

# TEXAS TECH UNIVERSITY



2020 Annual Report  
for the  
Department of Environmental Health and Safety

## **From the Assistant Vice President for Environmental Health & Safety**

I am happy to present the Annual Report for the Department of Environmental Health and Safety (EHS) for the 2020 academic year. This report highlights some of the accomplishments of the office. The challenges this year have been unparalleled with a virus pandemic closing the campus for more than three months. Even so, our office has continued to make progress in several areas including academic safety, occupational safety, and environmental protection. The efforts of these programs are detailed below.

Our current efforts to enhance the culture of safety on campus began in 2015 with a message from President Duane Nellis about the importance of safety in university research areas. EHS and the Office of the Vice President for Research and Innovation have coordinated efforts on updating and implementing safety programs and supporting a positive safety culture. Texas Tech University's multiple Institutional Compliance Committees (ICCs), which include the Institutional Laboratory Safety Committee (ILSC), the Institutional Biosafety Committee (IBC), the Radiation and Laser Safety Committee (RLSC) and the Institutional Animal Care and Use Committee (IACUC), provide stakeholder representation and collegial review of research safety programs on campus. These committees make up the backbone of our research safety programs, and I would like to thank the faculty and staff who serve on these committees.

A handwritten signature in black ink, appearing to read "Matt Roe". The signature is fluid and cursive, with the first name "Matt" and last name "Roe" clearly distinguishable.

Matt Roe, Assistant Vice President for Environmental Health & Safety

## Academic Safety

The Academic Safety section encompasses multiple programs including Biological Safety, Radiation and Laser Safety, Chemical Hygiene and Physical Hazards with the focus on reducing injury from academic activities. The Academic Safety program is implemented through a collaborative approach with EHS serving as a knowledgeable partner and leader in developing these programs.

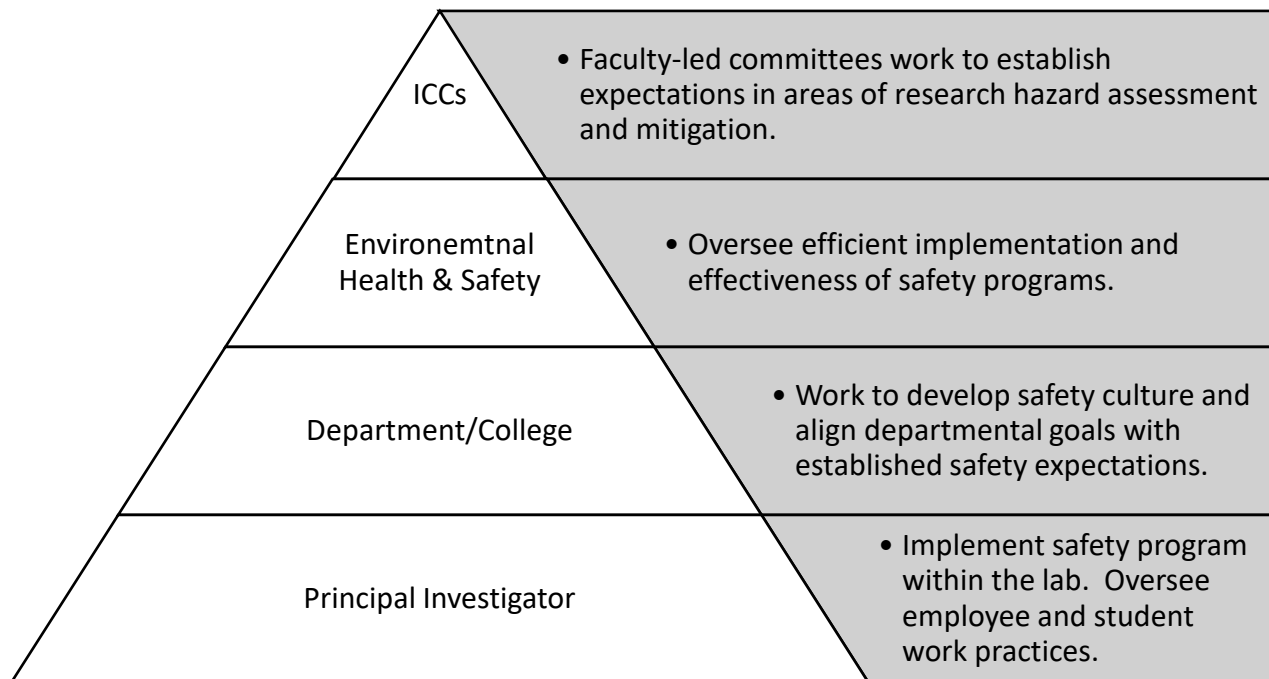


Figure 1: Academic safety program framework.

### Highlights:

#### *Raider Risk Assessment Management Program (RRAMP)*

Beginning in December 2019, EHS introduced the campus community to an online safety management system (RRAMP) that allows users to review their chemical inventories, view and respond to annual safety assessments, view personnel training status and perform an online risk assessment resulting in an automated work area safety plan.

#### *Field Research Safety Program*

The Institutional Laboratory Safety Committee and the Institutional Animal Care and Use Committee have requested that EHS develop a Field Safety Program. EHS is currently developing a manual and training course to support this program; review and publication of these materials is scheduled to occur in FY 2021.

#### *COVID-19 Response*

EHS worked closely with research groups as they safely shut down research and other academic activities for the COVID-19 quarantine. EHS also supported the pickup and transport of donated personal protective equipment including more than 1500 boxes of gloves, 275 safety glasses and 1200 N-95 respirators that were contributed by the Texas Tech research community for medical first responders. As campus re-opened, EHS worked with facility managers and research groups to reinitiate work safely under new Covid-related requirements.

### *Biological Safety*

For the first time in FY 2020, EHS established a section to specifically manage the unique safety challenges presented by biological agents and recombinant or synthetic genetic materials. This section coordinates the review of these protocols and establishes safety programs within the Biosafety Manual for the university. This section also collaborated and assisted with the development of the COVID-19 return to work procedures and guidance documents and with other COVID-19 outreach initiatives to faculty and students.

### *Radiation Safety*

During FY 2020, the Radiation Safety section completed the renewal of the University's five-year radioactive materials use permit through the Texas Department of State Health Services. Included in this renewal was a full program review with no critical findings identified and all deficiencies corrected in a timely manner.

## **Occupational Safety**

The Occupational Safety section works to create and manage programs designed "...to assure so far as possible every working man and woman... safe and healthful working conditions..." (Occupational Safety and Health Act 1970). These programs are focused on the proactive control of hazards within the work environment through elimination or communication and management.

Highlights:

### *Occupational Health Program*

EHS has developed an Occupational Health Program providing to support medical assessment and surveillance of occupational issues. This program includes coordinating independent medical review through a third-party contract for individuals on campus exposed to certain occupational hazards.

### *Ergonomic Assessments*

Thirty-four ergonomic assessments were performed in FY 2020, representing a 7% increase in assessments from the previous year. This was carried out even during the COVID-19 response. An ergonomics guide for remote work was also created and distributed during the COVID-19 closures on campus.

### *Respiratory Fit Testing*

During the COVID-19 response the Occupational Safety section worked with University personnel to properly fit test respirators for COVID response staff. This increase represented a 39% increase in respirator fit tests from FY 2019. Additionally, the section supported research conducted within the Whitacre College of Engineering by providing equipment and expertise in designing and testing of new respirator models and validating disinfection and reuse of disposable N-95 respirators for healthcare workers.

### *Shop/Studio/Makerspace Safety Initiative*

During FY 2020, the Occupational Safety section established criteria for training and assessment of university shops, studios, and makerspaces. This initiative included updating online training and hosting in person training, when possible, to support safety within these shops. Shop managers collaborate with EHS personnel in the Whitacre College of Engineering, School of Art and the College of Arts and Science to coordinate safety within these areas.

## **Environmental Protection**

The Environmental Protection section focuses primarily on compliance with federal and state environmental regulations. In addition to ensuring TTU adheres to compliance requirements, Environmental Protection provides several services to the campus, including:

- Chemical management,
- Hazardous chemical and infectious waste disposal,
- Surplus chemical redistribution,
- Universal Waste and electronic equipment recycling,
- Pollution prevention and waste minimization, and
- Training and education related to waste.

Responsibilities involving air compliance include the permitting, emissions testing, and reporting of air pollution sources associated with the Texas Tech University Federal Operating Permit and annually reporting the quantity of greenhouse gas emissions from the campus. Water compliance activities include the inspection, permitting, and reporting associated with storm water runoff, fuel storage tanks, and sanitary sewer discharges. These services protect not only individuals on campus but the Lubbock community at large.

Highlights:

### *Controlled Substances*

The Environmental Protection section added capabilities for Drug Enforcement Agency (DEA) controlled substance disposal, thus eliminating the need for costly DEA certified reverse distributor vendor services.

#### *Laboratory Cleanouts*

A process for laboratory cleanout requests was developed and implemented, where department personnel coordinate the cleanout and closure of laboratories with EHS personnel. Clean outs occur when faculty are leaving or have left the university and can leave behind chemical containers. The developed plan provides a well-defined, and safer process for department and EHS personnel. Can you add sentence about number of departments that made use of plan in its first year? This is expected to save the university money and lower risks by removing unneeded hazardous chemicals.

#### *Regulatory Compliance*

Four external environmental compliance regulatory inspections were conducted during FY 2020 resulting in a Texas Commission on Environmental Quality 'Satisfactory' compliance history.

#### *Recycling Program*

The Environmental Protection section facilitated the recycling of more than 25000 lbs. of electronic and universal waste (printer cartridges, batteries, and metals) in FY 2020. This recycling is done through EPA certified recycling programs and reduces the carbon footprint of the university.

### **Outreach and Training**

The Outreach and Training section, also formed in FY 20, directs programs at community engagement in safety and the development and distribution of effective safety training and other informational materials in support of safety programs of the department. This section seeks to educate the university community about our safety programs and engage faculty, staff, and students in learning opportunities and initiatives to help develop a continuously improving safety culture.

Highlights:

#### *President's Excellence in Safety Award*

FY 2020 was the inaugural year for the new President's Excellence in Safety Award. This program recognizes excellence in departmental safety programs and was awarded to the Department of Environmental Toxicology for their commitment to implementing university safety programs, their effective Department Safety Award program and an expanded safety training agenda.

#### *Graduate Laboratory and Art Studio Safety (GLASS) Ambassadors*

The GLASS Ambassadors organization was started to create a cadre of graduate students in departments fostering transparency, communication and safety awareness in the management of chemical, biological and physical hazards that may be present in research laboratories, studios and educational activities of Texas Tech University. FY 2020 was the second year of this program, and the program now has more than 95 established ambassadors across multiple departments and is an official student organization of Texas Tech.

### *Web Based Training*

All modules of EHS web-based training were redeveloped during FY 2020 with implementation dates in FY 2021. These updates included renewing the content and creating more engaging content for adult learners. Total assigned trainings surpassed 55,000 during FY 2020 with a timely completion rate of assigned trainings exceeding 67%.

### *COVID-19 Training*

The Outreach and Training section developed a return to work COVID-19 Awareness training delivered to all University employees and students. This training was fundamental in helping students, faculty, and staff return to work safely and established infection control procedures after Phase III restrictions.

### *Outreach & Engagement*

This section also coordinated the redesign of the departmental website and creation of social media pages (@TexasTechSafety), including a YouTube channel that features custom-made videos on a variety of safety topics, to further engage the TTU community. The section also created a *Safe-Science Series* (workshop series) in FY 2019 that saw exponential growth in attendance over the past two years. The program will continue virtually for FY 2021. Redesigned in-person training courses on laboratory safety were delivered to over a dozen departments across resulting in over 500 students and employees receiving novel safety education and resource materials through the distribution of information folders created specifically for lab personnel, faculty supervisors or Department Safety Officers. When COVID-19 closed campus, virtual *Safe-Science Sessions* and other safety trainings were still conducted using Zoom, the TTU-created safety videos, and other electronic resources.

### *TA & Lab Leadership Workshop*

The first TA & Lab Leadership Workshop was held in August 2019 and drew attendance 90 attendees from across campus. The workshop provides skills needed to respond to emergency situations that may arise in a lab, shop or studio space and enforce safety effectively. The workshop was held virtually in August 2020 and had an attendance of roughly 80 people.

## Department Metrics

## Risk Management:

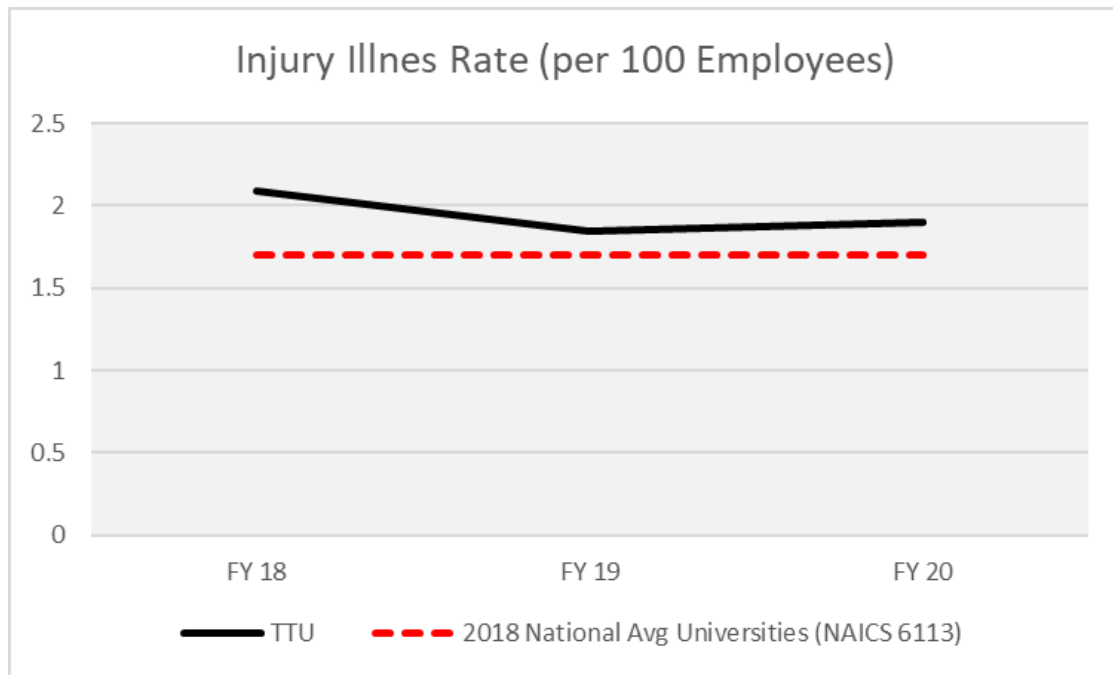


Figure 2: Injury/Illness rate per 100 employees compared to 2018 National Average of Universities from the Bureau of Labor Statistics (most recent data available).

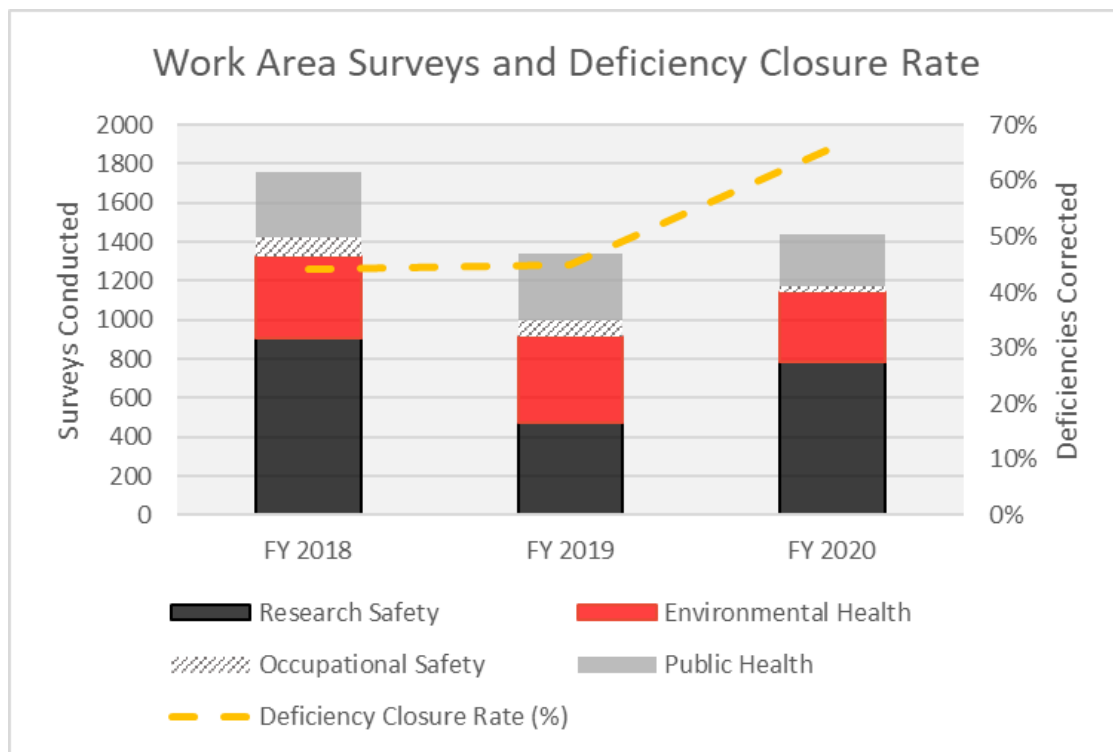


Figure 3: Work area surveys conducted and deficiency closure rate.

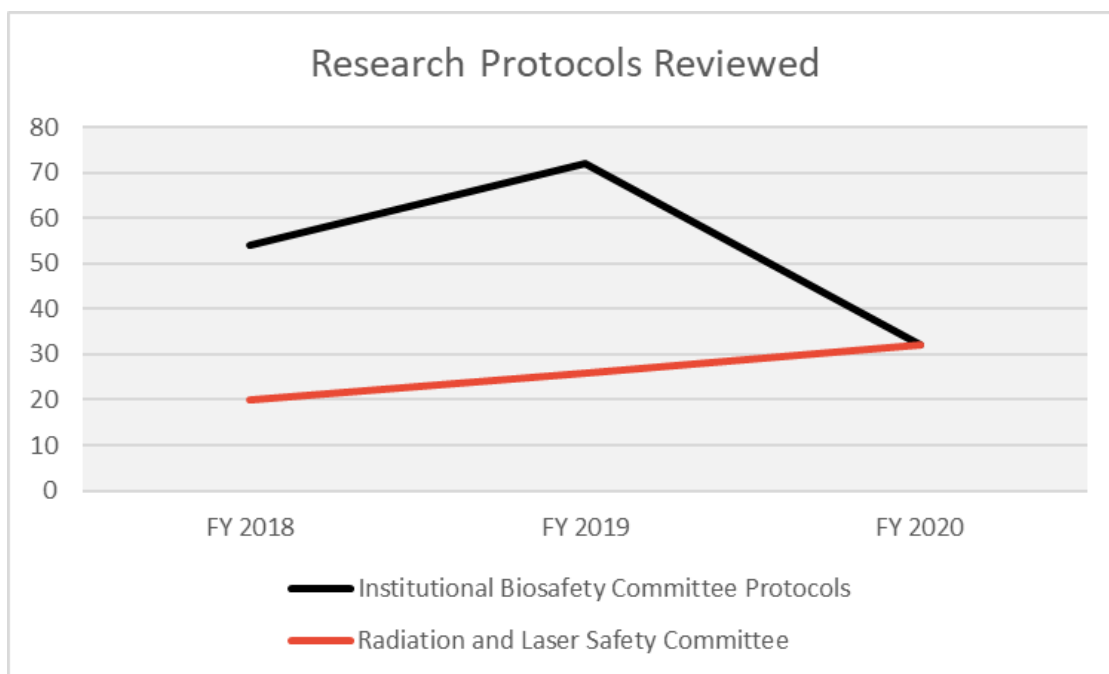


Figure 4: Institutional Biosafety Committee and Radiation Laser Safety Committee research protocols reviewed.

#### Services:

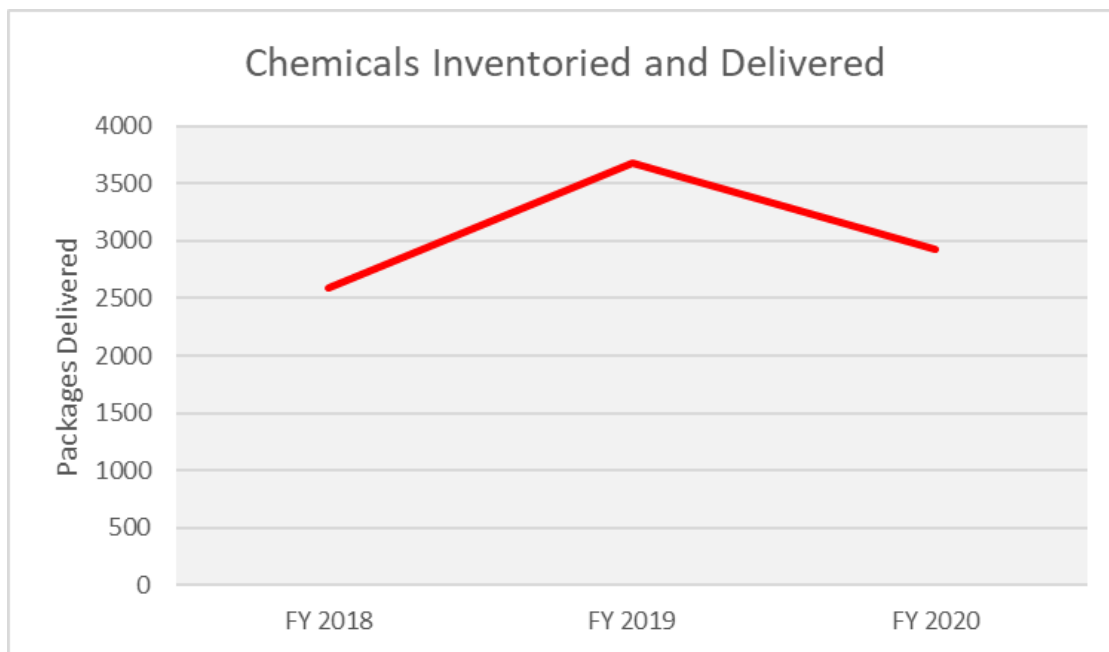


Figure 5: Chemicals inventoried into the online chemical inventory and delivered to academic work areas by EHS personnel. Academic Safety maintains online chemical inventories for all academic work areas on campus.

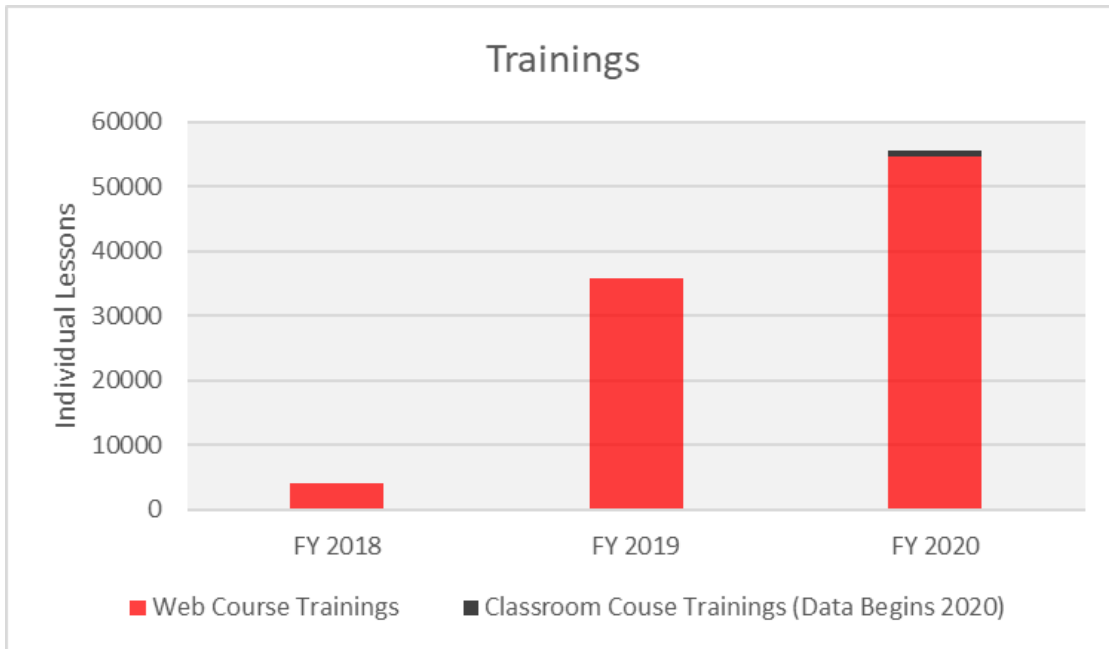


Figure 6: Individual training session enrollments over FY 2018-2020. FY 2020 began tracking in-person class attendance.

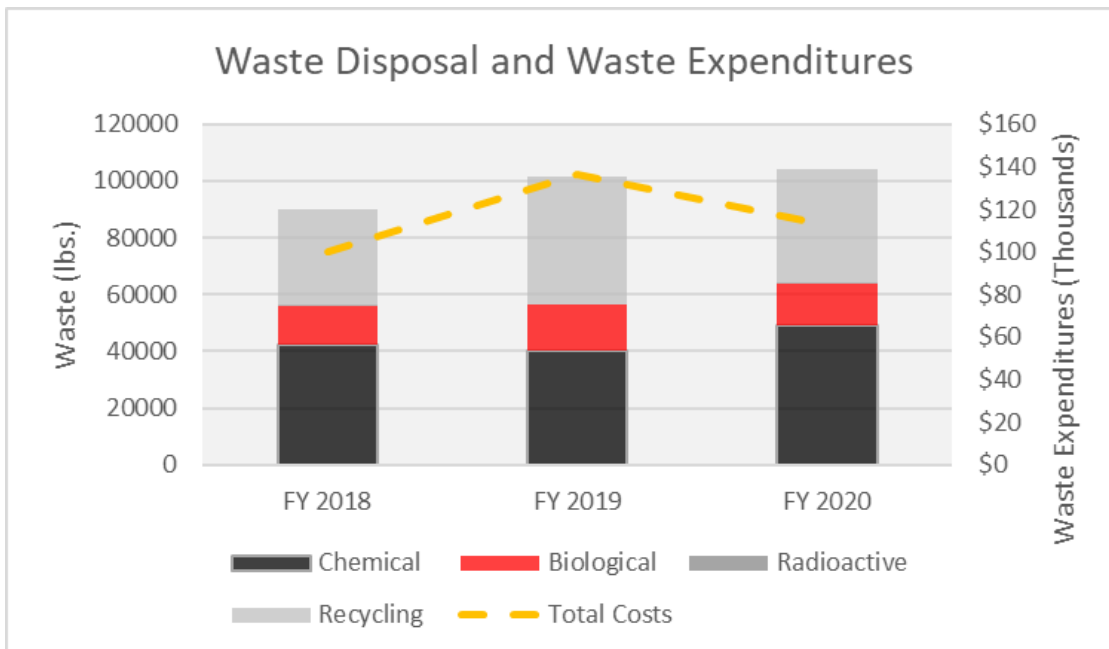


Figure 7: Waste disposal and waste expenditures.

## Finances:

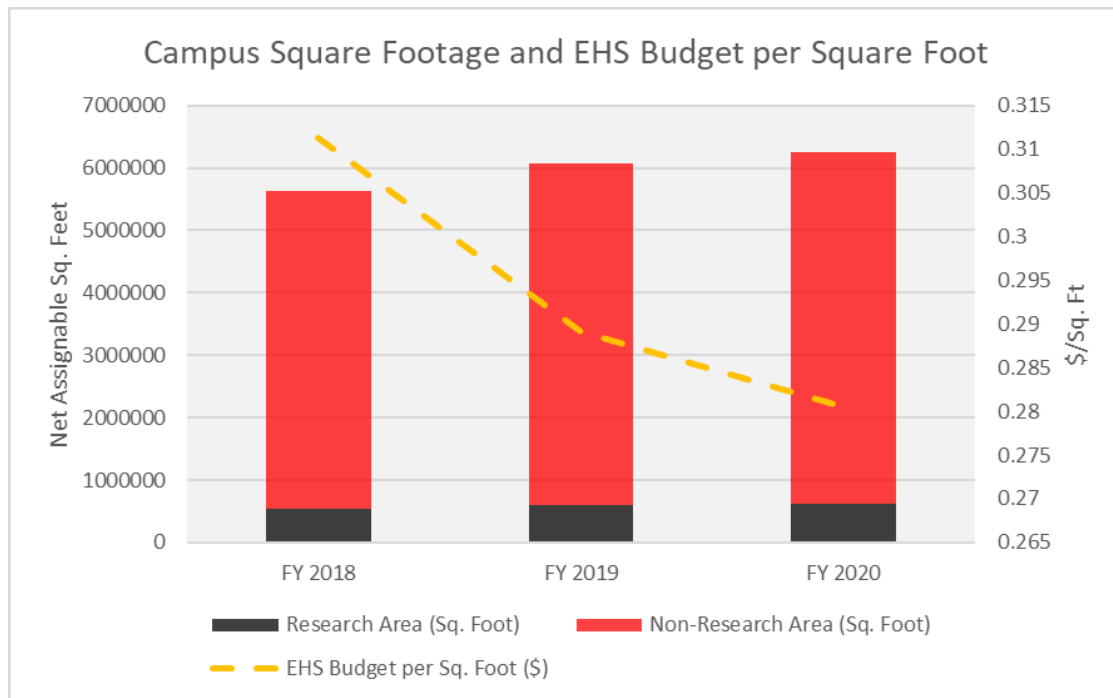


Figure 8: Campus square footage and EHS budget per square foot. This represents a decrease in budgeted dollars per square foot while realizing an increase in square foot responsibilities.