# 405

# In 1947 the nation and the world were just coming out of the turmoil of World War II.

The baby boom was ramping up, and technological optimism was in the air. Wartime research had created scores of new substances that, in peacetime, made for "better living through chemistry." It became common to use the fruits of war for everything from lawn care to pregnancy care.

In line with its time, a small program to train undergraduate students in sanitary science began in the Department of Public Health and Preventive Medicine at the University of Washington's new School of Medicine in 1947. Alvin Green, an energetic sanitary engineer and the Director of Sanitation for the Tacoma-Pierce County Health Department, was the first faculty member.

#### **BENCHMARKS IN 1947**





UW Commencement Ceremony, 1948.

### **1946** UNIVERSITY OF WASHINTON SCHOOL OF MEDICINE OPENS

It includes the Department of Preventive Medicine and Public Health and Leland Powers is named first Chair.

# **1947** • UW SANITARY SCIENCE PROGRAM

created within the Department of Preventative Medicine. The program begins with five students.

### **1948** • CONSTRUCTION OF THE HEALTH SCIENCES BUILDING

**1949** • THE DEPARTMENT HAS \$56,200 IN GRANTS FOR THE YEAR

### **1941 – 1945** • UNITED STATES INVOLVEMENT IN WWI

Public and private transit use peaks in the United States during World War II. Civilians and soldiers are exposed to a range of environemntal and chemical hazards.

In 1945, on August 6 and 9, respectively, the US drops atomic bombs on Hiroshima and Nagasaki, Japan. Immideiate fatality estimates range from 129,000 - 226,000+.

### **1944** • G.I. BILL SIGNED INTO LAW

Millions of WWII veterans make use of G.I. Bill benefits to enroll in college.

### **1948** • FATAL SMOG IN DONORA, PENNSYLVANIA

kills 20 and sickens thousands.

#### PAUL HERMANN MÜLLER RECEIVES NOBEL PRIZE

for discovering the insecticidal qualities of DDT.





Smog from the Donora Zinc Works and its American Steel & Wire plant in Donora, PA, 1948.





# As the world beyond the university evolved, so did the undergraduate program.

The curriculum developed by Al Green followed the Recommendations for the Professional Development of Sanitarians developed by the American Public Health Association.

In 1951, the Kellogg Foundation sponsored a conference on undergraduate education in sanitary science, which further defined the optimum curriculum for training sanitarians. The US curriculum, consisting of courses in food and milk sanitation, industrial hygiene, vector control, and impacts of biological agents on human health, was right on target.

#### **BENCHMARKS IN 1957**





Seattle Light linemen, 1952.

# **1951** • ENVIRONMENTAL HEALTH LABORATORY

officially established in the School of Medicine to provide industrial hygiene services for industry and air pollution studies for local governments. Environmental Health Lab contracts with the City of Seattle for air quality analysis.

### **1954** • THE SCHOOL OF MEDICINE EXPANDS OFFERINGS

UW's School of Medicine offers options in health education, sanitation, or statistics. 25 students are enrolled as majors.

### **1956** • FACULTY MEMBERS MOVE TO FULL-TIME

Prior to this date, faculty members from the undergraduate Sanitation Program held part-time appointments as campus sanitarians.

### **1951 .** THE GREAT FORKS FIRE

Forest fire burns 38,000 acres and 36 buildings in Forks, WA.

### **1952** • SEATTLE AIR POLLUTION ADVISORY BOARD FORMED

### **1954 – 1955** • ENVIRONMENTAL HEALTH LAWS ENACTED

Atomic Energy Act (1955), Air Pollution Control Act (1955), signed into law.

### **1959** UW SCIENTIST COLLECTS BLOOD SAMPLE OF FIRST DOCUMENTED CASE OF HIV





An early gas chromatograph.





# By the 1960s, it became clear that better living through chemistry had its downside.

Rachel Carson's Silent Spring, published in 1962, awakened the public to threats industrial chemicals posed to human health and the environment.

Concern over toxic pollutants was added to concern over sanitation, and the UW's undergraduate program in sanitary science began to expand to include chemical agents and toxicology.

#### **BENCHMARKS IN 1967**





Children near the water in Seattle, 1960.

### **1963** • ENVIRONMENTAL HEALTH LABORATORY EXPANDS

The Washington State Legislature funds the Environmental Health Laboratory to do research, teaching, and service in occupational health.

#### THE F-WING IS ADDED TO THE HEALTH SCIENCES CENTER

#### THE EH LAB TESTS AIR QUALITY IN SEATTLE'S METRO TUNNEL

#### PETER A. BREYSSE BECOMES CHAIRMAN

of the Seattle-King County Air Pollution Advisory Board.

# **1967** • ENVIRONMENTAL HEALTH UNDERGRADUATE PROGRAM ACCREDITED

### **1962** • RACHEL CARSON PUBLISHES SILENT SPRING

#### **1963 – 1967** ENVIRONMENTAL HEALTH LAWS ENACTED

Clean Air Act (1963), Solid Waste Disposal Act (1965), & Washington State Clean Air Act (1967) signed into law.

### **1967** • THE PUGET SOUND AIR POLLUTION CONTROL AGENCY IS FORMED

**1969** CUYAHOGA RIVER IN OHIO CATCHES FIRE DUE TO HIGH LEVELS OF POLLUTION NATIONAL ENVIRONMENTAL POLICY ACT, WILDERNESS ACT, & SCENIC RIVERS ACT PASSED





Rachel Carson, 1963.

UNIVERSITY of WASHINGTON



# The 1970s were a time of environmental awakening across the United States.

The energy crisis of the early '70s set ordinary people to seriously worrying about how long finite supplies of petroleum and other natural resources would last. The first Earth Day opened the public's eyes to broad environmental ills.

New environmental laws, new government agencies, and new academic disciplines arose almost overnight. Undergraduate programs labeled "environmental studies," "environmental science," "outdoor education," and "environmental health" sprang up nationwide.

#### **BENCHMARKS IN 1977**





Peter Breysse conducting fieldwork, circa 1975.

#### **1970** DEPARTMENT OF ENVIRONMENTAL HEALTH (DEH) ESTABLISHED

as one of four departments in the newly founded School of Public Health and Community Medicine (SPHCM). Environmental Health major capped at 50 students.

### **1977** • ENVIRONMENTAL HEALTH LABORATORY ACCREDITED

by the American Industrial Hygiene Association, as one of the first wave of laboratories accredited nationally to perform industrial hygiene analyses.

#### NIOSH ESTABLISHES NORTHWEST CENTER FOR OCCUPATIONAL HEALTH & SAFETY

## **1979** • UW INSTITUTE FOR ENVIRONMENTAL STUDIES RECRUITS A NEW ASSISTANT PROFESSOR IN "ENVIRONMENTAL TOXICOLOGY"

#### **1970** OFFICIAL FORMATION OF ENVIRONMENTAL PROTECTION AGENCY OCCUPATIONAL SAFETY AND HEALTH ACT SIGNED INTO LAW

### **1970–1976** • **ENVIRONMENTAL HEALTH LAWS ENACTED**

Clean Air Act (1970) given significant, impactful ammendments. Clean Water Act (1972), Washington Industrial Safety and Health Act (1973), Toxic Substances Control Act (1976), and Resource Conservation & Recovery Act (1976) signed into law.

### **1979** • THREE MILE ISLAND SUFFERS A PARTIAL MELTDOWN

making it the worst civilian nuclear accident in US history.





The Three Mile Island Nuclear Plant.





#### The 1980s brought growth to DEH, as faculty were added to meet the needs...

... of growing graduate and research programs in occupational medicine, toxicology, industrial hygiene, and the more traditional sanitation fields, now named "environmental health." Faculty research, coupled with the continuing bachelor's degree requirement for an internship with local public health agencies, kept the program strong.

By the mid-1980s, however, a sluggish economy lowered enrollment university-wide, including in the undergraduate environmental health major.

#### **BENCHMARKS IN 1987**





SPHCM Faculty, 1980.

#### 1980 -**OCCUPATIONAL MEDICINE CLINIC ESTABLISHED AT HARBORVIEW**

#### 1982 -**GILBERT OMENN HIRED AS DEH CHAIR**

then becomes Dean of SPHCM. Omenn champions the growth of Toxicology in the department. The same year, UW's first undergraduate course in toxicology, called "Toxic Chemicals in the Environment" is offered. DEH recruits Sheldon Murphy as the new Chair.

### 1986

### DEH RECIEVES SUPERFUND RESEARCH GRANT

from the National Institute of Environmental Health Sciences, becoming 1 of just 4 major Universitys to recieve one

#### 1987 **OCCUPATIONAL AND ENVIRONMENTAL MEDICINE PROGRAM**



#### 1980 **MT. ST. HELEN'S ERUPTS ON MAY 18TH**

#### SUPERFUND PROGRAM ESTABLISHED

Congress passes the Comprehensive Environmental Response, Compensation, and Liability Act in response to the Love Canal disaster, providing funds for the cleanup of sites contaminated with hazardous substances and pollutants.

#### 1981 JIM WOODS, DAVE EATON, OTHERS FORM PACIFIC NORTHWEST SOCIETY OF TOXICOLOGY

#### 1984 - 1989 HIGH PROFILE ENVIRONMENTAL HEALTH DISASTERS PLAGUE THE GLOBE

**1984**, **Bhopal**, **India**: An industrial pesticide leak kills between 2500 and 5000 people. **1985, Antarctic:** Scientists discover a recurring springtime Antarctic ozone hole. **1986, Chernobyl, Soviet Union:** The worst nuclear power plant disaster in history occurs. **1989, Prince William Sound:** An Exxon Valdez tanker spills 10.8 million gallons of oil.





Exxon Valdez Oil Spill in the Antarctic, 1989.





# Enrollments in DEH's programs began to grow again throughout the 90s.

The core pathway still emphasized the biological aspects of protecting human health: control of microbes and other vectors in food, water, and waste. The program also includes air pollution; hazardous exposures in occupational and industrial settings; and the legal and administrative framework that environmental health practitioners encounter.

An Environmental Health minor available to all UW undergraduates was also approved. And for the first time since 1962, the department received substantial new funding from the central UW administration for undergraduate teaching.

#### **BENCHMARKS IN 1997**





EH graduate students prepare samples, circa 1997.

#### **1991** GERALD VAN BELLE NAMED CHAIR OF DEH

after the untimely death of Sheldon Murphy.

# **1995** • FIRST PHD STUDENT GRADUATES

Kay Teschke becomes the first student in the Department of Environmental Health to graduate with their PhD, in June of 1995.

#### **1997** NIOSH FUNDS DEH INDUSTRIAL HYGIENE GRADUATE STUDENTS FOR THE FIRST TIME

**1999** • NORTHWEST PARTICULATE MATTER CENTER FUNDED AT UW

#### 

\_\_\_\_\_

Clean Air Act receives major amendments (1990) Washington State Growth Management Act (1990) and Food Quality Protection Act (1996) signed into law.

### **1993** • WA HEALTH & SAFETY INDUSTRY STANDARDS EXTENDED TO AGRICULTURE

#### **1998** SOUND TRANSIT FORMS EXPLOSION AT EQUILON PUGET SOUND REFINERY KILLS SIX WORKERS

1999
OLYMPIC PIPELINE ACCIDENT IN BELLINGHAM KILLS THREE YOUTHS
WORLD TRADE ORGANIZATION (WTO) MINESTERIAL MEETING HELD IN SEATTLE
Protests and vandalism erupt. Mayor Schell declares a state of emergency on November 30th.





Olympic Pipeline accident, Bellingham, WA, 1999.





#### A new millennium brings renewed inspiration and motivation to look forward and outward.

Partnerships and community collaborations investigate children's health, agricultural safety, and casual labor. Major centers supporting projects on urban air pollution, genetics and toxic chemicals, school bus diesel exhaust, and climate change roll out.

The department undergoes a name change to reflect the expanding scope of education and research in the new century.

#### **BENCHMARKS IN 2007**





DEOHS Students at UW's 2008 Commencement Ceremony.

### **2000** • DAVID KALMAN NAMED CHAIR OF ENVIRONMENTAL HEALTH

### **2003** • DEH BECOMES DEOHS

The Environmental Health Department name changes to "Department of Environmental and Occupational Health Sciences."

# **2005** • **DEOHS RECEIVES \$30 MIL GRANT**

to study the connection between air pollution and cardiovascular disease. The grant is the largest ever awarded by the EPA for scientific research. Dr. Joel Kaufman is the P.I.

### **2007** INDUSTRIAL HYGIENE AND SAFETY PROGRAM IS RESTRUCTURED

The program becomes "Occupational and Environmental Exposure Sciences."

#### DEOHS JOINS THE NATIONAL CHILDREN'S HEALTH STUDY,

the first of its kind, tracking children's health from womb through adulthood.

#### 

First responders and others exposed to higly toxic dust during rescue efforts, leading to adverse health effects such as respiratory ailments and cancer.

### **2005** • SEATTLE MAYOR LAUNCHES CLIMATE PROTECTION AGREEMENT

Seattle Mayor Greg Nickels launches the US Mayors Climate Protection Agreement in response to the Kyoto Protocol.

### **2006** • E. COLI OUTBREAK FROM UNCOOKED SPINACH

Sickens at least 276 consumers. 3 deaths have been attributed to the outbreak.

### **2007** • NUMBER OF DEATHS FROM MAD COW DISEASE REACH 165 IN GREAT BRITAIN





First Responders in the wreckage of the World Trade Center Towers, 2001.





# Global changes impact the face and nature of the Department.

Changes in technology, understanding of our environment, and the organization of work lead to changes in how we understand, evaluate and control hazards. Faculty, staff, and students continue their work in-state and around the nation, but increase their presence around the globe.

A core curriculum is developed to allow all of our students to share some of the same knowledge, experiences, and friendships.

#### **BENCHMARKS IN 2017**





As part of a summer internship, students set and collect fly traps at a dairy farm, 2015.

### **2012** • THE PETER A. BREYSSE MEMORIAL LECTURESHIP IS BEGUN

### **2013** • THE DEPARTMENT STARTS A NEW CENTER FOR ONE HEALTH RESEARCH

### **2014 - 2017** • MICHAEL YOST NAMED CHAIR OF DEOHS IN 2014

#### **NEW ACCELERATED DEGREE PROGRAMS WELCOME STUDENTS**

Student join the new Occupational & Environmental Exposure Sciences and Applied Toxicology masters degree programs in 2014 and 2017, respectively.

### **2016** UW BEGINS POPULATION HEALTH INITIATIVE

after recieving \$210 million gift from the Gates Foundation. The initiative's mission is to advance "the health of people around the world by leveraging capabilities and opportunities at the UW and beyond."

#### 

killing 11 workers and possibly releasing more than 200 million gallons of crude oil over 3 months.

### **2011** • EARTHQUAKE CAUSES MELTDOWN AT FUKASHIMA NUCLEAR POWER PLANT

After a large earthquake and tidal wave, the Fukashima Daiichi nuclear power plant, on the east coast of Japan, loses power and cooling, leaading to nuclear melt downs and the release of radioactivity to the environment.

#### 2016

#### WORLD SURPASSES 400 PPM THRESHOLD FOR ATMOSPHERIC CO2 LEVELS

The new level is unprecedented in millions of years and comes nearly three decades after surpassing 350 ppm, considered the 'safe' level of atmospheric  $CO_2$  levels.

#### PARIS CLIMATE ACCORD IS SIGNED BY THE UNITED STATES

under President Obama. In June of 2017, President Trump announces that the US will withdraw. The earliest possible date of withdrawal is Nov 4, 2020.





BP Oil's Deepwater Horizon drilling rig explosion, 2011.



