

Appendix G—Supporting Research on Institutional Systems in Washington

Appendix G—Contents

<u>Document</u>	<u>Page</u>
Possible Institutional Approaches to Child Use Areas—Licensed Home Childcares and Childcare Centers	1
Background Information on Certification Programs	6
Possible Institutional Approaches: Child Use Areas—K-12 Schools and Parks.....	8
Possible Institutional Approaches to Open Land Development	10

Possible Institutional Approaches to Child Use Areas—Licensed Home Childcares and Childcare Centers

(A) Overview: There are over 9000 licensed childcares (approximately 2000 childcare centers and 7208 family homes at most recent count¹) serving more than 164,000 children in the state of Washington. Approximately 110,603 of these children attend childcare in the seven Washington state counties with a high likelihood of elevated levels of arsenic and lead. Young children are of special interest in the context of area-wide contamination due to their high exposure potential (tendency to put hands and feet in their mouths, play patterns, uptake patterns, especially of lead).

(B) The following **Institutional Systems** at work at childcare facilities may present opportunities to help identify and/or address potential/actual area-wide contamination.

(1) **Childcare providers (both home and childcare centers) are required to provide an “environmentally safe site” (WAC 388-150-280(a)) to receive and maintain their operating licenses.** At childcare centers, health and safety inspectors make this determination. At family homes, DSHS childcare licensers conduct environmental/health and safety reviews. With supervisor approval, inspectors/licensers may call for sampling to ascertain the environmental safety of a given site. Licenses are valid for three (3) years.

(2) **DSHS conducts unannounced monitoring of licensed facilities** every 18 months for family homes and every year for childcare centers. Health and Safety officers receive extensive training and fill out checklists during their inspections.

(3) Rules governing health supervision and infectious disease prevention (WAC 388-150-220) **require childcare staff to wash, or assist children in washing their hands under a variety of circumstances**, including before the child eats and before the child participates in food activities. These rules further require childcare staff to clean and disinfect toys, equipment, furnishings, and facilities according to the center’s cleaning and disinfecting policies, as needed.

(C) The A-W Contamination Task Force identified the following relevant **Areas of Convergence** that pertain to childcare centers and family homes:

(1) Any responses to area-wide soil contamination shall be commensurate with the level of public health concern associated with potential exposures to low to moderate levels of arsenic and lead in soils.

(2) Resources devoted to assessing and responding to area-wide soil contamination should be focused on locations where contamination is most likely and should be targeted at protecting the most sensitive population group – children.

(3) The likelihood of exposure, and the duration or frequency of exposures of children to area-wide soil contamination are the most important factors in informing whether response actions are necessary and, where actions are needed, in informing the specific action selected.

¹ Licensed Child Care in Washington State: 2000, January 2002, Washington State Department of Social and Health Services, Management Services Administration, Research and Data Analysis Division.

http://www.dshs.wa.gov/esa/dccel/pdf/licensed_child_care_wa_2000/pdf.

Area-Wide Soil Contamination Task Force Report

(4) In general, responses to area-wide soil contamination should increase as exposures become more likely, more prevalent or more intense, especially for children.

(5) Some properties [where low to moderate levels of contamination are present or likely] may require responses beyond broad-based education and awareness building because of potential exposures of children, particularly high concentrations of arsenic or lead, or based on personal preferences of property owners.

(D) Possible **Additional Actions** (Beyond broad-based education) to be taken at Childcare Facilities.

SAMPLING

Assess the potential for problematic exposures to arsenic and lead in soil in places where children routinely play. OR Communities are encouraged to make assessments of the potential for problematic exposures to arsenic and lead in places where children routinely play.

- ▶ **Option 1: Agency conducts mandatory soil sampling on childcare center/family home properties in high likelihood areas using XRF; Agency lab processes results. Focus, especially, on play areas.**

Institutional Lead: Ecology or Local health departments

Institutional touch points/changes needed:

WAC governing child care center/facility licensing does not currently require soil sampling. However, the following potential touch points do exist.

- (1) Childcare providers (both home and childcare centers) are required to provide an “environmentally safe site” to receive and maintain their licenses; at childcare centers, health and safety inspectors make this determination. At family homes, DSHS childcare licensers conduct environmental/health and safety reviews. With supervisor approval, inspectors/licensers may call for sampling to ascertain the environmental safety of a given site prior to approving a license application.

Implementation Considerations:

- (1) The WAC does not currently define “environmentally safe site”; as a result, the determination varies from inspector to inspector.
- (2) Childcare licensers may need training to help identify potential areawide contamination or other environmental considerations.
- (3) Washington State currently has four (4) health and safety officers to review and inspect all existing and proposed childcare center facilities. The state has approximately 60 licensers based out of 6 or 7 regional offices to review all family homes.
- (4) Local health officials would take primary responsibility for all monitoring. In the seven high likelihood counties, combined, there are a total of approximately 1,353 licensed childcare centers and 4,355 family homes that could be sampled over a 3 year timeframe (e.g., as part of the licensing/relicensing process). Sampling at each facility is estimated to take at least 9 hours; additional lab time may be needed.

Comments:

Cost per site is lower where agency already has purchased an XRF. Where this is not the case, and no funds are available to purchase the unit, the XRF purchase costs could be offset by assessing a small fee on each sample or site visit.

► **Option 2: Agency conducts soil sampling, 3rd party lab processes results.**

Institutional Lead: Local Health Department or DOH

Institutional touch points/changes needed:

- (1) The WAC does not currently define “environmentally safe site.”
- (2) The WAC does not require sampling at childcare centers as a condition for permitting.

Implementation Considerations:

- (1) Local health officials would take primary responsibility for all monitoring. In the seven high likelihood counties, combined, there are a total of approximately 1,353 licensed childcare centers and 4,355 family homes that could be sampled over a 3 year timeframe (e.g., as part of the licensing/relicensing process). Sampling at each facility is estimated to take at least 9 hours; additional lab time may be needed.

► **Option 3: Owner/operator conducts soil sampling, 3rd party lab processes results.**

Institutional Lead: Licensed Childcare Provider

Institutional touch points/changes needed:

- (1) The WAC does not currently define “environmentally safe site.”

Implementation Considerations:

- (1) No program is in place to certify/acknowledge that a childcare facility has tested its soil and finds the concentrations of arsenic and lead to be below levels of concern.
- (2) Childcare providers often operate at slim profit margins and may not be able to absorb the additional costs of sampling.

Comments:

Potential childcare provider participation in this program might be enhanced by development, deployment of certification program (e.g., by DSHS or DOH) certifying that childcare facility’s soil has been tested, verified by approved laboratory to have “environmentally safe” levels of arsenic and lead.

► **Option 4: Independent consultant conducts soil sampling at request of childcare provider, 3rd party lab processes results.**

Institutional Lead: Licensed Childcare Provider

Institutional touch points/changes needed:

- (1) The WAC does not currently define “environmentally safe site.”

Implementation Considerations:

- (1) No program is in place to certify/acknowledge that a childcare has had its soil tested by an independent consultant who finds the concentrations of arsenic and lead to be below levels of concern.
- (2) Childcare providers often operate at slim profit margins and may not be able to absorb the additional costs of sampling.

Comments:

Potential childcare provider participation in this program might be enhanced by development, deployment of certification program (e.g., by DSHS or DOH) certifying that childcare facility's soil has been tested, verified by approved laboratory to have "environmentally safe" levels of arsenic and lead.

INDIVIDUAL PROTECTION MEASURES

Encourage childcare providers to implement individual protection measures to minimize potential for contact with soil. Actions include: (1) hand washing; (2) removing shoes before entering the facility; (3) damp-mopping, dusting, and/or vacuuming with a HEPA vacuum on a regular basis; and (4) maintaining soil covers (e.g., grass) with normal landscaping/maintenance activities on the property.

- ▶ **Option 1: Require implementation of individual protection measures as a condition for operation.**

Institutional Lead: Licensed Childcare Provider, with support from DSHS, DOH, or local health agency.

Institutional touch points/changes needed:

- (1) WAC governing childcare center/facility licensing already requires hand washing prior to meals, food handling, and other activities. The WAC does not currently require children to wash their hands (or have them washed) every time they come in from outside, however. Doing so would require a change in the WAC.
- (2) WAC does not currently require mopping/vacuuming on any specific schedule.
- (3) WAC calls for the design, construction, and maintenance of equipment and ground cover to prevent child injury but does not mention protection from potential environmental hazard/contamination. Elsewhere, however, the WAC calls for the licensed facility to have an "environmentally safe site." Guidance may be needed to clarify what ground covers offer acceptable protection.

Implementation Considerations:

- (1) DSHS does not have the resources to confirm that individual protection measures are being implemented, except as part of routine/unplanned inspections.
- (2) Any posters/educational materials, etc., should be prepared in several languages, given that several childcare providers and/or assistants are not fluent in English.
- (3) STARS training for childcare providers may need to be updated to address these topics.

- ▶ **Option 2: Encourage implementation of individual protection measures at childcare facilities during DSHS inspection visits and as part of childcare provider trainings.**

Institutional Leads: Childcare providers, with support from DSHS.

Institutional Touch points/changes needed:

- (1) Current institutional frameworks can accommodate this option.
- (2) Additional training or guidance may be needed by childcare providers on how to implement these individual protection measures appropriately.
- (3) Develop poster/notice to post over all sinks in licensed childcare centers to remind childcare providers about hand washing for children after outside play.

Implementation Considerations:

- (1) Any posters/educational materials, etc., should be prepared in several languages, given that several childcare providers and/or assistants are not fluent in English.
- (2) STARS training for childcare providers may need to be updated to address these topics.

PROTECTION MEASURES

Protection measures should be implemented where the potential for problematic exposure (e.g., a frequent or long duration exposure or exposure to particularly high concentrations of lead or arsenic) is identified. Targeted response actions to reduce the potential for contact with soil include placement of wood chips under swing sets, bringing in clean dirt for sand/dirt play areas.

- ▶ **Option 1: Require implementation of targeted response actions at childcare facilities where the potential for problematic exposure is identified.**

Institutional Lead: Childcare provider or DOH/Ecology

Institutional Touch points/changes needed:

- (1) WAC 388-150-280(2) governing general safety, maintenance, and site hold that “the licensee (i.e., the licensed childcare provider) shall maintain the indoor and outdoor premises in a safe and sanitary condition, free of hazards, and in good repair.” The regulations do not specify environmental hazards, however, and do not discuss soil contamination, specifically.
- (2) WAC 388-150-320 governing outdoor play area call for a “safe and securely-fenced or department-approved, enclosed outdoor play area.” The requirements do not define “safe” in the context of environmental safety.

Background Information on Certification Programs (for discussions related to childcare certification program options)

This document provides background information on potential components of certification programs as well as examples of existing similar certification programs across Washington State. One possible model prepared for the Task Force's consideration is also included.

Factors to Consider When Designing a Certification Program:

- Who will develop the program?
- Voluntary or mandatory?
- What should the criteria for certification be?
- Different tiers or levels of certification?
- Self, agency, or independent third-party certification?
- Who will administer the certification program?
- How will the program be funded?
- Will childcare facilities be required to pay a fee to be certified?
- How often should certification occur?

Example Certification Programs

EnviroStars: The EnviroStars program is a voluntary incentive-based certification program for businesses that reduce, recycle, and properly manage hazardous wastes. The program was created by the King County Local Hazardous Waste Management Program and expanded to other counties in Puget Sound. EnviroStars staff certify participating businesses on a 2-5 star rating scale depending on the level of proactive hazardous waste reduction. Incentives for participating in the program include EnviroStars decals, business listings in local "Green Business" directories, local media publicity, eligibility for business honors, and learning new ways of reducing waste. It cost \$60,000 over a one-year period to develop and kick-off the EnviroStars program in King County. Each County with an EnviroStars program has about 1 FTE working on it, and spends an additional \$10,000 to \$60,000 or more per year in printing and advertising costs to support the program.²

BuiltGreen: The BuiltGreen program in King and Snohomish Counties is a voluntary self-certification program for homes constructed or renovated in an environmentally sound manner. The Master Builders Association of King and Snohomish Counties, a local trade association, and the King and Snohomish County governments jointly developed the program with the help of a volunteer steering committee. The Master Builders Association administers the program, while local government agencies and other sponsors provide funding and in-kind services for the program. The program—which involves extensive outreach and advertising, four levels of certification, different certification programs for different actors (e.g., remodeler vs. developer), and six pages of criteria—cost about \$235,000 to develop over a two-year period (\$100,000 of which was printing and advertising costs) and requires 1 FTE to administer. For comparison, a similar, smaller scale green building program in Kitsap County cost about \$45,000 to develop, plus additional printing costs for materials.

² In previous years, King County spent up to \$200,000 per year on the program, not including salaries.

Possible Certification Approach

The chartering agencies collaborate with the Department of Social and Health Services (DSHS), local health districts, and childcare operators to establish a voluntary certification program for childcare centers and family homes. This program would be administered by the DSHS, in conjunction with the Department of Health. Under this program, individual certifications are timed to renew and expire in conjunction with the childcare licensing cycle (i.e., every 3 years). Local health jurisdictions, working with the appropriate oversight agencies, oversee the certification of childcare facilities.

The certification program establishes three tiers of recognition.

- Tier 1: These childcares certify that they have completed training on how to identify and minimize potential exposure using individual protection measures and other protection measures (possibly through the existing STARS childcare training program and/or other annual training requirements).
- Tier 2: These childcares certify that they have worked with local health districts to identify and take steps to minimize children's potential exposure to arsenic and lead in soil.
- Tier 3: Soils at these childcares have been tested and found not to contain elevated levels of arsenic and lead.

In practice, childcare facilities would fill out simple forms to apply for certification at the different tiers, and then local health jurisdictions would verify these claims (possibly, only for tiers 2 and 3). This program should be integrated into existing processes, such as DSHS' licensing and inspection processes, to the greatest extent possible to minimize costs.

Key Institutions: DSHS, DOH, local health jurisdictions, and childcare operators.

Possible Institutional Approaches: Child Use Areas—K-12 Schools and Parks

I. Schools (K-12)

There are approximately 1,557 primary schools in Washington, 1,189 of which are located in the seven counties considered to have a high likelihood of low to moderate arsenic and/or lead contamination (i.e., King, Pierce, Snohomish, Stevens, Yakima, Chelan, and Spokane counties).

A. Institutional Systems Related to Schools

The following institutional systems at work at primary schools may present opportunities to help identify and/or address potential/actual area-wide contamination.

- (1) **Health requirements for construction or renovation:** WAC 246-366-030 holds that a health officer (generally, a local health department official) must provide written approval to the board of education before “a new school facility is constructed, an addition is made to an existing school facility, or an existing school facility is remodeled” to certify that the site “presents no health problems.” Plans for new playgrounds must be reviewed by local health district officials under this provision.
- (2) Washington State Department of Health (DOH) and the Office of the Superintendent of Public Instruction (OSPI) recently updated their **Health and Safety Guide for K-12 Schools in Washington** (September 2002)³ in accordance with SBOH Primary and Secondary School Regulations, WAC 246-366-140. The guide is intended for use as a school “self-inspection tool” and addresses several issues. The most relevant section in the context of area-wide contamination, perhaps, is Section N, which addresses health and safety issues on playgrounds. Section N refers to the Consumer Product Safety Commission’s (CPSC) **Handbook for Public Playgrounds** and the American Society for Testing and Materials (ASTM) voluntary standards for public playgrounds. CPSC’s **Public Playground Safety Checklist** recommends that “surfaces around playground equipment have at least 12 inches of wood chips, mulch, sand, or pea gravel, or are mats made of safety-tested rubber or rubber-like materials.”

B. Key Institutional Players for Schools

- (1) School Districts
- (2) Individual School Superintendents and Maintenance Administrators – oversee the operation and maintenance of individual schools
- (3) Washington Association of Maintenance and Operations Administrators (WAMOA, www.wamoa.org) – a trade association of educational facilities maintenance professionals
- (4) Office of the Superintendent of Public Instruction – sets statewide policies for public schools
- (5) Local Health Districts
- (6) Department of Health
- (7) Department of Ecology

³ The guide as available online at www.k12.wa.us/facilities/healthsafetyguideNEW.asp

II. Parks and Recreation Areas

A. Institutional Systems Related to Parks and Recreation Areas

The following Institutional Systems at work at parks and recreation areas may present opportunities to help identify and/or address potential/actual area-wide contamination.

- (1) As with schools, parks and recreation districts and departments follow the voluntary **playground safety guidelines** of the Consumer Product Safety Commission (CPSC) and the American Society for Testing and Materials (ASTM). The National Recreation and Parks Association offers a playground safety inspector certification course that covers issues related to staff, facility, resources, and risk management. As mentioned above, CPSC's guidelines recommend that "surfaces around playground equipment have at least 12 inches of wood chips, mulch, sand, or pea gravel, or are mats made of safety-tested rubber or rubber-like materials."
- (2) The Interagency Committee for Outdoor Recreation, which administers a variety of federal and state grant programs related to parks and recreation areas, requires an environmental audit of sites proposed for park acquisition. Agencies or organizations proposing to develop park sites using any of the **Federal or State recreation grants** must conduct an **environmental audit of the proposed park site** and certify either (a) that no hazardous substances were present or (b) that the hazardous substances have been treated or disposed of in compliance with state and federal laws so the site may be deemed "clean."

B. Key Institutional Players for Parks

- (1) Local Parks and Recreation Departments/Districts – oversee the development, operation, and maintenance of local parks
- (2) Washington Parks and Recreation Commission – oversees the development, operation, and maintenance of State parks
- (3) State Interagency Committee for Outdoor Recreation – provides grants to State, local, and private organizations and agencies for acquisition, improvement, and maintenance of parks
- (4) Local Health Districts
- (5) Department of Health
- (6) Department of Ecology

Possible Institutional Approaches to Open Land Development

The discussion below is meant to inform Task Force deliberations on recommendations for how the project's chartering agencies/local governments might provide information on area-wide soil contamination issues and steps that should be taken to assess the potential for exposure and address contamination at open land being developed in areas where area-wide soil contamination is likely as part of local processes related to land-use planning and permitting. The examples listed below are not necessarily the only options for educating developers and facilitating responses to area-wide soil contamination at open land being developed.

A. Examples of Land-Use Approaches to Address Area-Wide Contamination during Development

1. Informational Requirements Associated with Property Titles

- The Chelan County Planning Department requires a plat notice regarding agricultural soils for all subdivision applications (short plats or major plats) for land in its jurisdiction (unincorporated Chelan County) that was historically used for agriculture. If the land was historically agricultural, Chelan County requires that a statement be included on the plat that says either:
 - (a) that there is a possibility for pesticide contamination on the property, or
 - (b) that the property was sampled and any contaminants were below MTCA cleanup levels.

2. Development Permits

- The City of Murray, UT created an overlay zoning district for the Murray City Smelter Site where development permits would be required before any excavation, demolition, construction, or change in land use occurred. (Other smelter sites, including Anaconda, MT and Bunker Hill, ID, have also established development permit systems for similar activities.) The permits provide a mechanism for the permitting agencies to ensure that work projects are consistent with the institutional controls at the site.

3. Requirements for Soil Testing or Cleanup before Development

- Mount Laurel Township, NJ requires that soils on properties that were formerly part of an agricultural area or orchard be tested before any new development occurs to determine whether the concentrations of any substances on the property exceed State soil cleanup criteria. If contaminants exceed State cleanup criteria, the property must be completely remediated according to State rules and regulations, or the developer must submit a "No Further Action" letter from the State to show that any necessary remediation has occurred.

4. Providing Information/Education During Permitting Processes

- Local permitting officials in Haywood County, NC inform property owners about the potential for soil and ground-water contamination at historical orchard sites when the property owners request septic tank permits (typically right before construction occurs).

5. Disclosure Requirements During Property Transactions

- The North-Central Washington realtors association is using a voluntary environmental disclaimer form to inform buyers of the potential for historical pesticide contamination at properties.

B. Key Institutional Players for Open Land Being Developed

- Local planning, zoning, and permitting officials

- Washington State Office of Community Development – OCD provides grants and technical assistance to local governments (cities and counties) for developing, updating, and implementing comprehensive plans and for developing development regulations or ordinances.
- Washington State Office of Trade and Economic Development (OTED) – OTED promotes economic development in the State (among other objectives) and helps to finance brownfields redevelopment efforts.
- Developers
- Lending institutions
- Real estate agents
- Others?

C. Potential Institutional “Touch Points” for Open Land Being Developed

- Local subdivision requirements
- Growth Management Act (GMA) – The GMA (RCW 36.70A.010 et seq.) requires that counties with significantly increasing populations (by 10% or more over 10 years for counties with populations of more than 50,000) and the cities within those counties develop comprehensive land use plans and development regulations to implement those plans. These comprehensive plans must be updated at least every seven years.
- State Environmental Policy Act (SEPA) – SEPA requires that government entities consider the environmental impacts of a proposal before making a decision (e.g., before granting a building permit). The SEPA checklist consists of a series of questions to help agencies and individuals determine whether an environmental impact statement needs to be prepared.
- Funding Sources for New Construction (Could prioritize funding for construction that addresses area-wide soil contamination)
 - OSPI School Construction Funds
 - Interagency Committee for Outdoor Recreation (IAC) Park Construction Funds
 - Others?
- Real estate disclosure requirements
- Others?