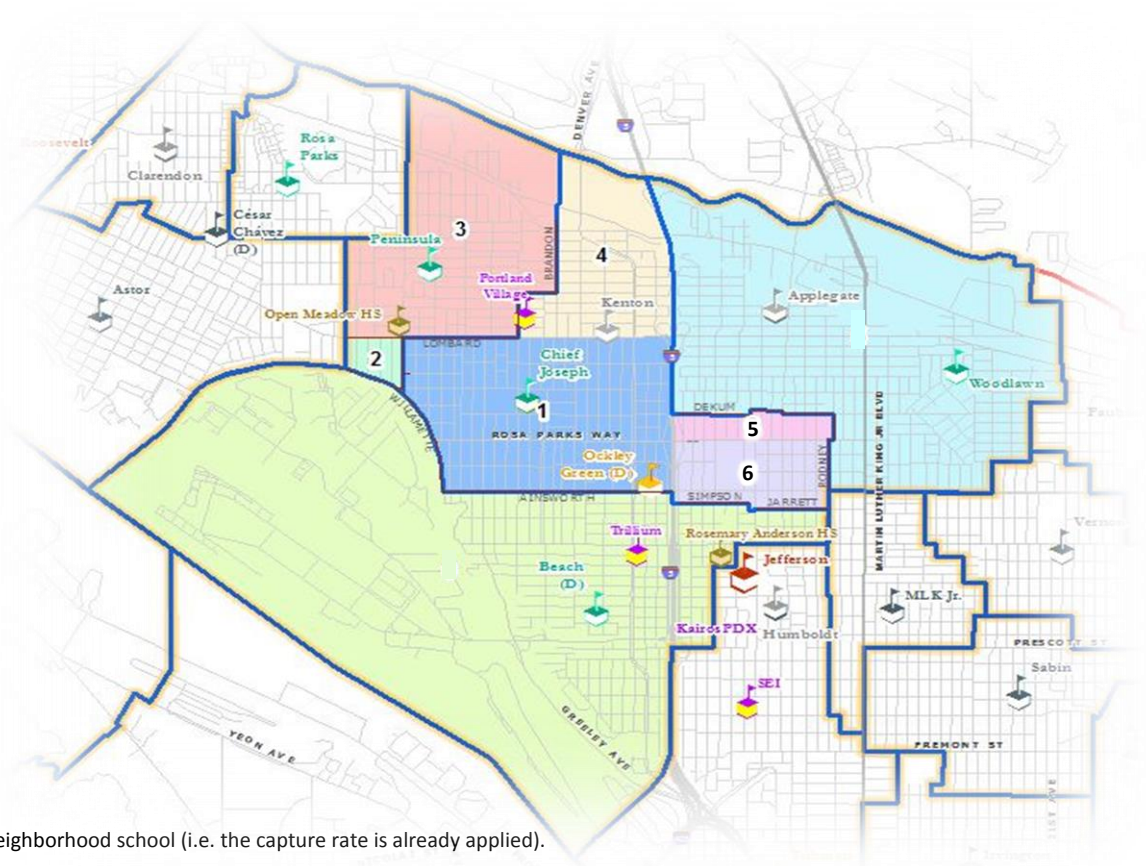
	Geographic Subsections	KG Neighborhood ¹	KG Transfers	Total KG Enrollment ²
Chief Joseph	1,5,6	50	3	53
Peninsula	2,3,4	45	16	61



¹ KG neighborhood enrollment is the number of Kindergarden students residing in that neighborhood expected to attend their neighborhood school (i.e. the capture rate is already applied)
² Total KG enrollment is neighborhood Kindergarden students plus transfer Kindergarden students. The number of transfers Kindergarden students by school is found in table 3. Cells are highlighted red if

Geographic Subsection Demographic Analysis

Geographic Subsection	Description	2017-18 Expected Kindergarten Neighborhood Enrollment ¹	K-5 Current % Direct Certification ²	K-5 Current % Historically Underserved ³
1	Area between Wabash and I-5; location of Chief Joseph building	38	20.1%	26.0%
2	Between Chautauqua and Wabash, south of Lombard; currently Peninsula	2	< 5%	42.9%
3	North of Lombard and west of Brandon/Delaware St; location of Peninsula building	30	28.9%	47.1%
4	Between I-5 and Brandon/Delaware St; currently Peninsula	13	34.5%	42.7%
5	East of I-5, south of Dekum, north of Rosa Parks Way; currently Chief Joseph	5	20.5%	51.3%
6	East of I-5, south of Rosa Parks Way; currently Chief Joseph	7	20.5%	33.0%



¹ Number of Kindergarten students residing in that neighborhood expected to attend their neighborhood school (i.e. the capture rate is already applied).

² Percent of neighborhood students in grades K-5 qualifying as Direct Certification status.

³ Percent of neighborhood students in grades K-5 identifying as Black, Latino, Native American, or Pacific Islander, including those identifying multiple.

INTERNAL STAKEHOLDER RESPONSE TO D-BRAC OPTIONS FOR CHIEF JOSEPH AND PENINSULA

Department	Option A-5: Begin boundary change from Chief Joseph to Peninsula	Option D-1: Move Chief Joseph 5th grade to Peninsula
Siliva Asson, Peninsula Principal	Brings stability to community. Something they can build toward..."We are going to be a Tech Smart school and the decision to have Option A in place I think would serve everyone best. I would advocate for a strong push for K-2 families to move to Peninsula allowing Chief Joseph's 4th grade students to finish their school experience at their home schools and allowing families to grow with their new schools."	To bring in the 2017 5th grade and then take them out would be a challenging situation for the incoming staff, students and families not just socially, but academically too. I am not sure where Chief Joseph staff or students are with PBIS, Literacy, Equity, CARE, AVID, etc, and think that this would set everyone up to struggle to understand a new setting and expectations when it isn't truly necessary.
Amber Gerber, Chief Joseph Principal	Community is in favor of being a K-5. Believes there is enough space to accomplish K-5 even without boundary change, with small facility changes.	Opposed to having 4th grade move to Peninsula for one year.
Transportation	Analysis underway. Likely one bus route next year, may be offset by fewer CJ or OG buses. No neighborhood buses into Peninsula now.	Analysis underway. Likely 2-3 buses added with no reduction from other Chief Joseph routes.
Nutrition Services	Triggers need to re-establish Provision 2 (free breakfast for all Peninsula students): all students still receive free breakfast, but data about kids who eat breakfast has to be collected and used to establish future level of service. Repeat of process school had to go through this year.	Instead of triggering re-establishment for Provision 2, department could choose to end breakfast for all if it looks certain the school would fall below 40% DC threshold next year. Trigger would be repeated next year again (3 straight years)
Human Resources	5th grade positions eliminated at Ockley Green, but additional 6-8 coming. Seniority, credentials, teacher choice determines who remains and who goes. Conversation happens with principals. HR will pull SMT rosters for credentials, revisit last year's process and contract. If option D-1, 5th grade unassignment would have to be repeated the following year.	
Facilities	No known issues. Investigating the impact of holding K-5 at Chief Joseph next year without a boundary change.	Principal Asson is concerned this move would require numerous internal classroom moves.

INTERNAL STAKEHOLDER RESPONSE TO D-BRAC OPTIONS FOR CHIEF JOSEPH AND PENINSULA

Department	Option A-5: Begin boundary change from Chief Joseph to Peninsula	Option D-1: Move Chief Joseph 5th grade to Peninsula
Special Ed		<p>Please keep in mind that there are two Focus Classrooms for Communication & Behavior at Peninsula. The impact of a large group of additional 5th graders filling the rest of the school space should be taken into account. I don't know that there would be significant negative impact but perhaps it could be discussed with current Peninsula staff and building admin.</p>
ESL	<p>Chief Joseph and Ockley Green are two of the smaller EB population schools. Historically, their numbers have been dropping and that is also true of Peninsula. Both schools in past have added FTE above the actual by count allocation due to two decisions rules: 1) Ockley and CJ being two campuses and 2) Peninsula have less than 1.0 FTE but several students across the grade span. For both schools they have received at least 0.5 more FTE due to these two special considerations. Allocations for next year will be based on K information.</p>	



**Portland Public Schools
Risk Management
Environmental Health and Safety Section**

Gap Analysis and Recommendations

**Presented To:
Yousef Awwad, CPA, MBA, CGMA, PMP
Chief Executive Officer**

**From:
John W. Burnham, Ph.D.
Interim Senior Director
Environmental Health and Safety Section**

December 31, 2016

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Executive Summary

After discussions with Portland Public Schools (PPS) leadership, I joined PPS in July 2016 as the Interim Senior Director for Environmental Health and Safety (EHS). I had just retired from Oregon Health and Science University (OHSU) after 23 years as the Director of EHS. Upon my arrival at PPS, Yousef Awwad, CFO at that time, created a team of professionals focused on resolution of school drinking water contaminated with lead. My early role at PPS has primarily been as the technical advisor to this health and safety team and to conduct a gap analysis review of the PPS EHS group. More recently, I joined a PPS team focused on including selected EHS needs in the May 2017 capital improvement bond measure.

This gap analysis is a product of my review of the EHS group. This is the third formal EHS gap analysis I have conducted in large academic organizations. Prior EHS gap analyses were completed at Portland State University and OHSU. A comprehensive gap analysis at PPS required identification of all programs which are overseen or assisted by EHS. This is a time-intensive process that requires knowledge of a wide range of EHS programs, individual program operating strategies and a fundamental understanding of risk analysis¹⁻⁶. EHS occupies a unique niche within large establishments and, generally speaking, those outside EHS are often not aware of the complexity and scope of typical EHS groups.

Review of the PPS EHS group resulted in the identification of 57 programs for which EHS is either directly responsible to administer or to provide assistance. This number of programs surprises most observers, but is not uncommon in an organization as complex as PPS. Using a technique I call abridged risk analysis/assessment, I investigated the status and needs of each of these programs with the intent to identify which of the programs currently presents the greatest potential enterprise risk. This process involves conducting an abridged multi-category risk assessment for each program based on the risk profile of each program. Risk categories considered for each program included financial, operations, reputational, human safety, environmental and regulatory/compliance risks¹⁻⁶. In the EHS world, most risk assessments are informal and based on regulatory compliance concerns with occasional consideration given to human health and safety risk. Plainly speaking, EHS groups are often almost exclusively focused on compliance and PPS EHS is a classic example. This has the unintended consequence of not recognizing, assessing and acting on all the potential enterprise/institutional risk, e.g. reputational risk, operational risk, etc., and its impact on the organization's objectives and strategy.

Of the 57 programs, 25 are currently inadequately supported and present a range of enterprise/institutional risks. The current staffing level cannot support these programs. I am recommending that two new positions, one safety professional and one industrial hygienist, be created and consideration be given to reorganizing the EHS group to reduce the risks associated with these 25 programs. During this assessment, two of the three existing EHS positions were filled and this was taken into account when identifying gaps. Recruitment to fill the Senior Manager position began in November. The largest gap involves several safety programs related to maintenance and custodial activities. This involves nine different safety programs and will likely require one of the two proposed new positions. Other major gaps include, but are not limited to, fall protection, database management, chemical fume hood certification, school safety committees and stage/auditorium safety. The crucial first step is the recruitment of a seasoned Senior Manager and structuring this position to allow for the development of EHS objectives, an overall risk-based operating strategy, the development of efficient individual program operating strategies and creation of balanced workloads for all employees.

Introduction

I recently retired as the Director of Environmental Health and Safety (EHS) at Oregon Health and Science University (OHSU) after 23 years. During this period, I also worked part-time at Portland State University (PSU) at the request of OHSU and PSU leadership to assist with the restructuring of the PSU EHS program. While at PSU, I worked with David Hobbs, now PPS Senior Director of Facilities and Assets Management (FAM). In June 2016, Mr. Hobbs invited me to meet with him to discuss ongoing issues related to lead in drinking water. I met with PPS leadership twice in June to discuss these issues. After the second meeting, PPS asked me to join the district to help address the concerns related to lead in drinking water. In addition to the lead in water concerns, District leadership was interested in conducting a gap analysis for EHS. During these meetings, the decision to move EHS from FAM to the Risk Management department was discussed along with the fact the current Senior Manager of EHS was on administrative leave. Effective July 18 I was brought in as the Senior Director of EHS.

This gap analysis was developed after a comprehensive review of the existing EHS Section. This assessment included a review of EHS records, Risk Management injury/illness records and several interviews inside and outside of EHS. These record reviews and interviews along with targeted investigations of specific programs informed the contents of this report. The aim of this gap analysis is to identify those EHS programs in substantial need of augmentation to reduce potential financial, operations, reputational, human health & safety, environmental and regulatory risks. These specific risk categories were selected based on my experience, knowledge and professional opinion regarding the role of EHS in the practice of Enterprise Risk Management (ERM)¹⁻⁶. Qualitative risk assessment methodology¹ is discussed in the section on Risk Assessment. Throughout this document, the terms institutional risk and enterprise risk are used interchangeably, however, I favor the use of institutional over enterprise for PPS.

Interim Senior Director Role

The responsibilities of the Interim Senior Director of EHS include daily meetings with a newly formed Health & Safety Leadership group to discuss current operations, new issues of concern, short-term/ long-term planning related to lead in PPS schools and EHS issues to be included in the May 2017 capital improvement bond measure. The Senior Director's role in this group was to provide internal technical guidance, seek out external experts when appropriate, provide specific recommendations, interview with representatives from the media as requested and participate in joint presentations to the PPS Board of Directors as needed. This specialized leadership group was the main conduit to implement a number of targeted operations to address narrow and broad lead-related health and safety concerns prior to and after the start of the 2016/2017 school year. In the process of implementing these programs, the Interim Senior Director often worked directly with the Risk Management Director, Executive Director of Operations, Senior Director of FAM and the Interim Chief of Community Involvement and Public Affairs, all of whom played mission-critical roles in successful implementation and outcome monitoring. Each of these individuals also reviewed the contents of this gap analysis with a special thanks to Joe Crelier, Director of Risk Management, for his contributions.

Shortly after arrival at PPS I assisted with the resolution of a number of specific risk issues, e.g., produce from gardens, use of eye wash stations, correct fixture sampling protocol, etc., related to lead contamination in District water fixtures/plumbing. I also initiated the process of investigating the scope of the entire EHS section of Risk Management. This investigation of EHS scope entailed the identification of existing programs, each program's structure and scope, estimates of labor resources dedicated to each program, qualitative estimates of potential institutional risk presented by each program and the presence of meaningful operating gaps due to programs that present substantial risk, yet do not currently exist. This included meetings with the two EHS personnel, several FAM personnel, the Senior Director of FAM, the Director of Risk Management and PPS leadership. The existence and status of an ongoing gap analysis was also discussed on several occasions with PPS Board members and Senior Management.

PPS EHS Background

EHS Org Chart and Scope

The EHS Organization Chart within the Risk Management department is presented in Figure 1. EHS is represented by the three positions located on the left side of the chart. This gap analysis represents a review of the EHS group only and does not include a review of the Insurance and Claims Section. In the past, EHS staffing has ranged from two to four full-time employees. The two EHS employees present during the creation of this gap analysis were Herb Wagner, a long-time employee of PPS, and Joel McCarthy. Mr. McCarthy left in November to join a consulting firm after approximately 1.5 years at PPS.

EHS is responsible for managing or assisting with the management of the institutional/enterprise risk presented by 57 regulatory and non-regulatory environmental, health and safety programs. These programs are illustrated in Table 1, classified under the six primary functions traditionally performed by EHS. The primary functions are presented in the dark boxes with the names of programs, regulatory agency and estimated annual person-hours committed to each program in the column below. A lay description of each program is provided in the section following Table 1. The large number of programs within EHS is not uncommon, for example, OHSU has 65 programs due to the accreditation requirements for four hospitals and PSU has over 50 active EHS programs.

The number of hours assigned to each program are best estimates of the time spent per year by Mr. Wagner and Mr. McCarthy on each specific program. These are not measured numbers, hence they are only valuable for comparison purposes between different programs and to determine which programs are receiving large allocations of labor and those that receive little or no labor hours.

The EHS section manages and maintains specialized monitoring and testing equipment. The equipment and the use of each item is as follows:

- Three High Volume Pumps – Area Air Monitoring
- Four Personal Air Pumps – Personal Air Monitoring
- Gillian Air Sample Pump Calibrator – Calibrate Air Pumps

- Sensidyne Gas Detector Pump – Color-metric Air Monitoring
- TSI IAQ 7545 Air Quality Diagnostic Meter – IAQ Measurements
- TelAire Air Quality Meter – IAQ Measurements
- CO2, Temperature, Humidity Meter – IAQ Measurements
- Jerome 431X Mercury Vapor Analyzer – Measure Mercury Vapor (Mercury Spill)
- Photovac HL-20 Microtip Organic Vapor Analyzer – Potentially Obsolete
- Moisture Probe – Detect Moisture in Wall
- Thermal Imaging Camera – Detect Temperature in Wall
- Auto-Ranging Light Meter – Measure Light Level
- Innov-X-Systems I-300 Lead Paint Analyzer – Real-Time Detection of Lead in Paint
- Anemometer – Measure Air Velocity
- Hot-Wire Air Velocity Meter – Measure Air Velocity
- Air-Pressure Velometer – Measure Air Velocity
- Sound-Level Meter – Measure Real-Time Noise Level
- Metrosonics DB307 Noise Dosimeter – Measure TWA Noise Dosage
- Industrial Scientific ATX 612 Confined Space Monitor – Confined Space Measurements
- Two Industrial Scientific M-40 Confined Space Monitor – Confined Space Measurements
- 18 Radon Monitors (About half need maintenance)

EHS currently has three full-time positions, this means that these employees are spread very thin, each overseeing and/or assisting with a large number of programs. It also likely means that many of the programs receive limited or no support.

Based on the active programs and the estimated annual hours dedicated to each program, EHS staff devote a high percentage (60 – 65%) of their person-hours working on programs, e.g., asbestos, indoor air quality, lead paint, radon, mold, Gmax testing, water quality, etc., that support school utilities, systems, equipment and buildings.

Figure 1
Risk Management Organization Chart

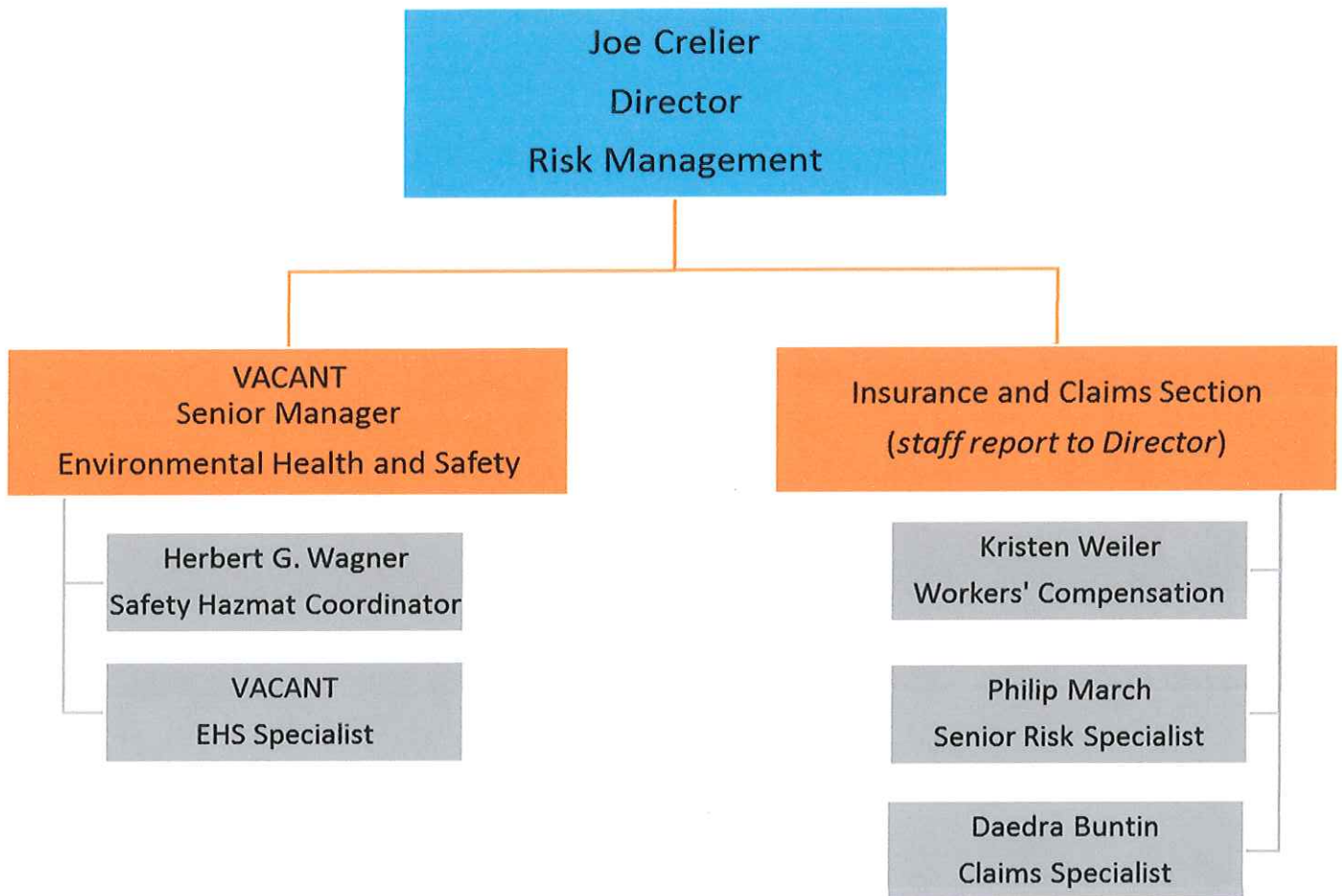


Table 1

PPS EHS Primary Functions with Programs* - Regulatory Agency/Annual Labor Hours

General Occupational/Student Safety	Environmental
<ul style="list-style-type: none"> • AED Inspections – ODE/50 Hours** • BESC Safety Committee Membership – OSHA/<20 Hours • Building/Room Remodel Plan Review – OSHA/<40 Hours • Confined Space Entry – OSHA/60 Hours • Electrical Safety – OSHA/<20 Hours • Emergency Management Assistance – ODE/<40 Hours • Ergonomics – OSHA/<40 Hours • Fall Protection – OSHA/180 Hours • FAM Maintenance Safety Meetings – OSHA/60 Hours • Fire/Life Safety Program Assistance – PF&R/ODE/<40 Hours • Fork Lift Training – OSHA/<20 Hours • Gmax Testing – CPSC/<20 Hours • High Lift Training – OSHA/<20 Hours • Incident/Accident Investigation – OSHA/<40 Hours • Indoor Air Quality – OSHA/440 Hours • Ladder Safety – OSHA/<40 Hours • Lockout/Tagout Program – OSHA/<20 Hours • Machine Guarding – OSHA/<20 Hours • Motor Vehicle Safety – OSHA/ODOT/0 Hours • Noise Assessment/Abatement – OSHA/<40 Hours • OR-OSHA Complaint Letters/Inspections – OSHA/80 Hours • Personal Protective Equipment – OSHA/60 Hours • Playground Inspections – CPSC/ODE/160 Hours** • Respirator Selection/Fit Testing – OSHA/80 Hours • School Safety Committee Assist – OSHA/40 Hours • Site Safety Surveys – CPSC/EPA/OSHA/120 Hours • Stage/Auditorium Safety – OSHA/<20 Hours** • Student Transportation Safety – ODE/0 Hours • Welding/Cutting Safety – OSHA/0 Hours 	<ul style="list-style-type: none"> • Asbestos Surveys/Abate– OSHA/DEQ/ODE/880 Hours** • Lead-Based Paint Disposal – OHA/DEQ/EPA/<20 Hours • Medical/Biological Waste Disposal – OHA/40 Hours • Metro Hazardous Waste Disposal – Metro/200 Hours • RCRA Hazardous Chemical Waste Mgmt – DEQ/40 Hours • Toxic Subst Cntl Act-PCB Collect/Dispose-EPA/DEQ/<20 Hours • Underground Injection Control – DEQ/<20 Hours • Underground Storage Tanks – DEQ/0 Hours • Universal Waste Management – DEQ/80 Hours • Water Quality (Lead/Copper) – OHA/DEQ/EPA/100 Hours

*Each of these programs supports employee environmental health and safety and/or student health and safety. **Included in Site Safety Surveys.

Table 1 (Cont'd)

PPS EHS Primary Functions with Programs* - Regulatory Agency/Annual Labor Hours

Chemical Safety	Radiation Safety		
<ul style="list-style-type: none"> • Air Contaminant Monitoring – OSHA/<20 Hours • Art Program Safety – OSHA/100 Hours** • Chemical Fume Hood Certification – OSHA/0 Hours • Hazard Comm/Safety Data Sheets – OSHA/<40 Hours • Hazardous Materials Inventory Report – OSFM/40 Hours • Integrated Pest Management – DEQ/OSHA/<20 Hours • Lab Safety (Chemical Hygiene) Plan – OSHA/<20 Hours • Lead-Based Paint Surveys – OHA/OSHA/200 Hours** • On-Call Response – DEQ/OSHA/200 Hours • Spill Response/Cleanup – DEQ/OSHA/<20 Hours 	<ul style="list-style-type: none"> • Radon Testing/Mitigation – OHA/EPA/200 Hours 		
Administrative	Biological Safety		
<ul style="list-style-type: none"> • Budget/0 Hours • Database Management – See Program Description Section • Healthy and Safe Schools Plan - ODE/0 Hours • Personnel Issues/0 Hours 	<ul style="list-style-type: none"> • Bacterial Contamination Monitoring – OHA/40 Hours • Bio-aerosol Mold Monitoring/Abate – OSHA/160 Hours • Bloodborne Pathogens – OSHA/<20 Hours 		
<p>AGENCY ACRONYMS</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>CPSC – Consumer Products Safety Commission</p> <p>DEQ – Department of Environmental Quality</p> <p>EPA – Environmental Protection Agency</p> <p>Metro – Portland Metro</p> <p>ODE – Oregon Department of Education</p> </td> <td style="width: 50%; vertical-align: top;"> <p>ODOT – Oregon Depart. of Transportation</p> <p>OHA – Oregon Health Authority</p> <p>OSFM – Oregon State Fire Marshal</p> <p>OSHA – OR Occupational Safety and Health Admin.</p> <p>PF&R – Portland Fire & Rescue</p> </td> </tr> </table>		<p>CPSC – Consumer Products Safety Commission</p> <p>DEQ – Department of Environmental Quality</p> <p>EPA – Environmental Protection Agency</p> <p>Metro – Portland Metro</p> <p>ODE – Oregon Department of Education</p>	<p>ODOT – Oregon Depart. of Transportation</p> <p>OHA – Oregon Health Authority</p> <p>OSFM – Oregon State Fire Marshal</p> <p>OSHA – OR Occupational Safety and Health Admin.</p> <p>PF&R – Portland Fire & Rescue</p>
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Each of these programs supports employee environmental health and safety and/or student health and safety. ** Included in Site Safety Surveys.

Program Descriptions

Below are the descriptions for each EHS program identified in Table 1. These descriptions are presented in alphabetical order independent of the EHS primary function group (chemical safety, environmental, etc.) to which they belong. Each program description is a brief, high-level narrative that provides the reader with the basics of the program at PPS. At the end of each description are brief statements of any existing gap and the initials of the individual(s) currently responsible for that program along with an estimate of the person-hours per year spent working on that program. The initials are for Herb Wagner (HW) and Joel McCarthy (JM). The acronym NOA stands for No One Assigned. Several of the programs either require limited resources per year or current staffing levels are inadequate to properly resource the program. These programs are designated as receiving <20 person-hours per year or 0 person-hours. If additional information is needed concerning a specific program, please contact PPS EHS or Risk Management.

AED Inspections – Maintenance of District automated external defibrillators (AED). EHS conducts annual inspections during site safety surveys. Replace batteries and pads as needed. (HW/50 hours)

Air Contaminant Monitoring – EHS conducts specialized air monitoring for air contaminants, e.g., carbon monoxide, solvents, formaldehyde, etc. (HW/<20 hours)

Art Program Safety – Provide school staff with assistance as requested. EHS picks up and disposes chemical waste. Conduct annual inspections during site safety surveys. Biggest gap is the lack of resources to more fully understand the chemical processes being used and how kilns are being used. (HW/80 hours) (JM/<20 hours)

Asbestos Surveys/Sampling/Abatement – EHS maintains an asbestos inventory/database and conducts 6 month surveillance and comprehensive triannual inspections. Design in-house and contracted abatement projects as needed. Guide maintenance activity that impacts existing inventory. Manage employee training, personal monitoring and review abatement project design. Oversee abatement process through coordination of contractor selection, scheduling with school and facilities staff, project management and maintenance staff. Biggest gap is the need to update recordkeeping/database. (HW/80 hours) (JM/800 hours)

Bacterial Contamination Monitoring – EHS personnel serve as the licensed well water operator for the water well that serves Skyline. Testing is conducted monthly. Records are maintained onsite and in the EHS office. (HW/40 hours)

BESC Safety Committee Membership – EHS personnel participate as members of the BESC building personnel safety committee, providing input on a variety of safety topics, incidents and investigations as requested. This committee meets only quarterly and does not include employees from the FAM trades. (HW/<20 hours)

Bio-Aerosol Mold Monitoring/Abatement – EHS conducts mold assessment and air sampling as needed and coordinates abatement through project management/design, contractor selection,

scheduling/coordination of contractor, school and facilities maintenance staff and recordkeeping. (HW/40 hours) (JM/120 hours)

Bloodborne Pathogens – EHS provides training for staff (custodian/maintenance) who have the potential for exposure to blood and body fluids that may contain human blood. Focus of the training is to emphasize the requirement to follow Universal Precautions in the prevention of all exposures, e.g., percutaneous, skin, eyes, etc. Bloodborne pathogens include HIV and HBV. (HW/<20 hours)

Budget – Budget tracking is one of the responsibilities of the EHS Senior Manager. The Director of Risk Management currently tracks the budget. EHS has one budget that covers staff while others are used for contractors. (NOA/0 hours)

Building/Room Remodel Plan Review – Review plans for scheduled remodeling to identify safety/health hazards, i.e., asbestos, lead-based paint, mold, fall protection, PCB ballast, etc. Conduct site walks during active project to identify hazards. This process is FAM employee driven, hence not all remodeling is vetted by EHS. EHS should explore possible options to efficiently screen remodeling plans. (HW/<20 hours) (JM/<20 hours)

Chemical Fume Hood Certification – Chemistry/Biology fume hoods must be inspected and air flow measurements conducted annually to evaluate adequate air flow to capture vapors from hazardous chemicals used in chemistry and biology labs. Many hoods are old and poorly designed. The biggest gap is there is no plan to certify hoods on an annual basis. This program is currently inactive due to inadequate staffing. (NOA/0 hours)

Confined Space Entry – Testing and implementation of safe work practices for confined space entry, i.e., tanks, vaults, etc. not used for human occupation, to identify potential life and safety hazards. The written program is 22 years old, it should be reviewed and updated as needed. (HW/40 hours) (JM/<20 hours)

Database Management – EHS personnel design, maintain and update databases for AEDs, asbestos, well testing, confined space inventory, fall protection locations, Gmax testing, safety data sheets, hazardous materials inventory, fume hood testing, lead-based paint surveys/encapsulation/removal, RCRA and Metro waste disposal, playground inspections, radon testing, respirator selection/fit tests, site safety surveys, TSCA disposal, universal waste disposal, indoor air quality and water quality testing. Although the hours for database management are presented in specific programs, database management is set apart as a separate program to demonstrate the large number of programs that require dedicated databases. The EHS Senior Manager needs to conduct a comprehensive review of database management to standardize software and format where possible and they should periodically monitor the status of each database to assure all databases are properly used and updated. (HW) (JM)

Electrical Safety – This program is designed to address the unique needs of the FAM Electrical Shop and is heavily influenced by the tasks conducted, e.g., specific hot work, low voltage, etc. Simple electrical issues are included in the site safety surveys. Biggest gap is the lack of resources to provide comprehensive electrical safety services including the development of an arc flash protocol. (HW/<20 hours)

Emergency Management Assistance – EHS personnel participate in and contribute to a wide range of emergency management drills/incidents on a case by case basis as requested. (HW/<20 hours) (JM/<20 hours)

Ergonomics – The purpose of this program is to protect employees from injury due to lifting strain, material handling, awkward postures, or repetitive motion. Ergonomics is the science and best practice of developing work tasks that compliment natural human motion and limitations. The EHS section of Risk Management is called upon to provide safe-lifting training and consultation. The Workers' Compensation claims section provides ergonomic solutions and initiatives to reduce injuries. A contracted provider is also utilized for ergonomic services. (HW/<20 hours) (JM/<20 hours)

Fall Protection – EHS has developed a written fall protection program that includes employee training and site-specific roof access plans. The focus of the program is to safely access roofs and other elevated surfaces for cleaning and maintenance. Many PPS roofs and elevated surfaces lack fall protection infrastructure, consequently access to some rooftop drains, gutters and mechanical equipment is not allowed, leading to potential water accumulation and inability to maintain equipment. These issues represent major gaps in the program, hence there is an immediate need to develop an overall roof access plan. (HW/40 hours) (JM/140 hours)

FAM Maintenance Safety Meetings – EHS staff provide monthly training to maintenance personnel covering a wide range of safety topics. These sessions also include a Q/A session. However, this monthly meeting does not take the place a functioning safety committee. A facilities safety committee should be chartered and meetings conducted monthly. (HW/40 hours) (JM/<20 hours)

Fire/Life Safety Program Assistance – EHS occasionally assists FAM in response to fire marshal findings/citations to assist in the resolution of fire code issues. The FAM electrical and mechanical shops oversee monitoring, notification and suppression systems. FAM also oversees code compliance and a contractor is used for fire extinguisher inspection and testing. (HW/< 20 hours) (JM/<20 hours)

Fork Lift Training – EHS participates in annual training of maintenance, custodial and warehouse personnel using contracted trainers. Annual training covers the Powered Industrial Trucks standard from OR-OSHA. Biggest gaps are identification and training of new employees prior to fork lift use and maintaining certifications for existing employees. (HW/<20 hours)

Gmax Testing – EHS uses a contractor to visually assess and measure “impact attenuation” on play equipment and athletic fields (synthetic surfaces/turf) to detect surface degradation needing repair and/or replacement. EHS personnel also include the inspection of these surfaces in site safety surveys. (HW/<20 hours)

Hazard Communication/Safety Data Sheets – EHS oversees the hazard communication program that requires training and access to safety data sheets to minimize chemical exposures to PPS employees who utilize hazardous chemicals. Hazard communication applies to all employees who handle chemicals that are not “laboratory scale”. In addition to a written program, EHS assists with the maintenance of an

electronic database of Safety Data Sheets for each chemical used by all PPS employees. The database is currently accessible on the PPS website. (HW/<20hours) (JM/<20 hours)

Hazardous Materials Inventory Report – EHS provides an annual report to the Oregon State Fire Marshal concerning the identification, location and quantity of specific classes of hazardous chemicals. Generally, the report focuses on the location of significant quantities of flammable solvents, acids/bases, pesticides/herbicides, chemistry lab stock rooms and fertilizers. The report provides fire responders with the location of these materials in the event of a fire to advise them concerning the presence of special hazards. (HW/40 hours)

Healthy and Safe Schools Plan (HSSP) – EHS oversees the administration and quality assurance checks on ODE named environmental concerns in OAR 581-022-2223. Timely distribution and posting of environmental sampling results and annual plan revision. The Director of Risk Management is the contact on record for the HSSP and is presently using a temp agency for clerical assistance. This is a new program for EHS and it will be assigned to an EHS Specialist. (NOA/0 hours)

High-Lift Training – EHS provides and participates in annual training of maintenance, custodial and warehouse personnel using contract trainers regarding the safe use of man-lifts, scissor lifts and bucket trucks. EHS assists with the setup of the training area and provides personnel protective equipment. Biggest gaps are training new employees before using high lift equipment, maintaining certifications for existing employees and the high-lift equipment. (HW/<20 hours)

Incident/Accident Investigation – EHS provides assistance to PPS Risk Management on request to investigate, document and recommend prevention measures for specific injury and/or property losses on district property. (HW/<20 hours) (JM/<20 hours)

Indoor Air Quality – EHS responds to FAM and employee concerns regarding a range of air quality issues (odors, low/high humidity, low/high temperature, carbon dioxide/monoxide, etc.). Inspections are typically in conjunction with FAM. (HW/40 hours) (JM/400 hours)

Integrated Pest Management – EHS oversees the PPS policy concerning the safe use and disposal of waste pesticides and herbicides. Biggest gap is the lack of resources to adequately oversee and monitor the Integrated Pest Management (IPM) program. (HW/<20 hours)

Lab Safety (Chemical Hygiene) Plan – Requires a written chemical hygiene plan that includes written standard operating procedures (SOP) for those laboratory-scale procedures using hazardous chemicals. Also requires training, assess to safety data sheets, maintenance of container labeling and the appointment of a Chemical Hygiene Officer (CHO). Appointment of a CHO is required by OR-OSHA. The CHO provides guidance regarding the use of hazardous chemicals in chemistry and biology laboratories within the requirements of the Laboratory Safety (Chemical Hygiene) Plan, which is currently inadequate to address PPS laboratories. Presently, EHS staff serve as CHO as needed. A single individual needs to be officially designated CHO, the chemical hygiene plan should be reviewed, training needs should be reviewed and the level of person hours needed identified. Standard operating procedures should be created for classes (flammable, strong acids, etc.) of hazardous chemicals. (HW<20 hours)

Ladder Safety – A written program, training and evaluation of all ladders is needed for safe use. Biggest gap is the wide range of ladder usage and lack of inventory/location and identification of specific employees needing training. (HW/<20 hours) (JM/<20 hours)

Lead-Based Paint Disposal – Lead-based paint waste from in-house removal is collected, containerized, stored and disposed as RCRA waste 1-2 times per year. (HW/<20 hours)

Lead-Based Paint Surveys – Lead paint surveys are conducted annually during site safety surveys. Paint condition is assessed and documented. This includes the occasional use of XRF equipment to measure lead content. Special attention is given to K-5 classrooms, child-occupied areas and play structures. This program could present a major resource gap going forward after consultant development of a comprehensive database on the condition of paint throughout the District. There is a critical need to maintain the accuracy of this database which should be completed by year end. Biggest current gap is lack of an accurate database. (HW/200 hours)

Lockout/Tagout Program – Requires written program and awareness training that specifies requirements to lockout or tagout electrical, hydraulic or mechanical equipment with stored energy during repairs and maintenance. EHS maintains a stock of lockout/tagout kits in shop areas. The written program is 14 years old, it should be reviewed and updated as needed. Biggest gap is the lack of a rigorous training program. (HW/<20 hours)

Machine Guarding – EHS provides generic training for FAM maintenance personnel concerning working with equipment that has moving parts, e.g. drive belts, grinding wheels, etc. There is a need to evaluate work practices and inspect equipment to confirm adequate guards are used at all times to prevent serious injury. (HW/<20 hours)

Medical/Biological Waste Disposal – Medical/biological waste is collected during summer months and upon request during the school year for disposal. Waste consists of sharps, latex gloves, specimens, etc. (HW/40 hours)

Metro Hazardous Waste Disposal – Chemical waste that is allowed to be handled by Portland Metro is collected upon request and taken to the Metro station for disposal. (HW/200 hours)

Motor Vehicle Safety – Need a written plan and training related to safe operation of vehicles. (NOA/0 hours)

Noise Assessment/Abatement – EHS conducts personal dosimetry and area noise monitoring as needed to maintain a hearing conservation program. Areas that exceed the action level are posted as requiring hearing protection. EHS manages annual hearing tests for maintenance employees. (HW/<20 hours) (JM/<20 hours)

On-Call Response – EHS personnel serve their turn during off-hours as on-call to consult and/or come on-site to help resolve a wide range of concerns. The far majority of the issues that come up are not related to

EHS. This program should be reviewed for potential reduction in EHS person hours. (HW/100 hours)
(JM/100 hours)

OR-OSHA Complaint Letters/Inspections – EHS personnel provide documentation and/or corrective action in response to receipt of complaint letters. They also escort and facilitate OR-OSHA inspections. (HW/40 hours) (JM/40 hours)

Personnel Issues – The EHS Senior Manager is responsible for managing the EHS section in the PPS Risk Management department. At a minimum, this includes finding the right balance of assigned EHS programs for each EHS employee, establishing short and long-term priorities for each EHS program, assessing EHS employee training needs, evaluating employee performance and employee counseling, discipline and retention. The EHS Senior Manager is a “working manager” position with operations responsibilities for selected EHS programs in addition to managing EHS personnel. The EHS Senior Manager must have exceptional communication and people skills, excellent regulation interpretation skills and understand the role of risk assessment in EHS. This position is currently vacant. (NOA/0 hours)

Personal Protection Equipment – EHS assesses hazards and recommends/provides hand, eye, skin, head, respiratory, hearing, etc. personal protective equipment, e.g., gloves, eye protection, etc. Biggest gap is the absence of a written PPE plan for trades, mechanical and custodian personnel. (HW/40 hours) (JM<20 hours)

Playground Inspections – Playground inspections are conducted annually during site safety surveys and again during the summer months. Each area is inspected by a Certified Playground Safety Inspector (HW) for damaged equipment, condition of synthetic surfaces and paint condition. Greatest need is to develop a comprehensive database that includes age and condition. (HW/160 hours)

Radon Testing/Mitigation – EHS conducts in-house radon testing as needed. Solicit RFP, schedule/coordinate contractor (testing) and school staff. Assess need for evacuation, follow up testing and mitigation. Oversee/coordinate mitigation and recordkeeping. This program is in the process of expanding and will need additional operating resources to manage contractors, conduct site inspections, track work orders and maintain database. (JM/200 hours)

RCRA Hazardous Chemical Waste Management – BESC and all PPS schools are classified as Conditionally Exempt Generators of hazardous chemical waste by DEQ. This allows EHS to collect, handle, centrally store and dispose chemical waste that is not taken by Portland Metro. These wastes typically consist of lead-based paint waste, aerosol cans and solvents. Off-site shipment occurs 1-2 times per year. (HW/40 hours)

Respirator Selection/Fit Testing – EHS personnel determine employee need for respirators based on regulation, process, personal air monitoring and risk assessment. Qualitative fit testing is currently conducted using irritant smoke. Typical need for respirator is in-house lead-based paint removal and asbestos-related activities. Provide for initial/follow up medical examination, perform respirator selection/fit testing and training. EHS should give consideration to purchasing a TSI Portacount to conduct quantitative fit testing. (HW/<20 hours) (JM/60 hours)

School Safety Committee Assist – Schools are required to have safety committees. Risk Management currently has a temporary employee auditing the centralized committee meeting records and doing other tasks in an analysis of the status of PPS school safety committees. EHS does not have the resources to track and confirm that each school is conducting these required committee meetings. This is an opportunity to develop better relationships with key personnel at many of the schools and potentially prevent future misunderstandings/confusion, injuries and regulatory issues. (HW/40 hours)

Site Safety Surveys – Site safety surveys are conducted at least annually. They include inspection of AEDs, playgrounds, auditorium stages, asbestos, art programs and lead paint condition. In addition, boiler rooms, mechanical spaces, kitchen areas, shops, etc. are inspected for general hazards. The total hours estimated for site safety surveys is 710 hours, however this includes the six above programs which are estimated to receive a total of 590 hours as shown in Table 1. This leaves 120 hours for the general hazard inspection part of the surveys. (HW/120 hours)

Spill Response/Cleanup – EHS has a written spill response plan and pre-placed spill kits at BESC, Benson High School and Green Thumb. Small spills are handled in-house. Contractor would be used for the rare uncontrolled spill. (HW/<20 hours)

Stage/Auditorium Safety – This is a specialized area of safety. EHS should oversee hiring a contractor with this specialty. The contractor would conduct inspections of curtains, rigging systems and ropes, electrical systems, flooring and fall arrest systems annually. They will also conduct training for teachers involved with stage productions. This program lacks the resources to maintain adequate safety on District stages. (HW/<20 hours)

Student Transportation Safety – EHS conducts fork-lift training and picks up hazardous and universal waste for Student transportation. Student Transportation is accountable to comply with Oregon OAR 581-053-(002-0640). This includes, but is not limited to, driver physical exams, driving/criminal record and drug/alcohol testing, as well as pre-trip vehicle inspections and student behavior management. Drivers also receive training on student injury prevention, classroom driving safety and behind the wheel safety using certified teachers. Contractors operate all large buses and 1/2 of the small buses. PPS employees maintain and operate 1/3 of all buses, which are all small. (NOA/0 hours)

Toxic Substance Control Act (TSCA)/PCB Collection/Disposal – Polychlorinated Biphenyls (PCB) were used in light ballasts prior to the 1980s. Many older fluorescent light fixtures still exist in PPS buildings. As the older fixtures are replaced to improve energy efficiency, the PCB ballasts are collected and EHS disposes as TSCA waste. (HW/<20 hours)

Underground Injection Control – EHS oversees the permit to inject storm water from parking lots and roof surfaces underground. The permit requires annual testing of water from representative locations to test for contaminants. (JM/<20 hours)

Underground Storage Tanks (UST) – PPS appears to have a few USTs that are no longer in use that need to be decommissioned and one that is still in use. Biggest gap appears to be lack of a comprehensive

inventory and status of each UST. A single individual in or outside EHS should be designated to oversee this program. (NOA/0 hours)

Universal Waste Management – Universal waste is collected throughout the school year in designated, labelled containers for pickup and disposal by EHS. This waste consists primarily of light tubes, batteries and latex paints. (HW/80 hours)

Water Quality (Lead/Copper) – This program is currently overseen by the multi-disciplinary Health and Safety Leadership group mentioned in the section on Interim Senior Director Role. For additional details, refer to this topic in the section on Areas of Improvement/Progress. New legislation is expected this Spring requiring lead testing in schools. This program will present a major resource gap going forward and EHS will need to implement a water quality program testing 10% of water fixtures annually. (HW/<20 hours) (JM/80 hours)

Welding/Cutting Safety – This typically is a written welding, cutting, brazing and soldering health and safety program that covers fume exposure, compressed gases, fire prevention/watch, personal protective equipment, ventilation, confined space and plasma arc. Biggest gap is lack of a written program and targeted training specific to PPS. (NOA/0 hours)

EHS Metrics

Although EHS must administer or assist with 57 programs, some programs have a large number of inspections/assessments or require unique attention due to the frequency of customer needs. These programs include AED inspections/maintenance, asbestos abatement, chemical hazardous waste, mold abatements, indoor air quality, site safety surveys and universal waste management. Below are recent metrics for these programs:

- AED Inspections/Maintenance – 155 inspections/year
- Asbestos Abatement Projects – 300/year (In-house) and 36/year (Contractor)
- Chemical (RCRA) Hazardous Waste – 3,683 lbs./year
- Mold Abatements – 15/year
- Indoor Air Quality Assessments – 90/year
- Site Safety Surveys – 85/year *
- Universal Waste Recycled – 3,195 lbs. batteries, 7,180 lbs. light tubes, 5,244 lbs. compact fluorescent bulbs, 7,344 lbs. latex paint and 850 lbs. tires recycled per year

* Each survey can include inspection of several of the active programs, such as lead-based paint condition, playground condition, etc.

District Benchmarking for EHS

A number of public sources were reviewed to identify school districts similar to PPS. The two comparative values used were number of schools and students, which resulted in selecting four districts for benchmarking purposes. The districts were Wichita, Omaha, Seattle and Salem-Keizer. Salem-Keizer was selected because it is the second largest district in Oregon, making it likely to be the best local comparison. Initial phone calls were made to confirm that each school district's comparative values were similar to PPS. Several questions were asked to identify the scope of EHS programs and if the EHS groups were comprehensive or fragmented over two or three different departments. This is critical for comparison purposes because it is not uncommon for EHS programs to be spread across more than one department. For example, a district could have lead-based paint surveys, water quality, asbestos inventory/abatement or AED inspections located in facilities and ergonomics located in Risk Management or HR with the remainder of EHS programs in an EHS department. This approach was used to identify, with reasonable accuracy, the number of FTEs dedicated to EHS programs and the overall scope of EHS programs in the district. The findings from interviewing EHS leaders in each district are shown in Table 2.

Table 2
School District Benchmarking

School District	No. Schools ¹	Enrollment ²	EHS FTE	Comments
Portland	83	49,000	3.0	
Seattle	102	54,000	2.5	Recent report to Leadership – EHS Understaffed by 2-3 FTE
Salem-Keizer	65	42,000	2+	Some EHS programs located in Facilities ³
Wichita	89	50,500	6.0	Programs very similar to PPS EHS
Omaha	89	52,000	7.0	Programs very similar to PPS EHS

¹Varying definitions of school

²Rounded

³Likely less than 1 FTE

Benchmarking on this limited number of comparable school districts indicates that PPS EHS staffing is comparable to Seattle and Salem-Keizer. Discussions with Seattle EHS leaders indicated that they believe they are understaffed by 2-3 FTE and have made a presentation to their leadership requesting more staff. Wichita and Omaha EHS programs have much higher EHS staffing levels, although they have very similar numbers of schools and enrollment.

Areas of Improvement/Progress

EHS Moved to Risk Management Department

Historically, PPS EHS has reported up through FAM. This has been and still remains a common reporting structure for EHS groups in academic organizations. The reasoning used for this reporting structure is that many of the programs that EHS oversees have a facilities component. Although this is a practical reporting structure, it means that the EHS Senior Manager at PPS reported to the Facilities Director. This fact presents inherent potential for unintended conflict of interest. This is due to the fact that the EHS Senior Manager must oversee the regulatory compliance of their direct FAM supervisor and FAM employees.

In addition, one common misunderstanding is that the primary role of EHS is limited to developing programs that are in compliance with federal, state and local regulations. Although EHS does indeed develop compliance programs, this is a short-sighted perception and viewpoint. The reality is that regulatory compliance is effective at reducing regulatory risk, however some EHS programs are not regulated and those that are regulated do not always address all potential risk. Hence, many other risk categories should be considered by EHS leadership/employees when addressing EHS-related concerns.

Those risk categories¹⁻⁶ include financial, operations, reputational, human health & safety, and environmental risks, as well as regulatory risk. Failure of EHS leadership to consider all of these risk categories in decision making and program development can have unintended consequences and result in substantial institutional risk and inefficient use of limited resources.

In the summer of 2016, PPS leadership elected to move the EHS Section away from FAM and into the Risk Management department. This reporting structure is part of a growing trend to reduce the potential for conflicts of interest and at the same time acknowledges that EHS oversees programs that have the potential to negatively impact organizational objectives and strategy. Placing EHS inside Risk Management also places EHS in an environment and culture where the primary role is to identify and reduce institutional risk.

Another justification for EHS to be in the Risk Management department is the fact that PPS is authorized by the state to be self-insured for Workers' Compensation. This requires that a self-insured employer must have an occupational safety and health loss control program as required by ORS 654.097 in the insurance company statutes.

Moving EHS to the department of Risk Management represents a major improvement for the functionality and productivity of the EHS Section.

Water Quality

Beginning in the spring and continuing into the 2016/2017 school year, PPS has made substantial progress in minimizing public concern regarding dissolved lead in drinking water and water used in food preparation.

This included testing almost 11,000 water fixtures throughout the District. Two samples were taken from each fixture. The first sample (A sample) was an immediate sample taken after the fixture remained unused for 8-18 hours. A second sample (B sample) was taken after a 30 second flush. One of the first steps was to cover all drinking fountains to prevent access, use pre-washed food in kitchens and provide bottled water. Arrangements were also made to provide blood-lead screening for students and employees. Water test results became available during the summer indicating that water from 12% of fountains and 39% of other fixtures contained elevated lead levels.

A total of 498 kitchen fixtures were included in this testing and 107 produced water with elevated lead levels. After using a flushing protocol, only 8 (2%) of the 498 fixtures had elevated lead levels. A 30 minute flushing protocol was published, sinks requiring flushing prior to use were labeled and training was conducted. Kitchens resumed normal operation on October 3.

Work continues to measure lead levels in B samples from fountains and selected other fixtures in an effort to open fountains and selected fixtures. Based on B sample results, decisions will be made to replace fixtures and/or water lines upstream of fixtures as appropriate.

Several specific issues related to lead contaminated water became matters of concern during 2016. These issues included sampling procedure, handwashing, showers, dishwashing, emergency eyewashes and eating produce from school gardens. Each of these issues and others were researched and inquiries were made with Oregon Health Authority and the Oregon Toxicology Information Center. Each issue was individually resolved as presenting insignificant lead exposure.

Lead-Based Paint

Lead-based paint was used on PPS schools prior to its ban in 1978. Consequently, many painted surfaces have lead-based paint covered with non-lead-based paint. This fact presents an ongoing maintenance need to track the condition of all painted surfaces. The most common causes of lead poisoning in children are typically from eating chips of lead paint and exposure to lead-paint dust.

PPS is working with a consultant to create a comprehensive database of lead-based paint throughout the District that should be available near the end of 2016/2017 school year. Removal of peeling paint, encapsulation and application of new paint has been completed in several schools, heavily focused on K-5 buildings since that student population is at the highest risk. This will be an ongoing project throughout the school year. After the District-wide database is complete, a strategy will be developed to conduct ongoing surveys and maintenance.

Radon

Initial radon testing in early 2016 was intended to target all sites in which previous tests indicated elevated concentrations of radon, regardless of whether or not follow-up sampling prompted mitigation actions. However, we ran out of cold weather, so not all sites with previously elevated results were able to be sampled before the end of the 2015/2016 school year. In all, 26 sites and about 800 locations were

sampled. Of those 800 locations, 88 had results over the action level of 4 pCi/l. Of those 88, 15 locations had results at or above the upper limit of 8 pCi/l, requiring more immediate action. The HVAC at those locations was set to run continuously and they were retested just before the end of the 2015-2016 school year. All but 2 of those 15 locations tested below 4 pCi/l under those conditions. These two locations were temporarily closed and mitigation actions have been ongoing since that time. Both locations are now opened with continuous monitoring and permanent mitigation systems are being designed and implemented.

In the fall of 2016, EHS continued the process of performing comprehensive radon testing following the guidelines set forth by Oregon Health Authority. This included any needed follow-up sampling of the initially tested 800 locations and initial testing at all locations not covered during the spring of 2016. During the 2016/2017 school year, long-term testing will also take place at all locations with initial results between 4 and 8 pCi/l. Short-term follow-up testing will take place at any location with initial results at or above 8 pCi/l, including those areas which were re-tested at the end of the 2015-2016 school year. Any location with confirmed results above 4 pCi/l will be mitigated. By the end of the 2016/2017 school year, we should know where we stand on the need for mitigation throughout the District, although there may be need for additional testing in 2017/2018. In addition, mitigation for locations at all sites should be largely completed by the end of the 2017/2018 school year.

Radon is normally mitigated by balancing/tuning the existing HVAC or by depressurization of the crawlspace/tunnels/sub-slab. Generally, HVAC is used for short-term mitigation and depressurization systems are used for long-term/permanent solutions. It is also likely that many locations can be mitigated simply by finding and conducting needed repairs to the HVAC system.

Institutional Risk

Introduction

As mentioned earlier, I use the terms institutional risk and enterprise risk interchangeably. Over the years, I have noticed that many academic organizations refer to themselves as institutions rather than enterprises, presumably because the word enterprise is used almost exclusively to refer to a private organization or company. For this reason, I tend to favor the use of the term institutional risk when referring to PPS risks.

Risk Analysis

The terms risk analysis and risk assessment are often used interchangeably. In fact, they are related but different terms¹. Risk analysis describes the broad concept of performing a comprehensive analysis of a potential risk and has three components. The three components are risk management, risk assessment and risk communication. The risk analysis process¹ is typically initiated and overseen by a risk manager. The risk manager selects the issue of concern for risk analysis and then works to reach consensus on the development of a risk profile. A risk profile is simply the identification of what is already known about a

perceived risk along with any associated uncertainty. The risk profile is then used to justify or negate the need to conduct a full risk assessment. Often, the risk profile provides sufficient facts to qualitatively estimate institutional risk. If the risk profile supports the need for a more comprehensive risk assessment, the risk manager then commissions a risk assessor to assemble an inclusive team of knowledgeable individuals to conduct the risk assessment. At the completion of a risk assessment, the risk manager would identify the risk management options (RMO) to address the specific risk issue and reach consensus on the selection of the best RMO. Finally, the risk manager completes the risk analysis process through risk communication to the appropriate level within the organization to seek approval to implement the RMO. This might also include communication outside the organization.

The risk analysis process should be scalable¹ depending on the time frame available to conduct the risk analysis. There are three critical factors in the conduct of a risk analysis. First is to agree on the question that is posed to the risk assessment team after completion of the risk profile. This question should clearly define the specific risk issue that the assessment team must investigate to complete the risk assessment. It should be as specific as possible. One other critical factor is to clearly define the areas of uncertainty that exist in the process of performing the risk assessment. It is likely there will always be uncertainty that is identified in the risk analysis process. One of the goals of the risk analysis process is to reduce uncertainty. If uncertainty cannot be eliminated, which is often the case, it should be clearly identified/documented to aid in the selection of the best RMO. Finally, the risk assessment step must be conducted using a team that includes individuals who either possess knowledge specific to the risk question or can acquire the needed knowledge. This knowledge should be based on the best established and scientific facts available. In gathering facts, consideration should be given to financial, operations, regulatory, and reputational consequences and probability, as well as that for environmental health and safety.

It is the intent of this gap analysis to conduct a qualitative, abridged risk analysis of each of the 57 EHS programs and to identify those programs that present substantial institutional risk along with the operational staffing resources needed to address these programs. The term “abridged risk analysis” is used because the limited time available to construct this report did not allow time to conduct a more comprehensive risk analysis for each of the 57 programs.

Risk Assessment

One common reality in many public school environments is limited resources to address the growing number of federal, state and local requirements along with adherence to many guidelines and best practices. Hence, the development and implementation of efficient programs that minimize institutional risk is a critical component in the management of an EHS program. Consequently, strategies that allocate resources to areas of higher risk have the greatest overall impact on the wide range of possible institutional risks.

Each of the programs presented in Table 1 were identified and assessed to delineate if they are required and/or justified by unacceptable institutional risk. Qualitative risk assessments¹ were not limited to regulatory compliance risk due to the fact that some programs are not required by regulation, yet present substantive institutional risk. Consequently, risk categories considered for each program in Table 1

included financial, operations, reputational, human health/safety and environmental, as well as regulatory risk. An example of a program that is required by regulation is fire/life safety hardware/code compliance. This is clearly a regulatory compliance issue and but also presents substantial potential for human health & safety, reputational, financial, and operations risk, as well as regulatory risk. However, an example of a program that is not required by regulation is ergonomics. Although an ergonomics program is not required by regulation, the potential exists for extensive human health, financial and operations risk.

Due to the limited time available and the large number of programs, qualitative estimates of risk were determined using my knowledge and experience of the risk profile for each program in a school district like PPS along with assignments of severity/consequence. Typical severity assignments for each of the six EHS risk categories are shown in Table 3.

Table 3 – Severity/Consequence Assignments

<p style="text-align: center;"><u>Financial</u></p> <p>Very High - >\$1,000,000 High - \$100,001 – 1,000,000 Moderate - \$10,001 – 100,000 Low - \$1,001 – 10,000 Very Low – 0 - \$1,000</p>	<p style="text-align: center;"><u>Human</u></p> <p>Very High – Fatality/Catastrophe/Perm. Disability High – Serious Injury/Illness >3 Mo Disability Moderate – Serious Injury/Illness <3 Mo Disability Low – Minor Injury/Illness <1 Wk Sick Leave Very Low – No Injury/Illness Only 1st Aid</p>
<p style="text-align: center;"><u>Operations</u></p> <p>Very High – Cease Operation(s) High – Extensive Impact SOU/MOU* >1 Wk Moderate – Extensive Impact SOU/MOU <1 Wk Low – Minor Impact SOU* Very Low – Little or No Impact</p>	<p style="text-align: center;"><u>Environmental</u></p> <p>Very High – Uncontrolled Release High – Controlled Release (High Impact) Moderate – Controlled Release (Mod. Impact) Low – Controlled Release (Min. Impact) Very Low – De Minimis Impact</p>
<p style="text-align: center;"><u>Reputational</u></p> <p>Very High – Multi-Media Release >1 Month High - Multi-Media Release <1 Month Moderate –Single Media Release (Inj./Illness) Low – Single Media Release (Reg. Issue Only) Very Low – No Media Coverage</p>	<p style="text-align: center;"><u>Regulatory</u></p> <p>Very High – Cease Operations High – Repeat Violations/Increased Fines Moderate – Citation & Fine/Permit Violation Low – Citation w/No Fine Very Low – No Citation</p>

*SOU – Single Operating Unit/MOU - Multiple Operating Units

These qualitative severity assignments were then combined with assignment of likelihood/frequency as follows, providing estimated risk for each risk category.

- Very Likely - >Once/Year
- Likely – Every Year
- Infrequent – Every 1-10 Years
- Unlikely – Every 10 – 50 Years
- Very Unlikely - <Once/50 Years

My definitions for each of the six risk categories are as follows:

Financial Risk – Risk of an economic loss/cost resulting from failure to adequately manage an EHS program.

Operations Risk – Risk of a loss of personnel, equipment, utilities or classroom/building space critical to PPS objectives, strategy and operations.

Reputational Risk – Risk of a reduction or loss of internal and/or public image, reputation or trust.

Human Health/Safety Risk – Risk of human injury, illness, disability or fatality.

Environmental Risk – Risk of a controlled or uncontrolled release of a hazardous material to air, water or soil.

Regulatory Risk – Risk of a regulatory finding resulting in a citation, fine and/or an impact on operations.

Great City Schools and Enterprise Risk Management

The Council of the Great City Schools (CGCS) is a national organization that exclusively represents the needs of urban public schools with 70 member schools, including PPS. CGCS recently published a white paper (see link below) entitled Enterprise Risk Management in Great City Schools².

Enterprise risk management (ERM) is a relatively new concept. Depending on your source, ERM evolved from classical risk management within the private sector in the mid-1990s to minimize financial losses. It has now slowly found its way into some academic organizations. This slow evolution will likely continue. ERM is a comprehensive integrated approach to the management of all potential organizational risks that a school district faces. The practice of ERM requires a broad approach to risk management that goes beyond insuring against pure risk. At its heart, ERM formally wraps risk-based decision making into the overarching objectives and strategies of the institution. This requires that all leaders within an organization identify, understand and implement best practices in managing the areas of risk for which they are accountable.

The reason that ERM is a topic in this gap analysis is due to the growing, increasingly complex list of risks that public schools need to manage, hence there is a mounting need to consider the insertion of risk into large public school district strategic decision making.

http://www.cgcs.org/cms/lib/DC00001581/Centricity/Domain/87/EntRiskMan_Report_R5.pdf

Areas of Concern

The following EHS programs/topics are areas of concern. Because of the challenges in weighing the many factors that must be considered, it is difficult to assign level of priority to each of these areas/programs.

An attempt is made in the discussion of each area to indicate its level of importance based on the potential impact that a given issue can have on District objectives and strategy. Potential impact is based on anecdotal and contextual evidence, as well as the professional experience and knowledge of the author along with Risk Management statistics where applicable. Programs that are areas of concern are presented in alphabetical order after a brief discussion of broader areas of concern and each program includes specific recommendations.

Prioritization of Resources

EHS decisions can have significant impact on the objectives, strategy, operations and budgets of other departments and even the entire institution/enterprise. EHS decision making and problem solving skills should expand beyond the current almost exclusive focus on regulation-based solutions to include Systems Thinking. EHS should approach all decision making holistically by considering Risk, Relationships and Resources, as well as Regulations in all decision making where Risk is defined as institutional or enterprise-wide risk. I refer to this as the 4R's Strategy. This management strategy can be used to identify and prioritize those programs that justify a greater allocation of existing resources on the basis of six categories of risk. Those categories include financial, operations, reputational, human, environmental and regulatory.

Senior Manager Selection/Duties

The recruitment of a Senior Manager for the EHS Section began in November 2016. Ideally, the new manager will have extensive experience in a public schools environment and a strong science background in chemistry and biology with a preference toward chemistry. This person will need to have experience that covers the entire spectrum of EHS programs or have the background and skills to understand the science and operations for each program and have a working knowledge of evaluating institutional risk. Ultimately, they will be the eyes, ears, face and heartbeat of the EHS group at PPS. The careful selection of a new Senior Manager should be the highest priority for the EHS section.

In small EHS groups like PPS EHS, this position is typically a "working manager" position. In addition to management duties, the EHS manager often becomes the lead person for specific EHS programs based on their past experience and knowledge and the workloads and experience of other EHS employees. Although they will have direct operations involvement, it is critical that they also have time to focus on the objectives of the EHS Section. This includes developing program operating strategies, identifying and monitoring performance metrics, conducting risk assessments and working closely with the Director of Risk Management for daily and long-term decision making, maintenance of the Healthy and Safe Schools Plan and creation of an annual report. The selection of specific operations duties for the Senior Manager should be limited to those programs that allow time to adequately conduct the administration of the EHS Section. One of the most critical operating strategies that the manager should develop is the management of data for future access and use. Many of the EHS programs are data driven and several are data intensive, accumulating massive amounts of data measurements. The accessibility and accuracy of these databases can directly influence future decision making and costs, as well as reducing the need for consultants and repeat data gathering. This should be one of the highest priorities for the Senior Manager.

As important as the education and experience of the new manager are to their success, it is equally important that they possess innate people skills. Communication, customer service, collaboration and empathy skills are crucial and go a long way in the development of creative, inclusive and cost effective solutions for complex EHS issues!

Finally, the Senior Manager and Risk Management Director should work with FAM senior management to agree on and implement a methodology to prioritize safety and health-related work orders.

Annual Report

As mentioned earlier, the EHS Senior Manager must be responsible to collaborate with Risk Management leadership to create an annual report for the EHS Section. This is one of the most important roles of the Senior Manager, if done properly it provides an annual “fresh” look at where improvements can be made along with celebrating accomplishments. Just as important, it is instructive for PPS upper administration regarding their understanding of the scope and complexity of the EHS section. The annual report can be a standalone report or wrapped into a Risk Management annual report at the discretion of the Risk Management Director. Contents of the report should include, but not be limited to, established performance metrics, discussion of major accomplishments, existing needs and challenges going forward and those topics selected by the Risk Management Director.

Art Program Safety

EHS picks up and disposes a variety of hazardous chemicals from District art programs. Annual visits during site safety surveys also occur. Art programs also operate high-temperature kilns. Limited resources in EHS has prevented a comprehensive review of the potential hazards associated with art program operation. EHS needs the resources to evaluate art programs at PPS and conduct risk assessments on materials in use and kiln usage.

Chemical Fume Hood Certification

Chemical fume hoods at all school laboratory locations must be certified annually to minimize the potential for student exposure to chemical vapors. A practical Standard Operating Procedure (SOP) using the ANSI standard should be developed that describes the step by step process for certification. Certification of each hood must be documented and a database or spreadsheet created and maintained annually. This work is not complex, although each hood will require 15-30 minutes to certify. To minimize costs, certification can be performed by a trained EHS employee.

Database Management

Database management has the potential to reduce the costs and time demands of several EHS programs. The accessibility and accuracy of EHS databases can directly impact day to day and long-term decision making in FAM, Risk Management and EHS. Development of accurate and useable databases should be

one of the highest priorities for the EHS Senior Manager. See Senior Manager Duties in the Areas of Concern section for further discussion regarding the high priority of this program.

Facilities Safety/Safety Committee

PPS FAM Operations have 423 multi-craft, mechanical trades and custodial personnel. Many of these employees work in hazardous environments and use hazardous equipment. The risk associated with many of these processes and procedures can result in serious injury or illness, some have the potential to result in a fatality. The large number of hazardous activities conducted by FAM maintenance and custodial personnel increases the probability of a serious and costly outcome. Programs and potential consequences are presented below. Descriptions of each of these 14 programs are available in the Program Descriptions section. Nine of these programs are exclusive or almost exclusive to FAM Operations.

- Confined Space – Serious Illness/Injury/Fatality
- Lockout/Tagout – Serious Injury/Fatality
- Fall Protection – Serious Injury/Fatality
- Forklift – Serious Injury/Fatality
- High Lift – Serious Injury/Fatality
- Electrical Safety – Serious Injury/Fatality
- Motor Vehicle Safety – Serious Injury/Fatality
- Ladder Safety – Serious Injury/Fatality
- Welding/Cutting – Serious Illness/Injury
- Machine Guarding – Serious Injury
- Hazard Communication (Chemical Exposure) – Serious Injury/Illness
- Respirator Fit Testing – Serious Illness
- Personal Protective Equipment – Serious Injury
- Ergonomics – Serious Illness

PPS safety programs associated with these activities are fragmented and limited in scope. Training is conducted for some activities, but validation of safe employee practices is limited. Although there are monthly training sessions, there is no safety committee that includes members of FAM maintenance and custodial staff. The frequency of incidents and claims involving these FAM employees is higher than that of other PPS departments. Over the past five years, FAM maintenance and custodial employees have reported almost 20% of the OSHA recordable incidents that became worker's compensation claims. A broad range of FAM maintenance employees filed these claims although the majority were custodians. Most common injuries were sprains and strains. Lack of a comprehensive facilities safety program presents substantial human health and safety, regulatory, reputational, operations and financial risk to PPS and should be given a high priority. EHS should review the Facilities Safety related programs in the list above and create a comprehensive program for FAM maintenance and custodial employees along with the creation of a dedicated safety committee. Finally, a TSI Portacount should be purchased to conduct quantitative fit testing for lead-paint and asbestos remediation employees.

Fall Protection

Although fall protection is included in the discussion above regarding facilities safety, it is important that it be addressed individually due to the impact on roof access. Many PPS buildings do not have fall protection infrastructure used to prevent or arrest employee falls while working on roofs. Although roof maps have been created that provide guidance on those sections of a given roof that can be accessed by FAM personnel, some portions of roofs cannot be accessed to perform maintenance on building support equipment and removal of debris (leaves, etc.) that plug roof drains. Current plans are to select a contractor to respond as needed to unplug drains that cannot be safely reached by FAM personnel. There is also a need to identify a consultant to assist with long-term planning for all buildings, and the identification of FAM or EHS personnel to serve as the in-house expert to manage a comprehensive fall protection program. Because of the complexity and extensive costs associated with installation of fall protection hardware, a multifaceted program should be developed by EHS. Final strategy will likely include installation of fall protection infrastructure at selected sites, limited access to sections of selected roofs and the use of an on-call contractor for drain cleanouts as needed, along with an in-house expert to oversee the program. Development of a comprehensive fall protection operating strategy should be a high priority for EHS to effectively deal with roof drains and reduce the risk of serious injury. Although the likelihood of a serious safety incident is likely low to moderate, the human health and safety, financial, reputational and regulatory risk is substantial because of the potential serious consequences.

Fire/Life Safety

FAM oversees the fire/life safety program at PPS. It appears that adequate operating resources are allocated to PPS fire/life safety systems and code compliance. However, experience at past workplaces has indicated that this program has a tendency to drift over the years. This is of significant concern because of the potential for catastrophic human health and safety, operations, financial and reputational risk. EHS, in conjunction with FAM, should conduct a comprehensive review of fire/life safety systems function and testing along with overall code compliance.

Integrated Pest Management

PPS has a written plan for Integrated Pest Management (IPM). EHS leadership should review and update as needed based on the new Healthy and Safe Schools rule. There is also a need for EHS to play a more active role in IPM, including the review of current pest management procedures, training for FAM maintenance personnel and approval of new pest management devices and chemicals.

Lab Safety Plan

PPS does have a written Laboratory Safety plan which is also called a Chemical Hygiene plan in OR-OSHA's hazardous chemicals in laboratories rule. A broad range of toxic and flammable chemicals is used in small quantities in PPS laboratories. Very few resources are currently being devoted to this program. There is also a lack of clarity on the designation of the required Chemical Hygiene Officer (CHO). EHS should designate a CHO to review the entire program. Emphasis should be placed on updating the existing

chemical hygiene plan, training for laboratory faculty, an updated review of the chemicals currently in use in student laboratories, the need for safety standard operating procedures for specific chemicals and experiments and waste disposal practices. This appears to be primarily a regulatory risk.

Lead-Based Paint Surveys

Eating chips of lead-based paint and exposure to lead-paint dust are the most common causes of blood-lead poisoning in children. We are currently working with a consultant to create a District-wide database on paint condition from field observations. After this database is complete, there will be a need for ongoing comprehensive and accurate field surveys to prevent the need to update the database using consultants. EHS already conducts site safety surveys, see section on EHS Metrics. These surveys are field evaluations of a number of EHS issues and have included paint condition in the past. Lead-based paint condition should continue to be included in these surveys and the format of the new database maintained up-to-date at all times. This should add little additional time to site surveys and could substantially reduce future consulting costs along with helping to prioritize painting needs while minimizing the presence of lead-based paint in poor condition. Inadequate maintenance of this database could result in significant financial, reputational and human health and safety risk in the future. This must be a long-term and high priority for EHS to minimize potential student exposure and future reputational risk.

Motor Vehicle Safety

EHS should create and maintain a safe driving program that includes screening of drivers, driver training and accident prevention.

On-Call

EHS employees respond and participate in on-call activities for a total of approximately 200 hours per year. In this role, each EHS employee must be available to respond to requests by carrying an on-call cell phone for 5-6 weeks per year. Interviews with the two EHS employees indicates that the far majority of on-call activity involves FAM issues that are not related to EHS issues such as spills, safety concerns, etc. It appears that this is not a wise use of EHS time in a limited resource environment. Consideration should be given to EHS personnel serving in an ad hoc role to respond only as needed for EHS related concerns. This would require EHS to provide on-call participants with documentation on when EHS should be called and EHS leadership to develop a dependable communication strategy for those rare instances that EHS resources are needed.

Playground Inspections

Inspections of playgrounds occur annually during site safety surveys and when requested. Work orders are initiated as needed for repairs. EHS should establish a standard protocol for playground inspections and create a database that documents the need for partial and/or full replacement to aid in the budgeting and prioritization of replacement funding.

Radon

As discussed early in the section on Areas of Improvement/Progress, extensive long-term and short-term testing will take place throughout the 2016/2017 school year and also likely will continue during 2017/2018. This testing will result in the need to conduct site specific mitigation in the 2016/2017 and 2017/2018 school years. Consequently, person-hour demand on EHS will continue to be high for this program and may increase during this period depending the number of sites requiring mitigation and the specific mitigation process required. This may result in a time demand spike for EHS staff and also cause increased capital costs for FAM if several HVAC systems must be upgraded. EHS leadership should carefully watch this program to monitor staffing needs. After this two year period, staffing needs should be reduced and remain relatively low. This program is included in the Healthy and Safe Schools rule, hence regulatory and reputational risks are substantial. Human health risk is considered high due to the fact that radon is believed to be the second leading cause of lung cancer in the U.S.

School Safety Committees

State OSHA regulations and PPS policies require that each school have a safety committee. Risk Management is currently reviewing the central records that confirm compliance with this requirement, but not all are complete. The establishment of functioning safety committees that meet quarterly has many benefits. Local school leaders would receive regular reports on safety concerns and school employees can report concerns locally, increasing the likelihood that local solutions can be found. In addition, school committees give Risk Management and EHS points of contact for needed two way communications to discuss current and future health and safety projects, evaluate incidents and to provide resources as needed. EHS should review this program and reestablish it as needed to create active safety committees at each school. They should also attend meetings on an ad hoc basis to consult and assist with the resolution of issues, this provides visibility and credibility for EHS and lends to a culture of safety.

Site Safety Surveys

Site safety surveys is one of the core EHS programs and currently requires over 700 person hours. This is a valuable and high impact program that should be carefully reviewed and updated. These surveys should be used to maintain the lead-based paint database created by PBS consultants to reduce the potential for lead exposures and to minimize future consulting and maintenance costs related to lead-based paint removal and encapsulation. Risk Management and EHS leadership should review the current survey program and modify as necessary to maximize the generation of data valuable to the prioritization of resources. The many programs and general hazard inspections currently included in surveys should be reviewed for continued inclusion based on the efficient use of the time spent conducting surveys and the potential to reduce hazards/risk and future costs. This program should be structured to maximize its potential to efficiently reduce costs and institutional risk.

Stage/Auditorium Safety

Stage safety is being reviewed for a health and safety capital proposal to the Board for a May 2017 bond measure. Regardless of its selection for a bond measure, there is a genuine need to improve stage safety on the operations level. EHS should develop a comprehensive program operations strategy. At a minimum this will include training for school faculty and EHS using a professional trainer with expertise in stage operations safety. EHS should conduct periodic field inspections of stage curtains, rigging systems, ropes, fall arrest systems, flooring and electrical systems. Although it is unlikely a serious safety incident will occur, the potential consequences of an injury includes long-term disability and even fatality, as well as reputational and financial risks.

Underground Storage Tanks

The author has not been able to find a comprehensive database on the existence and status of all regulated and unregulated underground storage tanks (USTs) in the District. This list likely does exist although the recordkeeping may be fragmented. The existence of “orphan” USTs that have not been decommissioned, if they exist, could represent significant financial, environmental and reputational risk for the District. The status of all USTs should be determined and a central database created.

Water Quality

FAM has completed taking A (initial) and B (after 30 second flush) samples from almost 11,000 water fixtures. Testing of all A samples is complete and selected B sample testing will likely be completed in the near future, leading to decisions to replace fixtures and/or upstream water lines based on test results and fixture usage. Included in this decision-making process will be the past and future use of filters in fountains. There will be a need to retest after repairs have been completed on several fixtures to confirm lead levels have been reduced below or remain below action limits. Risk Management and FAM operations must agree on EHS’s role in the maintenance of this program. It is imperative that a long-term operating strategy be created, maintained, monitored and rigidly enforced. It is recommended that at least one individual in EHS be assigned the responsibility to strictly oversee water quality operations at PPS to prevent maintenance program drift. New legislation requiring testing every 10 years is expected in the near term. This will require that EHS test 10% of required water fixtures annually. There is substantial, long-term institutional risk associated with this program, primarily due to potential future financial and reputational risk if not properly maintained.

Recommendations

The PPS EHS group needs a reset for its mission, objectives, overall operating strategy and staffing. The staffing level of three full-time FTE is inadequate to properly develop clear objectives and an overall operating strategy to reduce the potential institutional risk associated with EHS programs. Current staffing

has resulted in day-to-day “firefighting” in an effort to respond to the latest customer or regulatory need. Yet, the scope of the EHS section has grown to include 57 different programs. This is not an uncommon circumstance for EHS groups in large organizations. EHS groups have been faced with a steadily increasing number of required new programs, not to mention guidelines and best practices, over the past 25 years emanating from 10-15 different local, state and federal regulatory agencies. The challenge presented to EHS leadership over these years has been that when a new regulation is mandated, it often does not justify a new full-time employee. Consequently the new program is assigned to an existing employee’s workload. When this happens repeatedly over a number of years, existing employee’s workloads steadily increase and existing programs receive less and less resources resulting in ineffective environmental health and safety programs and increased institutional risk. This is complicated further by an almost exclusive focus on compliance with regulations from fear of non-compliance, yet regulatory compliance is only one of the six institutional risk categories that EHS should consider when setting priorities and allocating resources.

EHS Senior Manager

The first crucial step in adequately staffing and administrating EHS is the recruitment of a highly qualified EHS Senior Manager. This individual must have a good balance of education, experience and organizational skills, as well as superior people skills. Operationally, EHS is driven by applied science, regulation interpretation skills and program development skills, but at its core, EHS is really in the business of providing EHS customer service to parents, students and PPS employees along with the reduction of PPS institutional risk. Put simply, EHS is in the business of customer service and risk reduction. The Senior Manager must recognize these two basic foundational precepts to set effective objectives and an overall operating strategy. For a more detailed discussion on the EHS Senior Manager position, see that section under Areas of Concern.

EHS Staffing Levels

In addition to existing full-time positions, EHS should recruit one safety professional and one industrial hygienist. The proposed organization chart for Risk Management/EHS is presented in Figure 2 where these two new positions are represented by those *EHS Specialists* in italics. These new positions are justified by existing workloads and the fact that 25 of the 57 EHS programs receive inadequate resources. For example, the Facilities Safety/Safety Committee combined with the Fall Protection program will likely require between 0.75 – 1.0 FTE. The two new positions combined with the existing three FTE should be able to adequately oversee each of the 57 programs if each program is carefully designed and assigned.

Because of the competition for quality EHS professionals, PPS will need to provide opportunity for professional development. This will attract applicants who have a desire to continue to improve their skills and career potential. The specific professional development choice will be candidate dependent. At a minimum, I recommend that successful candidates be provided PPS support to complete designation as a Certified Safety Professional (CSP) or a Certified Industrial Hygienist (CIH).

The fact that EHS presently has only one full-time employee and two open positions presents an excellent opportunity for reorganization of the EHS group. The new Senior Manager should collaborate with the

Director of Risk Management to review and propose the most operative assignment for all 57 programs to each of the five positions. The goal should be to assign programs to each position to match employee experience and technical skills along with creation of balanced workloads.

As a starting point to aid in this process, I have listed each of the 57 programs in two tiers. Tier One lists those programs that present higher institutional risk. The programs with significant operative gaps are in italics and highlighted in red. Recommendations/needs for each of these 25 programs are presented in the Areas of Concern section. This is not to imply that the 32 remaining programs cannot be refined/improved. The 12 programs in Tier One that currently do not have significant operating gaps have adequate operational funding and controls to manage the potential for high institutional risk. Tier Two lists those programs that inherently present limited institutional risk and currently appear to be adequately resourced.

Tier One Programs:

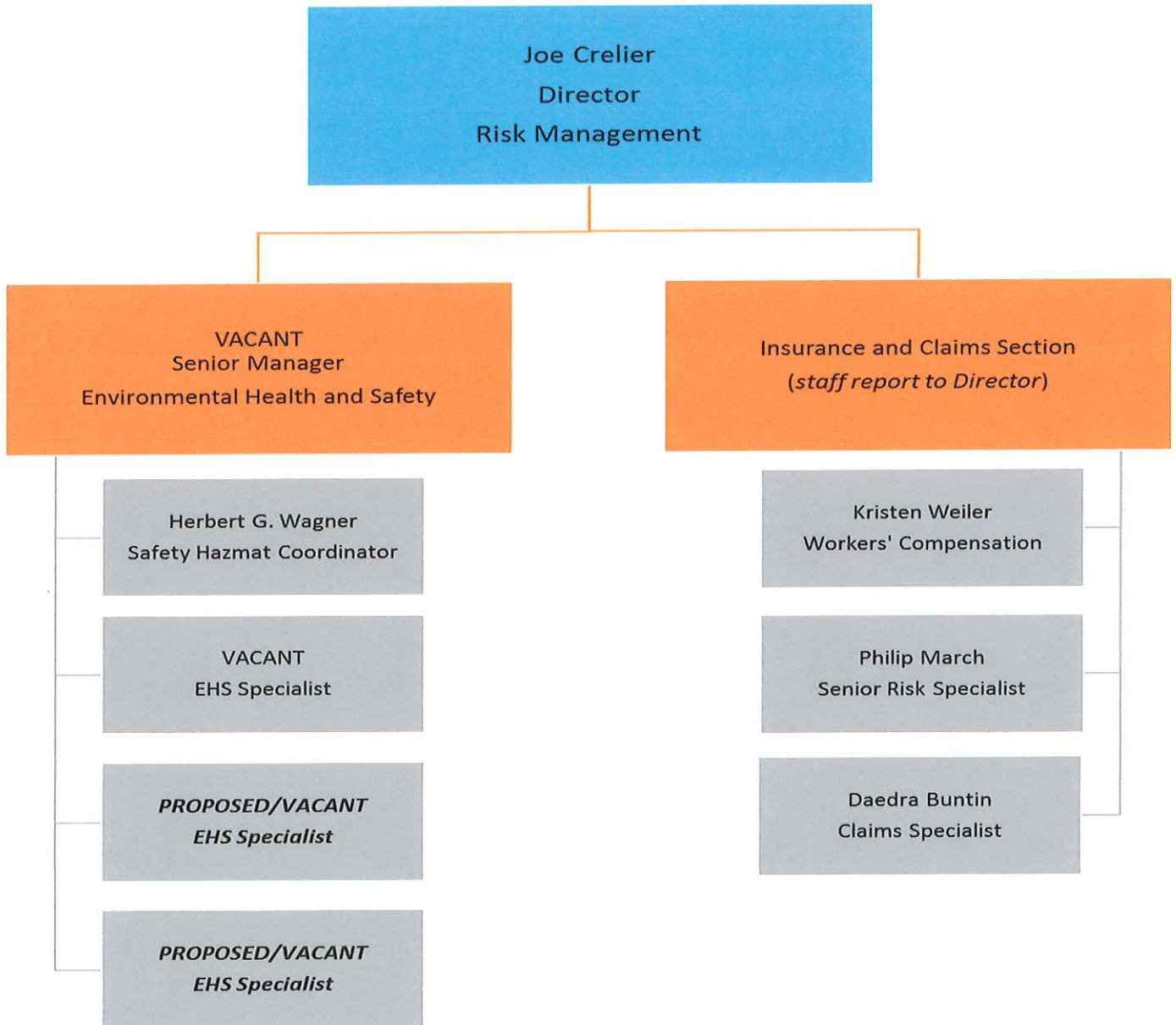
- AED Inspections
- *Art Program Safety*
- Asbestos Surveys/Sampling/Abatement
- Bio-Aerosol Mold Monitoring/Abatement
- *Chemical Fume Hood Certification*
- *Database Management*
- Ergonomics
- *Facilities Safety/Safety Committee (9 safety programs)*
- *Fall Protection*
- FAM Maintenance Safety Meetings
- *Fire/Life Safety Assistance*
- Gmax Testing
- Healthy and Safety Schools Plan
- Incident/Accident Investigation
- Indoor Air Quality
- *Integrated Pest Management*
- *Laboratory Safety*
- *Lead-Based Paint Surveys*
- *Motor Vehicle Safety*
- OR-OSHA Complaint Letters/Inspections
- Personal Protection Equipment
- *Playground Inspections*
- *Radon Testing/Mitigation*
- *School Safety Committee Assist*
- *Site Safety Surveys*
- *Stage/Auditorium Safety*
- Student Transportation Safety
- *Underground Storage Tanks*
- *Water Quality*

Tier Two Programs:

- Air Contaminant Monitoring
- Bacterial Contamination Monitoring
- BESC Safety Committee Membership
- Bloodborne Pathogens
- Budget
- Building/Room Remodel Plan Review
- Emergency Management Assistance
- Hazard Communication/Safety Data Sheets
- Hazardous Materials Inventory Report
- Lead-Based Paint Disposal
- Medical/Biological Waste Disposal
- Metro Hazardous Waste Disposal
- Noise Assessment/Abatement
- On-Call Response
- Personnel Issues
- RCRA Hazardous Chemical Waste Management
- Spill Response/Cleanup
- Toxic Substance Control Act (TSCA)/PCB Collection/Disposal
- Underground Injection Control
- Universal Waste Management


The resources required to develop, update and maintain each of the 57 programs varies widely. The listing above is an attempt to prioritize each of the programs into two tiers based on the potential institutional risk associated with each program. The assignment of abridged qualitative risk to each program is based on my technical/operational knowledge and experience with each program, as well as the uncertainty associated with each program. For a discussion on conducting a more comprehensive risk analysis¹ see that section.

Figure 2
Proposed Risk Management Org Chart



References

1. Yoe, Charles. 2012. *Principles of Risk Analysis-Decision Making Under Uncertainty*. Chapter 9: Qualitative Risk Assessment. Boca Raton, FL: Taylor & Francis Group, LLC. CRC Press.
<https://www.amazon.com/Principles-Risk-Analysis-Decision-Uncertainty-ebook/dp/B008KZUQGU>
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6. Casualty Actuarial Society Enterprise Risk Management Committee. 2003. Overview of Enterprise Risk Management. <https://erm.ncsu.edu/az/erm/i/chan/m-articles/documents/CasualtyActuarialSocietyOverviewofERM.pdf>





PORTLAND PUBLIC SCHOOLS

Environmental Health & Safety Section Gap Analysis

February 6, 2017


John W. Burnham, Ph.D.
Interim Senior Director

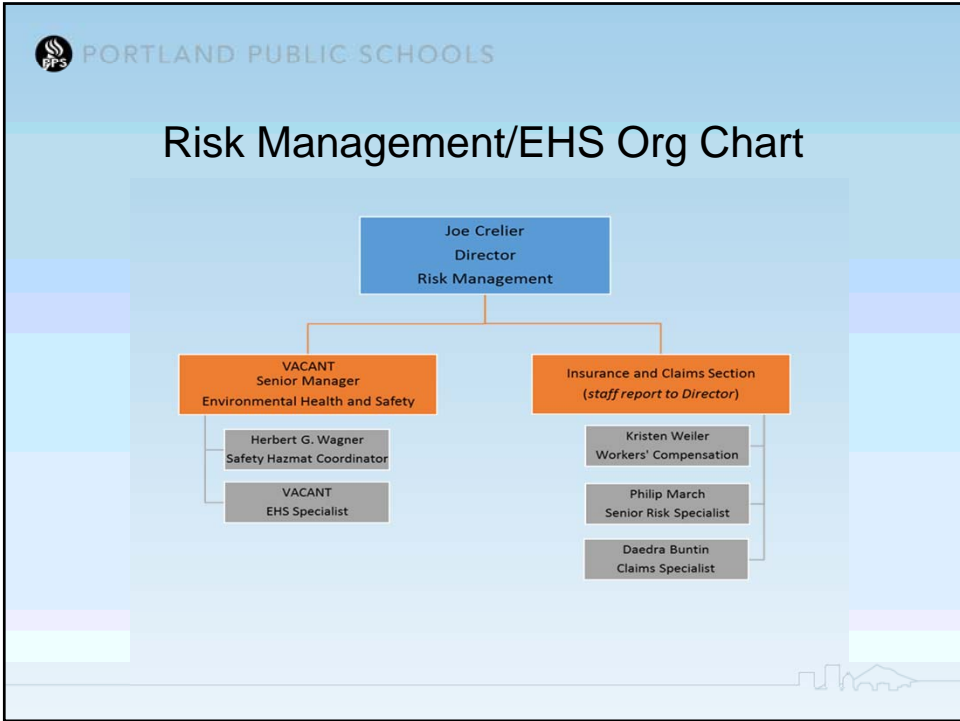


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Professional Background


- MS Environmental Health/PhD Organic Chemistry
- Scientist – Private Sector
- Regulator – OR-OSHA
- Graduate Faculty – OSU Public Health
- EHS Director – OHSU/PSU
- Retired – OHSU 7/15
- My Third EHS Gap Analysis





The slide lists the following EHS programs:

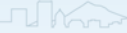
- 57 Total Programs
- 29 General Occupational Safety
- 10 Environmental
- 10 Chemical Safety
- 1 Radiation Safety
- 3 Biological Safety
- 4 Administrative
- Ten Regulatory Agencies/Commissions
- Over 60% labor hours is building related



 PORTLAND PUBLIC SCHOOLS


Benchmarking

School District	No. Schools ¹	Enrollment ²	EHS FTE	Comments
Portland	83	49,000	3.0	
Seattle	102	54,000	2.5	Recent report to Leadership – EHS Understaffed by 2-3 FTE
Salem-Keizer	65	42,000	2+	Some EHS programs located in Facilities ³
Wichita	89	50,500	6.0	Programs very similar to PPS EHS
Omaha	89	52,000	7.0	Programs very similar to PPS EHS

¹Varying definitions of school ²Rounded ³Likely less than 1 FTE

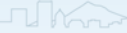


-  PORTLAND PUBLIC SCHOOLS
- ## Gap Analysis Methodology
- Identify all EHS Programs
 - Required by Regulation?
 - Investigate Program Operating Strategy
 - Estimate Current Labor/Resource Commitment
 - Identify Gaps
 - Determine Risk Profile
 - Conduct “Abridged” Institutional/Enterprise Risk Assessment
- 

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Institutional/Enterprise Risk Assessment


I use the terms institutional risk and enterprise risk interchangeably, however I favor the use of institutional over enterprise for PPS because I tend to relate the word enterprise with a private enterprise.




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Risk Assessment Resources


- Yoe, Charles. 2012. *Principles of Risk Analysis-Decision Making Under Uncertainty*. Boca Raton, FL: Taylor & Francis Group, LLC. CRC Press. <https://www.amazon.com/Principles-Risk-Analysis-Decision-Uncertainty-ebook/dp/B008KZUQGU>
- Council of the Great City Schools. Spring 2016. *Enterprise Risk Management in the Great City Schools*. Washington D.C. http://www.cgcs.org/cms/lib/DC00001581/Centricity/Domain/87/EntRiskMan_Report_R5.pdf
- *Institutional Risk Management*: University of North Carolina Wilmington <http://uncw.edu/ba/irm/index.html>
- *Institutional Risk Management*: Vanderbilt University <https://www4.vanderbilt.edu/internalaudit/institutional-risk-management/>
- RIMS. The Risk Management Society. *Enterprise Risk Management - What is ERM?* <https://www.rims.org/ERM/Pages/WhatIsERM.aspx>
- Casualty Actuarial Society Enterprise Risk Management Committee. 2003. Overview of Enterprise Risk Management. <https://erm.ncsu.edu/az/erm/i/chan/m-articles/documents/CasualtyActuarialSocietyOverviewofERM.pdf>



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EHS Institutional/Enterprise Risk Assessment Severity/Consequence

<p style="text-align: center;"><u>Financial</u></p> <p>Very High - >\$1,000,000 High - \$100,001 – 1,000,000 Moderate - \$10,001 – 100,000 Low - \$1,001 – 10,000 Very Low – 0 - \$1,000</p>	<p style="text-align: center;"><u>Human</u></p> <p>Very High – Fatality/Catastrophe/Perm. Disability High – Serious Injury/Illness >3 Mo Disability Moderate – Serious Injury/Illness <3 Mo Disability Low – Minor Injury/Illness <1 Week Sick Leave Very Low – No Injury/Illness Only 1st Aid</p>
<p style="text-align: center;"><u>Operations</u></p> <p>Very High – Cease Operation(s) High – Extensive Impact MOU* >1 Week Moderate – Extensive Impact SOU*/MOU <1 Week Low – Minor Impact Single Operating Unit (SOU) Very Low – Little or No Impact</p>	<p style="text-align: center;"><u>Environmental</u></p> <p>Very High – Uncontrolled Release High – Controlled Release (High Impact) Moderate – Controlled Release (Mod. Impact) Low – Controlled Release (Min. Impact) Very Low – De Minimis Impact</p>
<p style="text-align: center;"><u>Reputational</u></p> <p>Very High – Multi-Media Release >1 Month High - Multi-Media Release <1 Month Moderate –Single Media Release (Inj./Illness) Low – Single Media Release (Reg. Issue Only) Very Low – No Media Coverage</p>	<p style="text-align: center;"><u>Regulatory</u></p> <p>Very High – Cease Operations High – Repeat Violations/Increased Fines Moderate – Citation & Fine/Permit Violation Low – Citation w/No Fine Very Low – No Citation</p>

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Why these six risk categories?

These specific risk categories were selected based on my experience, knowledge and professional opinion regarding the role of EHS in the practice of Enterprise Risk Management (ERM)¹⁻⁶.



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Risk Categories

- Financial Risk – Risk of an economic loss/cost resulting from failure to adequately manage an EHS program.
- Operations Risk – Risk of a loss of personnel, equipment, utilities or classroom/building space critical to PPS objectives, strategy and operations.
- Reputational Risk – Risk of a loss of internal and/or public image, reputation or trust.



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Risk Categories Cont'd.

- Human Health/Safety Risk – Risk of human injury, illness, disability or fatality.
- Environmental Risk – Risk of a controlled or uncontrolled release of a hazardous material to air, water or soil.
- Regulatory Risk – Risk of regulatory finding resulting in a citation, fine and/or an impact on operations.





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Areas of Concern/Findings

Review of each program's operating strategy and abridged institutional risk assessment for each of the 57 EHS programs revealed that 25 programs are inadequately supported and present a range of institutional risks.

Specific recommendations for general areas of concern and each of the 25 programs are provided in the gap analysis report.



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Areas of Concern Cont'd.

Of the 25 programs of concern, those programs of greatest concern include, FAM operations safety, chemical fume hood certification, database management, fall protection, school safety committees and stage/auditorium safety.





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Recommendations

- Transition EHS from almost exclusive regulation compliance-based focus to focusing on institutional risk and relationships.
- Structure duties of new EHS Senior Manager to reduce time spent dealing with daily issues to allow adequate time for development of efficient program operating and compliance strategies, customer service and risk reduction.

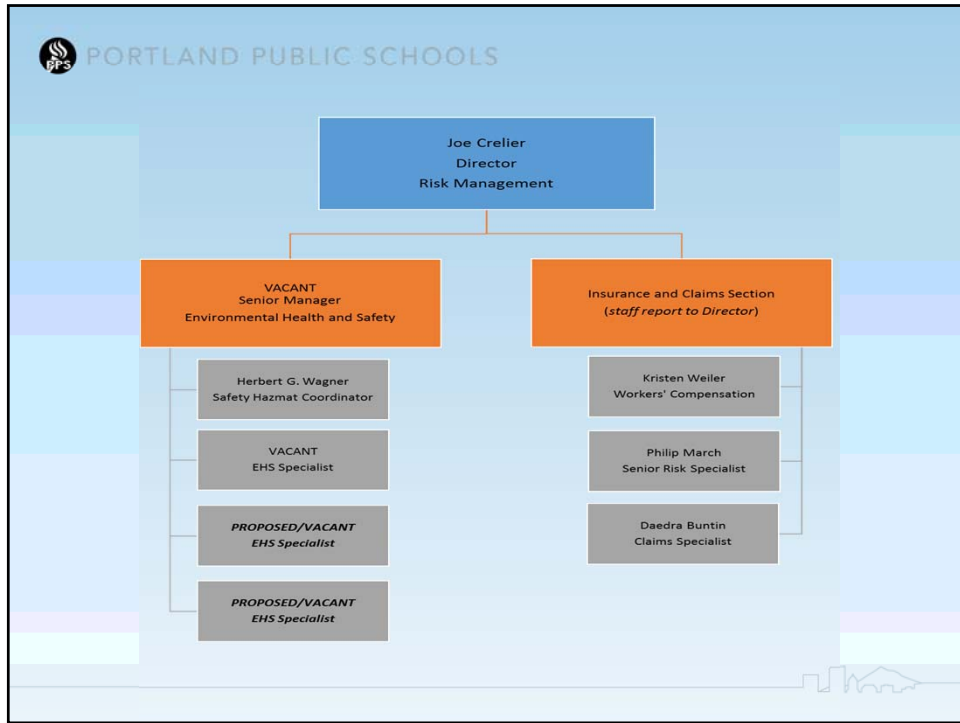


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Recommendations Cont'd.

- Create two new EHS positions to adequately support all 57 programs. The two positions should include one safety professional and one industrial hygienist.
- EHS Senior Manager and Risk Management Director collaborate to organize duties of all EHS employees as needed based on each employee's skills and experience to create balanced workloads, reduced institutional risk and great customer service.





BOARD OF EDUCATION
SCHOOL DISTRICT NO. 1J, MULTNOMAH COUNTY, OREGON

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February 6, 2017

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Purchases, Bids, Contracts

The Interim Superintendent RECOMMENDS adoption of the following items:

Numbers 5386 and 5387

RESOLUTION No. 5386

Revenue Contracts that Exceed \$150,000 Limit for Delegation of Authority

RECITAL

Portland Public Schools (“District”) Public Contracting Rules PPS-45-0200 (“Authority to Approve District Contracts; Delegation of Authority to Superintendent”) requires the Board of Education (“Board”) to enter into and approve all contracts, except as otherwise expressly authorized. Contracts exceeding \$150,000 per contractor are listed below.

RESOLUTION

The Superintendent recommends that the Board approve these contracts. The Board accepts this recommendation and by this resolution authorizes the Deputy Clerk to enter into the following agreements.

NEW REVENUE CONTRACTS

No New Revenue Contracts

NEW INTERGOVERNMENTAL AGREEMENTS / REVENUE (“IGA/Rs”)

Contractor	Contract Term	Contract Type	Description of Services	Contract Amount	Responsible Administrator, Funding Source
University of Oregon	6/1/2016 through 5/31/2017	Intergovernmental Agreement/Revenue IGA/R 64090	Funding for year five of the K-12 Oregon Chinese Flagship grant project.	\$350,000	C. Russo Fund 205 Dept. 9999 Grant G1658

AMENDMENTS TO EXISTING REVENUE CONTRACTS

No Amendments to Existing Revenue Contracts

Y. Awwad

RESOLUTION No. 5387

Expenditure Contracts that Exceed \$150,000 for Delegation of Authority

RECITAL

Portland Public Schools (“District”) Public Contracting Rules PPS-45-0200 (“Authority to Approve District Contracts; Delegation of Authority to Superintendent”) requires the Board of Education (“Board”) enter into contracts and approve payment for products, materials, supplies, capital outlay, equipment, and services whenever the total amount exceeds \$150,000 per contract, excepting settlement or real property agreements. Contracts meeting this criterion are listed below.

RESOLUTION

The Superintendent recommends that the Board approve these contracts. The Board accepts this recommendation and by this resolution authorizes the Deputy Clerk to enter into the following agreements.

NEW CONTRACTS

Contractor	Contract Term	Contract Type	Description of Services	Contract Amount	Responsible Administrator, Funding Source
Schetky Northwest	2/7/2017	Purchase Order PO 134112	Pursuant to Cooperative Agreement, COA 60560, purchase two 12-passenger buses with lift wheelchair station. Cooperative Procurement Group: N/A Administering Agency: Lane County School District	\$153,594	C. Wilton Fund 101 Dept. 5560
PBS Engineering and Environmental, Inc.	02/07/17 through 02/07/18 Option to renew annually through 02/07/2022	Related Services RS 64043	District-wide Environmental Consulting services on an as needed basis. Maximum contract term through 02/07/2022 RFP 2016-2136	Original Term \$1,000,000 \$5,000,000 over maximum contract term	C. Wilton Fund 101 Dept. 5597
Professional Service Industries, Inc. (PSI)	02/07/17 through 02/07/18 Option to renew annually through 02/07/2022	Related Services RS 64044	District-wide Environmental Consulting services on an as needed basis. Maximum contract term through 02/07/2022 RFP 2016-2136	Original Term \$1,000,000 \$5,000,000 over maximum contract term	C. Wilton Fund 101 Dept. 5597
Camfill USA, Inc.	2/7/2017 through 1/31/2018	Services S 64162	Provide air filters and replacement services for District HVAC systems. Maximum contract term through 1/31/2021 RFP 2015-1967	\$120,000 \$480,000 over maximum contract term.	C. Wilton Fund 101 Dept. 5592
Instructure, Inc.	2/7/2017 through 6/30/2020	Cooperative Agreement COA 64106	Provide “Canvas” cloud based software application for the administration, documentation, tracking, reporting and delivery of e-learning courses and training programs.	\$377,208	J. Klein Fund 191 Dept. 5581

NEW INTERGOVERNMENTAL AGREEMENTS (“IGAs”)

Contractor	Contract Term	Contract Type	Description of Services	Contract Amount	Responsible Administrator, Funding Source
Reynolds School District	7/1/2016 through 6/30/2017	Intergovernmental Agreement IGA 63256	Columbia Regional will provide the funding for Contractor to obtain Autism Spectrum Disorder program support and supplementary aides and services including coaching, professional development, technical assistance and consulting for school personnel.	\$204,000	H. Adair Fund 205 Dept. 5433 Grant G1630

AMENDMENTS TO EXISTING CONTRACTS

Contractor	Contract Amendment Term	Contract Type	Description of Services	Amendment Amount, Contract Total	Responsible Administrator, Funding Source
Two Oceans, LLC	2/7/2017 through 6/30/2017	Personal Services PS 63137 Amendment 1	To provide support to the Finance department by performing functions that would regularly be handled by the CFO and Budget Director, which are vacant positions. Direct Negotiation PPS 46-0525(4)	\$80,000 \$160,000	Y. Awwad Fund 101 Dept. 5523

Y. Awwad

Other Matters Requiring Board Approval

The Interim Superintendent RECOMMENDS adoption of the following item:

Number 5388

RESOLUTION No. 5388

Minutes

The following minutes are offered for adoption:

January 10 and 25, 2017