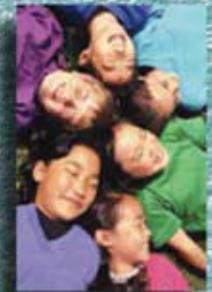


Public Health - Seattle & King County

Environmental Health Services

2007-2008
Biennial Report



Public Health
Seattle & King County





From the desk of Dr. Fleming

The 2007-2008 Biennial Environmental Health Services Division report illustrates how the field of environmental health is changing. Historically, environmental health services focused on enforcement of health and safety regulations. While regulatory functions remain, environmental health, as a field, is adapting to 21st century health challenges by paying increased attention to environmental health education, working with communities, developing policies focusing on manufacturer responsibility, and creating strong partnerships with groups that share a passion for environments that promote healthy living.

Through a strategic planning process underway at the time of this report, Environmental Health is setting new goals that expand policy development and help create healthy environments that support healthy people. Last year's Health Impact Assessment (HIA) on the State Route 520 Bridge rebuild is one example. Before this massive transportation project design was even finalized, the HIA showed planners how their design choices will affect the health of surrounding communities for generations to come.

I hope you enjoy reading about the outstanding work our environmental health professionals do on behalf of the residents of King County. Thank you.

David Fleming, MD

Director and Health Officer, Public Health - Seattle & King County



Hello!

Welcome to the 2007-2008 Biennial Environmental Health Services Division Report which documents many ways our staff work to create safer, healthier communities for all of us in King County. Our division is a leader in providing traditional Environmental Health services, as well as delivering innovative and progressive services with a special focus on underserved segments of our populations.

Here's an example of 21st century public health: climate change will likely have an increased negative impact on everything from zoonotic disease and vector-borne illness to air pollution, variable weather, including heat waves and floods, as well as water and wastewater management concerns. Environmental Health must – and will – play our part to confront these issues in a variety of innovative ways, including addressing the causes.

We are paying increased attention to education and policy development related to toxics reduction and elimination, the promotion of product stewardship and rainwater harvesting, purchasing locally-grown food, climate-friendly plumbing systems that save water and energy, and nutrition labeling to combat obesity.

Environmental Health will continue to provide core environmental health services by ensuring that regulations intended to protect our land, food, water and air are maintained, but as our world and region evolve and change, so must we adapt to new challenges.

Enjoy the report. I hope it is clear that the depth and breadth of our work positively impacts you, your family and your community.

Ngozi Oleru, Ph.D.

Director, Environmental Health Services Division



Overview:

Environmental Health provides services aimed at assuring the basic ingredients of a vibrant community – its land, food, air, and water – are safe and healthy, and this report is organized to reflect these environmental domains. In addition to land, food, air, and water, we describe some of the cross-cutting programs that don't fit well into a single domain, such as emergency preparedness, code enforcement and Environmental Health financing.



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LAND

When the land where we live, work, and play is healthy, we are healthy too. In King County, we have some of the most spectacular natural environments anywhere – vibrant urban areas, productive farmland, and salmon-spawning rivers and streams. Several Environmental Health programs protect the land in King County through regulation, policy and collaboration with communities.

Hazardous Waste

The Local Hazardous Waste Management Program (LHWMP) in King County is an inter-governmental collaboration between Public Health – Seattle & King County, Seattle Public Utilities, King County Department of Natural Resources, and the Suburban Cities Association. LHWMP's mission is to protect and enhance public health and environmental quality by reducing the threat posed by the production, use, storage and disposal of hazardous materials. We help people and businesses learn what materials are hazardous, how to identify safer alternatives, and how to manage hazardous waste they may have or produce.

2007-2008 LHWMP activities included:

- ◆ Providing on-site and telephone consultation for small businesses and residents about how to properly use, store, manage, and dispose of hazardous products and wastes.
- ◆ Contracting with the county's 37 cities to help collect hazardous waste, resulting in collection of 189 tons of hazardous waste in 2007 and 145 tons in 2008.
- ◆ Expanding the pilot pharmaceutical "take back" project; collecting more than 15,000 pounds of unwanted medicines during 2007 and 2008.
- ◆ Connecting industrial manufacturers through the Industrial Materials Exchange (IMEX) website to facilitate the exchange of materials that would otherwise be disposed.
- ◆ Consulting with agency and community partners on questions about potentially toxic materials, such as some types of synthetic athletic field material.
- ◆ Reducing toxic exposure risks to children. Our Young Children's Team conducted a study measuring the prevalence of lead-contaminated candy in King County, investigated causes of children with elevated toxic-blood levels, and visited childcares in King County to help them create a safe environment.
- ◆ Developing a "green purchasing policy" for Public Health, currently under consideration.
- ◆ Providing facilitation for the Seattle & King County Industrial Ecology Roundtable to promote and conduct several local material reuse projects.
- ◆ Conducting outreach to nail salon operators on safer alternatives for cosmetic products.
- ◆ Educating local housing authorities on integrated pest management.

Methamphetamine Lab Site Assessment

Illegal drugs like methamphetamine ("meth") are manufactured in houses, apartments, outbuildings, and even cars or motel rooms. When an illegal lab is found by law enforcement, they alert our meth lab team, which then determines whether the property is contaminated. During the manufacturing (or "cooking") process, the chemicals can cause serious injury to anyone who is exposed to them. The chemical fumes saturate the carpets, floors, and walls in the building where people, particularly young children, become exposed long after the cooking is done. The chemicals may include solvents, metals, and acids like ammonia, benzene, hydrochloric acid, or sodium hydroxide.





We work with the property owners, concerned neighbors and other agencies to get the site cleaned up by overseeing the decontamination process and ensuring that all toxic wastes are properly disposed. Finally, we approve the property for re-occupancy.

Solid Waste

The Solid Waste Program ensures that waste is being handled in the safest way for people and the environment by reviewing and approving plans for waste-handling facilities, issuing permits to operate facilities and garbage trucks, and inspecting and monitoring these facilities. The Solid Waste Program also works directly with residents by investigating complaints about unlawful garbage dumping.

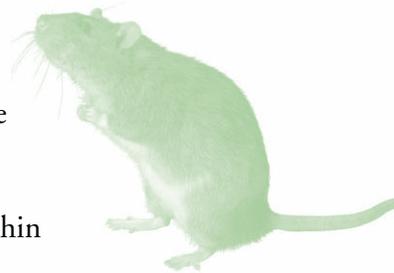
Estimates from 2007 – 2008 indicate a decrease in solid waste produced in King County, with 1.21 million tons of solid waste generated within the county and sent to the Cedar Hills Landfill or out of state. The decrease is due to increased consumer recycling, as well as less production of waste due to the economic downturn.

In 2007, the Solid Waste Program investigated whether putting food scraps with yard waste would result in environmental problems, such as excess rodents or smell. We found that with proper containers and weekly pick-up, the risk of environmental problems is minimal. Now many communities in King County are joining all single family homes in Seattle in recycling food scraps along with their yard waste. This program will literally keep tons of garbage out of landfills every year.

The Waste Characterization Team determines whether soil, sludge, chemicals and other industrial waste can safely be disposed of in the solid waste system. Staff field questions about all types of waste, some quite unusual. For example, we received a request to clear seven tons of counterfeit cigarettes seized by Customs Border Protections for disposal at Cedar Hills Landfill. In addition to nicotine, cigarettes contain many other additives that would likely meet the criteria for toxicity. Ultimately, the cigarettes had to be managed as a dangerous waste and not disposed of like regular garbage.

Rodent Control

Rodents can carry diseases, destroy property, cause electrical fires, and contaminate food. Program staff visit homes and attend community events to educate King County residents about getting rid of the garbage that attracts rodents and other disease-carrying animals. Educational materials in multiple languages are available in print and on the Web. Our team responds to hundreds of rodent complaints each year, and within the City of Seattle, we bait sewers to control sewer rat populations.



Zoonotic Disease

Zoonotic diseases (also called “zoonoses”) are infectious diseases that spread from animals to humans. The potential of more zoonotic diseases exists due to the increased global movement of people and animals, the effects of human populations expanding into previously undeveloped wildlife habitat, and global climate change. Some zoonotic diseases are transmitted directly from animals to people, some result from contamination of the environment by animals, and others require an insect vector such as a tick or mosquito. Examples of zoonotic diseases include rabies, leptospirosis, ringworm, toxoplasmosis, and West Nile virus.

Zoonotic Disease staff consult with veterinarians and other medical professionals about potential cases of zoonotic disease in animals; investigate animal cases or outbreaks; provide infection control recommendations for animal exhibits at zoos, fairs, and farm tours; conduct active monitoring of diseases like West Nile virus; and provide disease prevention education. Program staff are also responsible for licensing, inspecting, and responding to complaints about pet shops, boarding kennels and pet daycare businesses in Seattle, and assisting with disease prevention at animal shelters.

Roadside Pesticide Monitoring

Weeds and plants along the roadside create safety hazards and damage pavement. To control this vegetation, the King County Roads Services Division performs herbicide spraying every year along some of the nearly 1,000 miles of roadway it maintains. We conduct environmental testing before and after spraying. Our monitoring has found that low concentrations of herbicides are effective at preventing weed growth but do not leave significant toxicity behind.

Site Hazard Assessment

Soil and water contamination caused by chemical spills, leaks, illegal discharges, or historic disposal activities are unfortunate legacies of industrialization. Our Site Hazard Assessment team investigates potentially contaminated sites to determine the type and extent of the contamination; the sites are then ranked in order of the severity of contamination. We provide this information to the Washington Department of Ecology, which then works on site with the owner to mitigate the damage.

Tacoma Smelter Plume

Arsenic and lead, by-products of Tacoma's Asarco copper smelter, were carried and spread by air currents over much of King County for almost 100 years before the smelter closed in 1986. The Tacoma Smelter Plume Project investigates lead and arsenic contamination at area schools, parks, and childcares, and provides outreach and education for teachers, childcare providers, and the community. We collaborate with community groups, schools, childcares, and gardeners to provide education at conferences, workshops, and local festivals. To help children learn healthy habits that reduce their risk of exposure to contaminated soil, we produced an interactive curriculum and music video in English and Spanish called "Be Alert in the Dirt."



Program Highlight

Upstream Planning for Better Toxics Management

In 2007 the Local Hazardous Waste Management Program (LHWMP) launched its new strategic plan. Historically, the program had focused on collection and disposal of household hazardous wastes as well as educational outreach to businesses. While this continues to be important work, the strategic plan adds goals and objectives that emphasize reductions in hazardous material use and exposure, and increased service to vulnerable and underserved populations. Program staff research and develop policies that increase manufacturer responsibility, or "product stewardship," for managing safe disposal of hazardous materials.

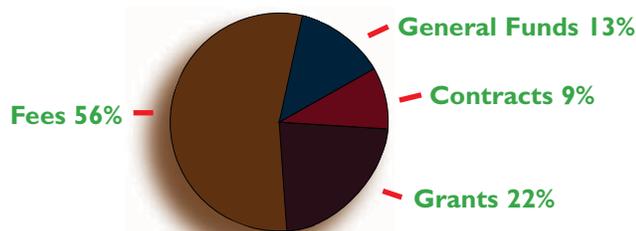
LAND PROTECTION and DISEASE CONTROL ACTIVITIES

Quick Statistics	2007	2008
Conducted initial site hazard investigations and assessments	15 investigations and 26 site hazard assessments	18 site hazard assessments
Investigated unlawful dumping complaints	1,786 complaints	1,420 complaints
Investigated rodent complaints	1,289 complaints	1,237 complaints
Mapped dead birds reported to the West Nile virus surveillance program	2,798 mapped birds	1,611 mapped birds
Consulted with residents on questions about mosquitoes, birds and West Nile virus	661 consultations	307 consultations
Issued Waste Clearances to ensure dangerous waste is not going to landfill	183 clearances	313 clearances
Responded to inquiries regarding hazardous waste	16,225 households and 1,747 businesses	10,890 households and 1,626 businesses
Released decontaminated illegal drug lab sites for re-occupancy	14 clearances for re-occupancy	14 clearances for re-occupancy
Saved businesses money through the IMEX program	21 documented exchanges	27 documented exchanges
Consulted and investigated zoonotic disease issues	375 rabies consultations 30 animal leptospirosis case investigations	701 rabies consultations 26 animal leptospirosis case investigations 2 Cryptococcus gattii case investigations 1 avian psittacosis outbreak investigation
Controlled rat population in the City of Seattle	8,619 manholes inspected 2,720 manhole baitings	4,511 manholes inspected 1,619 manhole baitings
Sampled for lead/arsenic as part of the Tacoma Smelter Plume	588 samples taken from 33 childcares and 34 schools	1,656 samples taken from 230 childcares and 8 schools
Consulted with pet shops, kennels, and dog daycares in the City of Seattle	84 consultations 22 complaint investigations 46 inspections	92 consultations 5 complaint investigations 54 inspections

Funding – Land

Environmental Health programs that focus on land-based issues are funded through a variety of sources including fees, grants, contracts for services, and some support from state and county general funds. Revenues collected for these programs are dedicated to their specific program activities. The programs cost approximately \$6,370,000 in 2007 and \$6,611,000 in 2008.

Revenues for Land Programs 2007-2008



FOOD

Foodborne illness can be very serious. Of the estimated 76 million people each year in the U.S. who suffer from vomiting and diarrhea caused by food contaminated with disease-causing organisms, 325,000 are hospitalized and 5,000 die. Environmental Health aims to reduce the risk of foodborne illness through education and community-supported regulation in King County restaurants and food service facilities, where Washingtonians eat more than half of their meals.

Food Establishment Inspections

King County food establishments represent a wonderful diversity of cultures from around the world. By conducting regular inspections and educational consultations, the food safety team works with over 10,000 permanent food establishments to assure they are selling food that is safe to eat.

Thousands of visitors use the restaurant inspection reports available on our Web site (www.kingcounty.gov/health/foodsafety) to check the status of local restaurants. Information about safe food preparation and storage at home is also available on the Web site.

Food Worker Training

Every food worker who prepares and serves food to the public must have a current food worker card, obtained by taking a food safety class and passing a test. We provide regularly scheduled classes along with our partners at the Washington Restaurant Association Education Foundation. Class materials are available in seven different languages. A person may request an interpreter or bring a trusted friend to the class if we do not have the translated materials in the necessary language.

Temporary Events

A temporary food permit must be obtained when food is to be served to the public for a one-time event, like a festival or fair. Environmental Health staff review plans for layout of food booth and menus, focusing on proper transportation of the food to be prepared and served, hand wash stations, refrigeration, preparation, food storage, cooking equipment, and restroom availability. With advance planning and inspections during the events, Environmental Health strives to ensure that temporary events keep King County residents and visitors safe from foodborne illness.

Environmental Health staff worked with several thousand temporary event applicants in 2007 and 2008. The largest ten events are noted below.

2007 Events

- Bite of Seattle – 66 vendors
- Salmon Days – 50 vendors
- Bumbershoot – 48 vendors
- Kent Cornucopia – 44 vendors
- Northwest Folklife Festival – 40 vendors
- University Street Fair – 39 vendors
- Chateau St. Michelle, Misc – 34 vendors
- Fremont Fair – 31 vendors
- Ballard Seafood Festival – 28 vendor
- Hemp Fest – 27 vendors

2008 Events

- Bite of Seattle – 80 vendors
- Northwest Folklife Festival – 47 vendors
- Kent Cornucopia – 45 vendors
- Bumbershoot – 44 vendors
- Chateau St. Michelle, Misc – 44 vendors
- Salmon Days – 44 vendors
- University Street Fair – 40 vendors
- Fremont Fair – 32 vendors
- Ballard Seafood Festival – 27 vendor
- Bellevue Festival of the Arts – 26 vendors





Program Highlight

Nutrition Labeling and Trans Fat Elimination in King County

In 2008, in an effort to lower obesity rates, help prevent heart disease, and improve health, the King County Board of Health passed two new regulations: trans fat and nutrition labeling. The trans fat regulation banned artificial trans fat in foods prepared in food establishments unless the food is served in the manufacturer's original sealed and labeled packaging. The nutrition labeling rule requires nutrition information on menus in large chain food establishments. Industry stakeholder meetings were held to get feedback and input on implementation of these groundbreaking regulations.

Phase One of the artificial trans fat regulation went into effect in May 2008. Food service establishments eliminated fry oils and shortenings containing partially hydrogenated oils. By the end of 2008, 92% of those inspected in King County were in compliance. Phase Two goes into effect February 1, 2009, and prohibits restaurants from serving food with 0.5 or more grams of artificial trans fat per serving.

The nutrition labeling regulation requires that some chain restaurants post calories, carbohydrates, sodium and saturated fat for each of their standard menu items. Restaurants that fall under the rule are chains with 15 or more stores nationwide that offer 80% or more of the same standard menu items. After negotiation with stakeholders, the Board of Health passed the regulation, which goes into effect on January 1, 2009. For more information on the regulations, visit www.kingcounty.gov/health/healthyeating.

Risk Categories for Restaurants

Food handled and prepared properly reduces the risk of food borne illness. The more complex a menu is, the greater the opportunity for pathogens that cause food borne illness. The risk categories below reflect the differences in food borne illness risk.

Low Risk - Risk Category 1: Any food establishment that serves ready-to-eat food that needs only to be kept cold or food that needs minimal preparation such as hot dogs, espresso drinks and prepackaged heat and serve foods. They receive one routine inspection per year.

Medium Risk - Risk Category 2: Any food establishment with food that must be kept cold and/or requires limited food preparation such as grilling sandwiches or making smoothies with raw ingredients. No foods that are kept hot after being cooked are allowed in this risk category. They receive two routine inspections per year.

High Risk - Risk Category 3: Any food establishment that performs complex food preparation including cooking, cooling, reheating, and hot holding of potentially hazardous foods. Two routine inspections and one educational visit.

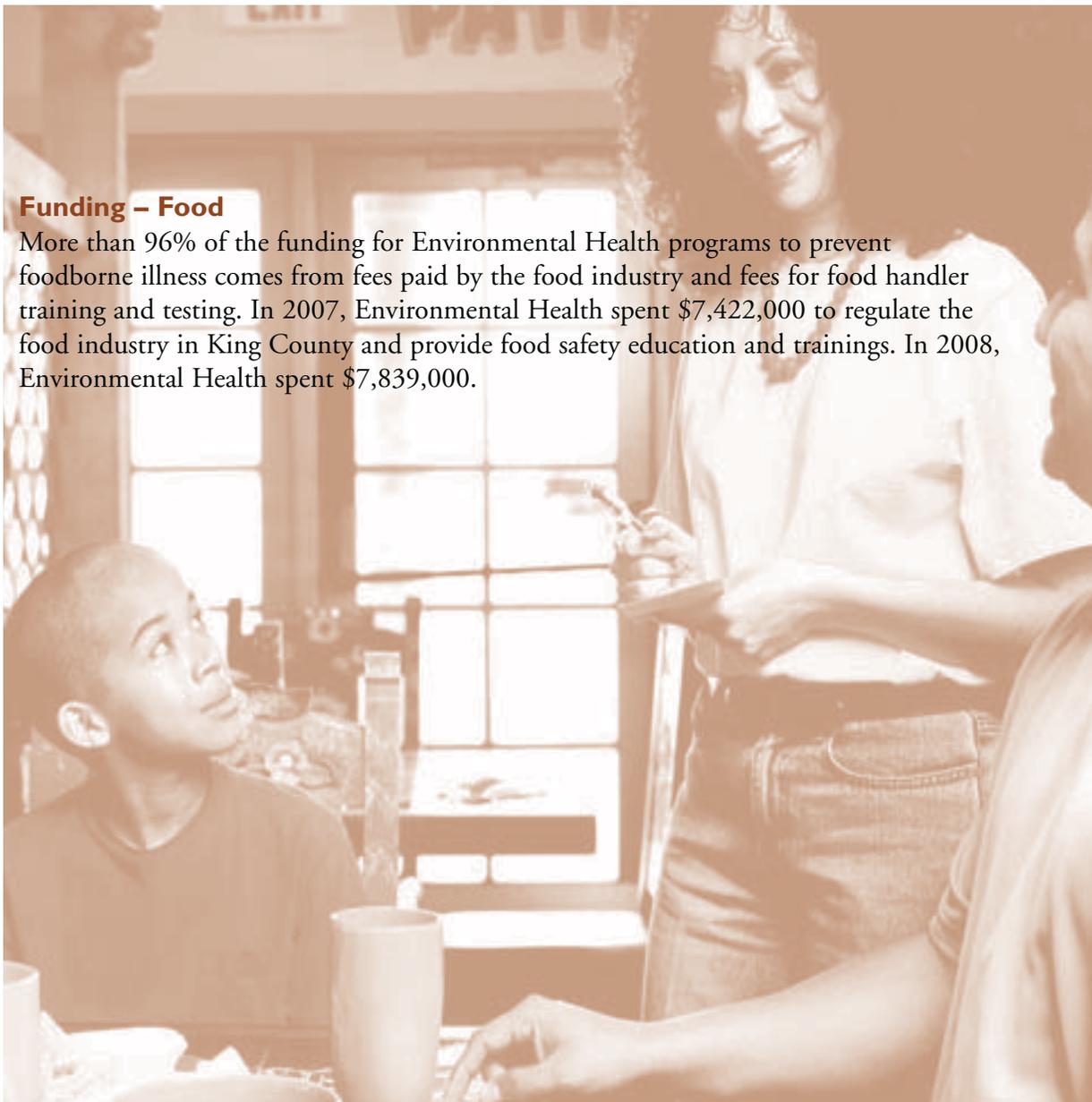
Count of Food Permits by Category

Category	2007	% of Total	2008	% of Total
Restaurants	7486	68.9%	7515	69.3%
Charitable	613	5.7	604	5.7
Demonstrator	1	> 0.1	1	> 0.1
Bakery	217	2.0	216	2.0
Limited food service	138	1.3	126	1.2
B&B's	15	0.1	15	0.1
Grocery	904	8.4	868	8.0
Caterer	192	1.7	197	1.8
Meat/seafood	442	4.1	436	4.0
Mobiles	355	3.3	332	3.1
School kitchens	594	5.5	575	5.3
Total	10,837		10,850	



Funding – Food

More than 96% of the funding for Environmental Health programs to prevent foodborne illness comes from fees paid by the food industry and fees for food handler training and testing. In 2007, Environmental Health spent \$7,422,000 to regulate the food industry in King County and provide food safety education and trainings. In 2008, Environmental Health spent \$7,839,000.





WATER

Clean, drinkable water is essential to good health. Contaminated water can cause an individual or community to get sick. Water becomes contaminated in many ways: leaking septic systems, sewage overflows and spills, and wildlife waste. If plumbing systems are installed incorrectly, they may result in toilet wastewater flowing into drinking water pipes. Poorly maintained spas and pools can harbor germs and spread disease or create conditions that could lead to preventable injury or death. Through regulation, education, inspection and working with other agencies, property managers, and users, we help communities avoid these potentially hazardous situations.

Drinking Water

Most King County residents get their water from large water utilities; however, many get water from wells. Small, multi-family "Group B" water systems, along with several thousand individual wells, provide water to people who live in rural King County. Environmental Health provides technical assistance and education to residents about how to operate their water systems safely, including monitoring well water quality, locating the well safely, and protecting the "wellhead."

Onsite Sewage

When they cannot connect to a sewer system, home owners and businesses use onsite septic systems. Environmental Health provides education, advisory and permitting services for septic system owners and certifications for septic system professionals. Education for septic system owners focuses on proper maintenance and operation.

In 2008 the Board of Health approved an Onsite Wastewater Management Plan. The plan goals include: 1) setting a strategy for assuring that all onsite sewage systems receive periodic maintenance; 2) assuring that all systems are identified and inventoried in our database; and 3) prioritizing sensitive areas, most notably Marine Recovery Areas, for agency oversight. The plan stresses community outreach and the use of innovative and creative approaches to repairing and replacing old onsite systems. Although some elements are fee supported, full implementation of the plan is dependent on uncertain future state funding.

Biotoxin Program

The Biotoxin Program works year-round to sample mussels and clams from salt water beaches for Paralytic Shellfish Poison ("red tide"), and Amnesic Shellfish Poison. A combination of warm temperatures, sunlight, and nutrient-rich waters can cause rapid reproduction or "blooms" of biotoxin producing algae. These biotoxins occur naturally in marine waters, and can make people very sick or even cause death. When Environmental Health detects a toxin at dangerous levels, we close harvest areas and post "shellfish harvest closure" signs on the beach in seven languages until the levels drop again.

Plumbing and Gas

Indoor plumbing is a convenience that many people in King County rely upon and take for granted. Correctly installed plumbing prevents the contamination of drinking water, spread of bacteria and disease, exposure to scalding hot water, unpleasant odors and the inconvenience of fixtures and faucets that do not work properly. Improperly or poorly installed plumbing is at best an annoyance and at worst a source of drinking water contamination through crossed connections or waste/grey water backflow.

Permits are required to install plumbing and gas piping in new buildings and to modify plumbing in existing buildings. Our plumbing inspectors assure that the fixtures have been properly installed before being put to use.

Pools and Spas

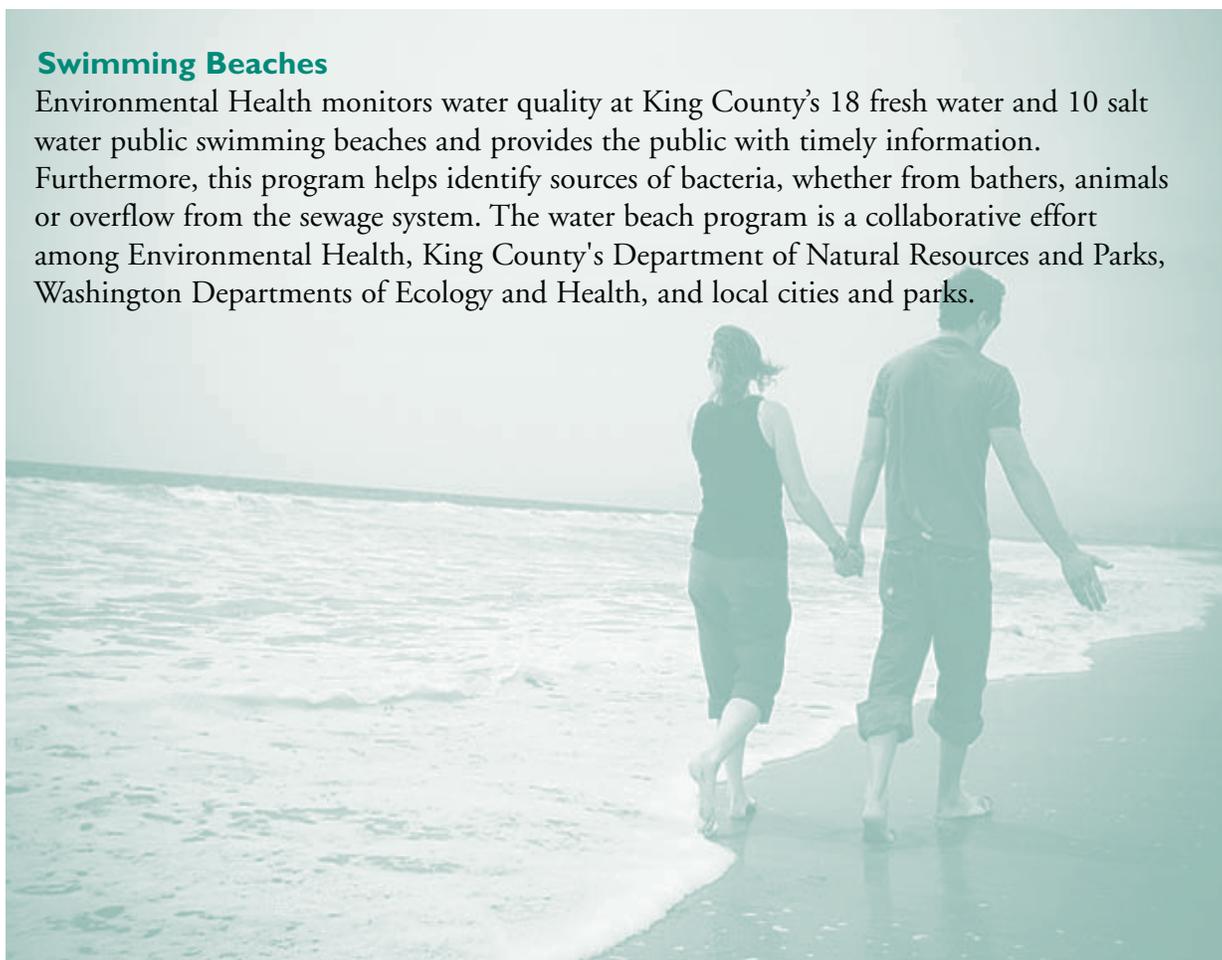
Residents, tourists and visitors make up the tens of thousands of people who enjoy swimming pools and spas in King County each year. Environmental Health inspectors check every public pool and spa for proper water disinfection, temperature, safety barriers, and safety equipment. Each year, we inspect approximately 1,800 water recreation facilities. Staff also review plans for new construction or remodel of pools, spas, wading pools, and spray pools.

During 2007 and 2008, a primary focus was to educate pool operators on the code requirements around specific safety barriers and drains. By June 1st, 2008, new protective barriers were required in order to comply with state code, and water recreation facilities were required to have their suction outlets (drains) protected to lessen the possibility of a hazard that could result in a serious accident or death.

Water recreation facilities are required to report any injury, illness, or death including drowning and near drowning events to the local health officer. One drowning was reported in 2007. In the spring of 2008, four people nearly drowned at a King County pool, and Environmental Health immediately launched an extensive investigation. The story has a happy outcome in that all four were rescued from the pool and have recovered from the incident. Findings and recommendations from the investigation have been shared widely with the community and colleagues in order to prevent similar situations in the future.

Swimming Beaches

Environmental Health monitors water quality at King County's 18 fresh water and 10 salt water public swimming beaches and provides the public with timely information. Furthermore, this program helps identify sources of bacteria, whether from bathers, animals or overflow from the sewage system. The water beach program is a collaborative effort among Environmental Health, King County's Department of Natural Resources and Parks, Washington Departments of Ecology and Health, and local cities and parks.





Program Highlight Marine Recovery Area

In July 2008, the Board of Health designated a Marine Recovery Area (MRA) on Vashon-Maury Island that includes portions of outer Quartermaster Harbor and East Passage. An MRA is a place where marine water quality is threatened by microbial or nutrient contamination and onsite sewage systems are identified as a probable source of the contamination. The MRA designation is a requirement of the Regulatory Code of Washington. Within the MRA, Environmental Health will inventory the onsite sewage systems, identify failing systems, and assure that failing systems are repaired and receive necessary maintenance in the future. The initial inventory will be completed by July 2012. The Vashon Island MRA includes 250 properties, most of which have long established cabins and homes. Residents have been informed through workshops, newspaper articles and direct mailings. Based on feedback from property owners who have attended workshops, prospects for success are encouraging. Next steps will include additional community participation at neighborhood and association meetings.

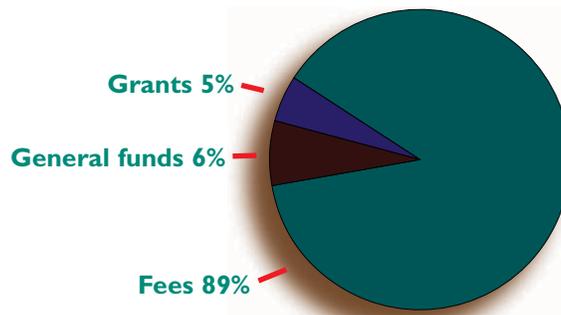
WATER PROTECTION ACTIVITIES

Quick Statistics	2007	2008
Approved new Group B wells	34 wells	16 wells
Provided plumbing and gas piping permits	15,558 permits	12,976 permits
Reviewed onsite septic system site applications	1,106 applications	828 applications
Approved as-built designs for onsite	467 designs	300 designs
Received Operation & Maintenance Reports	1,099 reports	1,289 reports
Inspected pools, spas, and wading pools	1,821 inspections	1,806 inspections

Funding – Water

Environmental Health programs to protect King County water from contamination are funded through fees paid by residents and businesses, grant, and state and county general fund support (as shown below). Program expenses in 2007 were \$6,660,000 and \$6,930,000 in 2008.

Revenues for Water Programs 2007-2008



AIR

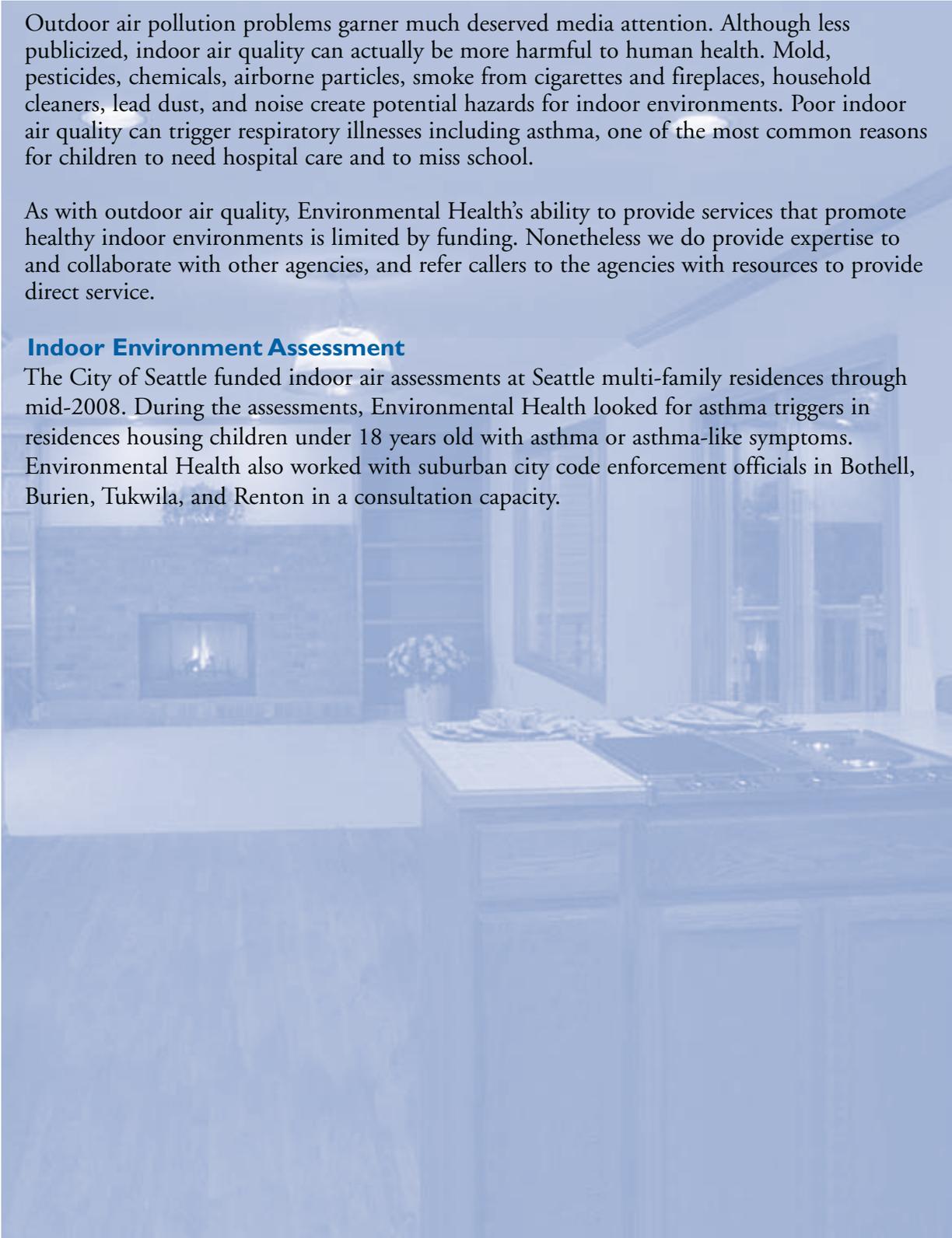
Many of us contribute to King County's air pollution through "mobile sources" like cars, trucks, trains and planes, and stationary sources like smoke from wood burning stoves or fireplaces. While Environmental Health does not have regulatory authority or a funding source to directly address outdoor air pollution issues, we work collaboratively with the Environmental Protection Agency, Puget Sound Clean Air Agency, and the State Department of Health on air quality concerns.

Outdoor air pollution problems garner much deserved media attention. Although less publicized, indoor air quality can actually be more harmful to human health. Mold, pesticides, chemicals, airborne particles, smoke from cigarettes and fireplaces, household cleaners, lead dust, and noise create potential hazards for indoor environments. Poor indoor air quality can trigger respiratory illnesses including asthma, one of the most common reasons for children to need hospital care and to miss school.

As with outdoor air quality, Environmental Health's ability to provide services that promote healthy indoor environments is limited by funding. Nonetheless we do provide expertise to and collaborate with other agencies, and refer callers to the agencies with resources to provide direct service.

Indoor Environment Assessment

The City of Seattle funded indoor air assessments at Seattle multi-family residences through mid-2008. During the assessments, Environmental Health looked for asthma triggers in residences housing children under 18 years old with asthma or asthma-like symptoms. Environmental Health also worked with suburban city code enforcement officials in Bothell, Burien, Tukwila, and Renton in a consultation capacity.





Noise Protection

Noise is usually defined as a sound you don't want to hear. Hearing loss is the most serious health effect caused by noise. Hearing loss is very well documented in the workplace environment. In the community, noise is associated more with sleep disturbance, interference in communication, and loss of concentration. These can all contribute to stress and stress-related health hazards. In addition to providing plan reviews and noise variances, we provided consultation to the SR 520 Health Impact Assessment.

SUMMARY of AIR PROTECTION ACTIVITIES

Quick Statistics	2007	2008
Provided noise variances and plan reviews	38 variances 4 plan reviews	19 variances 4 plan reviews
Assessed sites for the Seattle Asthma Program	69 assessments	42 assessments
Presented on indoor air issues to a variety of groups	3 presentations	2 presentations
Consulted by telephone on indoor air and environment questions	219 consultations	193 consultations
Provided training assistance to the Master Home Environmentalist Program	3 trainings	2 trainings



CROSS DIVISIONAL ENVIRONMENTAL HEALTH PROGRAMS

Equity and social justice

Place matters. Where you live, work, learn, and play impacts your physical, mental, emotional and spiritual health. King County was one of 16 teams nationwide chosen to address the issue of “place” for their communities. Environmental Health Management, along with other Public Health staff and the King County Executive’s office, created a model plan to address and eliminate long standing inequities and social injustices in King County. The team drafted the Equity Impact Review Tool that is designed to help county departments determine whether their new policies and programs allow for the equitable distribution of resources as well as the burdens. Their work was key to County Executive Sims’ launch of the Equity & Social Justice Initiative (ESJI) in early 2008. ESJI aims to apply the principles of equity and social justice when developing policy and making decisions, delivering county services, and in working with community partners.

In addition, the ESJI sponsored the showing of the ground-breaking and educational PBS series “Unnatural Causes: Is Inequality Making Us Sick?” Many Environmental Health staff watched the series and participated in discussions about health inequities and how we might address them in the work we do every day.

Built environment and land use

Land use, urban design, and zoning are among the key drivers underlying the form and function of the built environment. Empirical research is confirming what we knew intuitively – that choices involving the built environment impact the physical and mental health of residents, and the livability and environmental quality of a neighborhood. Since 2005, Environmental Health has been involved in projects focused on enhancing the built environment.

The Health Impact Assessment (HIA) is one tool to help decision-makers recognize the potential adverse health consequences of planning decisions and the opportunity to provide a healthier living environment. HIAs use a combination of methods to evaluate the effects of policies or projects on the public’s health and how equitably those effects might be distributed within the population.

In 2007, we completed a pilot HIA of a community proposal to create a plaza at the North Beacon Hill Sound Transit light rail stop. We gathered information through a review of design plans, discussions with community residents, a walking audit, and a design charrette. Findings supported the idea for a community gathering space around the light rail station to enhance physical activities and social connections with the potential for cultural festivals and markets. Findings also recommended additional land use improvements to improve pedestrian safety and increased use of the light rail station. The Beacon Hill HIA was conducted in collaboration with the Seattle Department of Planning and Development and Feet First, a pedestrian advocacy organization.

Program Highlight

State Route 520 Bridge Health Impact Assessment

In 2008, we partnered with the Puget Sound Clean Air Agency to conduct a HIA of the SR 520 Bridge Replacement and HOV Project, focusing on air quality, greenhouse gas emissions, and other public health issues. Our analysis supported infrastructure elements such as landscaped lids, pedestrian and bicycling connections, visual design elements, and transit facilities to reduce vehicle emissions, create opportunities for physical activity and reconnect communities. The HIA emphasized that it is critical to support all of these elements despite challenging budget times. A full copy of the report is available at:

<http://www.kingcounty.gov/healthservices/health/ehs/hia.aspx>.

Community engagement

Environmental Health's goal is to engage communities in a meaningful way, based on the principles of social and environmental justice. Communities disproportionately impacted by environmental hazards, such as substandard housing, toxic air, contaminated soil, poor water quality, unsafe walking areas, and limited access to fresh and healthy foods, often experience higher levels of illness and disease. Most often, these impacted communities are home to refugees, immigrants, the poor, and people of color. Visit <http://www.kingcounty.gov/healthservices/health/data.aspx> to see the Health of King County 2007 report for more specific information.

Environmental Health works to improve the health of our communities through collaboration that identifies and addresses environmental challenges. During 2007 – 2008, Environmental Health partnered with other member organizations in the Environmental Justice Network in Action. Our goal was to strengthen reciprocal relationships between government agencies and refugee/immigrant communities and better provide services to these communities. Members of community organizations helped us learn how to connect with their communities and cultures, and we were able to offer “train the trainer” programs on food safety and healthy indoor air at home.

In addition, Environmental Health collaborated with various communities on other projects, including:

- The South Seattle Environmental Justice Inter-Agency Group, a group that resulted from a community request. Its purpose is to reduce toxic exposure over time through improved communication among agencies and the communities of South Park, Georgetown and the International District.
- On the Yesler Terrace Citizen Review Committee that will provide feedback and guidance to the Seattle Housing Authority as they re-develop this community in upcoming years.
- Health Impact Assessments in Beacon Hill and for the SR 520 bridge re-build, with feedback and assistance from local community groups.
- The International District Housing Alliance's CARE II steering committee.

Emergency Preparedness

Part of Public Health's mission is to anticipate and respond to the public health consequences of local emergencies. This takes much planning and practice. Earthquakes, wind storms, flooding, snow storms and even the occasional terrorism threat underscore the importance of preparedness. In 2007 and 2008, Environmental Health developed and strengthened key partnerships, and participated in planning committees, workgroups and joint emergency response exercises and trainings.

In addition to many preparedness exercises and planning activities with area partners, Environmental Health employees participated in six response teams, staffed Public Health's Incident Command structure, and prepared for a regional response to the threat of West Nile virus. We responded to winter flooding events by doing site inspections and consultation with impacted food establishments and shelters about safe food handling. Environmental Health staff also participated in "Pandemonium 2008," a four-day pandemic influenza exercise that culminated in the activation of a large Alternate Care Facility. In the event of a real disaster when the medical system is overloaded, this facility will provide extra in-patient and out-patient medical services to our community.

Enforcement Services

Regulations, rules and policies are the foundation of many programs in Environmental Health. The enforcement team provides legal support services to staff and drafts rules and regulations for adoption by the King County Board of Health. The team represents the Division on inter-agency meetings and hearings before the King County Hearing Examiner and serves as liaison between the division and the Prosecuting Attorney's Office. When the Washington State Legislature is in session, the team reviews bills relating to Environmental Health and helps establish recommended policy positions on proposed legislation.

In addition, the enforcement team works closely with Environmental Health staff and Public Health's Compliance Office to coordinate our response to the on-going stream of public records requests. In 2008, Public Health fielded more than 500 requests, the vast majority of which were for Environmental Health records. Most of those requests were submitted by environmental consultants and others seeking solid waste and hazardous waste management-related records and records of environmental violations and complaints. The team reviews procedures and sources of records to ensure our timely and complete response in accordance with the state's Public Records Act.

Enforcement Actions

	Solid Waste Program	Unlawful Dumping Program	Waste-water Program	Rodent Program	Illegal Drug Labs Program	Other
Year 2008						
Notice of Violation	0	176	5	178	0	37
Notice and Order	1	60	0	38	8	6
Year 2007						
Notice of Violation	0	230	1	194	0	28
Notice and Order	1	82	0	58	4	15



BUDGET

Revenues

Regulatory programs in Environmental Health are funded through user fees paid by King County businesses and residents. For example, we charge each restaurant, public pool, or solid waste handling facility for inspections required by the Board of Health code. Other, primarily non-regulatory, work is funded by grants, contracts, and county and state general funds. The impact of the economic slowdown was evident in the last quarter of 2008, with a decrease in the number of land development and construction-related permits issued. Fee revenue was flat over the 2007 – 2008 periods, while other funding rose slightly. Division revenues for 2007 and 2008 were as follows:

Revenue Category	2007	%	2008	%
Fees	\$16,741,000	82%	\$16,740,000	81%
Grants	\$1,452,000	7%	\$1,827,000	9%
Contracts	\$604,000	3%	\$625,000	3%
General Funds	\$1,500,000	7%	\$1,576,000	8%
Total	\$20,297,000	100%	\$20,768,000	100%

Expenditures

Most of Environmental Health's costs relate to employee salaries and benefits, affected by cost-of-living adjustments and other labor agreement provisions. Environmental Health added three new positions in 2008 for projected volume increases, bringing the total number of budgeted FTEs to 170. However, the new positions were not filled when the permit volume increases were not realized. Division expenditures for 2007 and 2008 were as follows:

Expenditure Category	2007	%	2008	%
Salaries & Benefits	\$14,974,000	73%	\$15,481,000	72%
Supplies & Services	\$1,558,000	8%	\$2,026,000	9%
Overhead & Indirect Costs	\$4,060,000	20%	\$4,033,000	19%
Total	\$20,592,000	100%	\$21,540,000	100%

Environmental Health Sites and Contact Information

Black River

900 Oakesdale Ave. SW, Suite 100

Renton, WA 98057

Phone: 206-296-4932

Open M-W 7:00 AM to 5:00 PM, Th 9:00 AM to 5:00 PM
closed Friday

Services: Wastewater and Drinking water; **permits only** for plumbing and gas piping

Northshore Environmental Health

Dan Moran, Supervisor

10808 NE 145th St

Bothell, WA 98011

Phone: 206-296-9791

Services: Food and Facilities Protection Programs

Alder Square Environmental Health

Gail Yuen, Supervisor

1404 S Central Ave, Suite 101

Kent, WA 98032

Phone: 206-296-4708

Services: Food and Facilities Protection Programs

Downtown Environmental Health

Todd Yerkes, Supervisor

401 5th Ave, Suite 1100

Seattle, WA 98104-2333

Phone: 206-296-4632

Services: Food and Facilities Protection Programs

Environmental Health Administration

401 5th Ave, Suite 1100

Seattle, WA 98104

Phone: 206-205-4394

Services: Environmental Hazards

Environmental Health Plumbing and Gas Piping

401 5th Ave, Suite 1100

Seattle, WA 98104

Automated inspection request line: 206-205-0935

other inquiries: 206-296-4932

Services: Seattle & King County plumbing and gas permits and inspections