



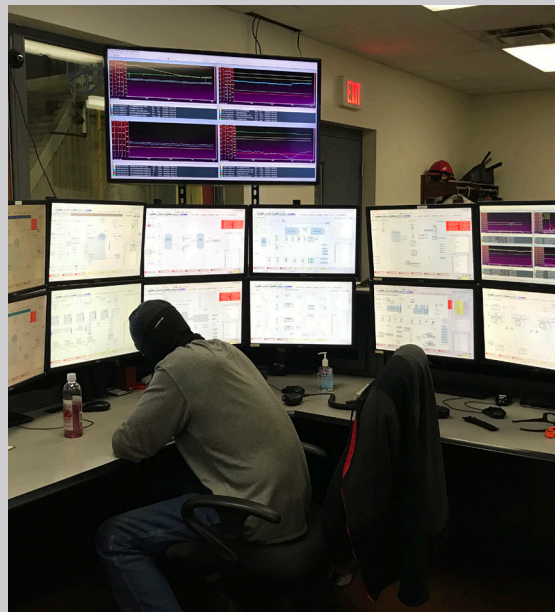
From the Director's Desk....

Over the past two months, the Physical Plant staff has provided support to prepare COVID-19 test sites, construct and support testing lab infrastructure, and adjust services for spring semester activities, while taking advantage of reduced occupancy to complete maintenance and construction work.

We recently entered into a welcome new phase of operational support: vaccination sites. Working with UHS, our staff rapidly installed an ultra-cold freezer to store COVID-19 vaccine doses. Technicians evaluated facilities for functionality, ventilation, and power requirements, and completed work within 24-hours, including emergency power and automatic alarming capabilities. Shout outs to our Campus Services, Electricians, Steamfitters, Locksmiths, and Work Control staff that came together to complete this critical project.

I hope you enjoy this update; there's a lot going on...

—Jay Bieszke



The Charter Street Heating & Cooling Plant Control Room is monitored by operations staff 24/7/365 to ensure uninterrupted operation of the utilities provided to campus.

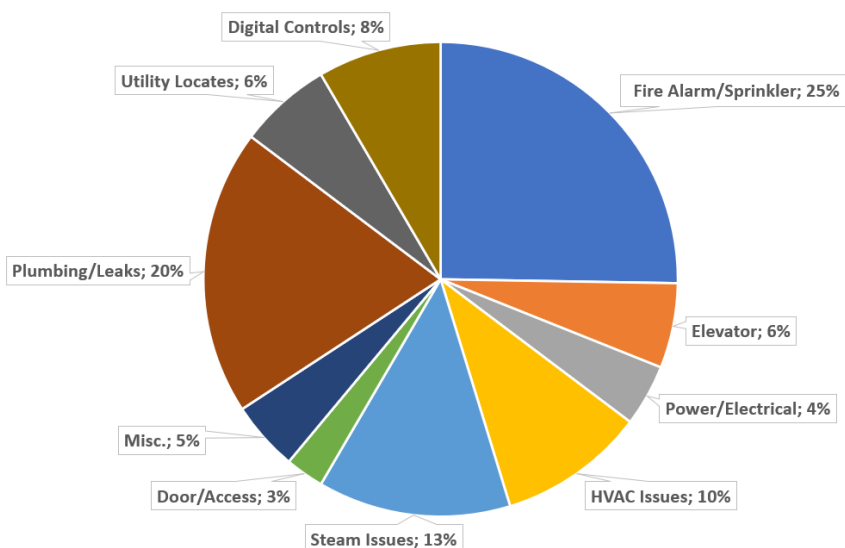
BREAKDOWNS AND EMERGENCY CALLS

There were two major equipment failures in December and January which demanded significant unplanned efforts and increased the risk to UW-Madison's operations and programs.

Air Handler Failure: A motor on a primary air handling unit (AHU) failed at the Chemistry Building. Physical Plant Steamfitters, Electricians, Machinists, and Material Management staff expedited the purchase and installation of a new motor. An extended outage could have led to other failures due to the extreme cold outside air temperatures. The team's quick action mitigated those risks. The original motor was beyond its typical life expectancy and was scheduled to be replaced as part of the Chemistry Addition and Renovation project.

High Pressure Steam Leak: A high pressure steam leak caused a temporary steam outage at the Agriculture Bulletin Building and reduced steam services to the Lakeshore residence halls. Physical Plant Steamfitters isolated the outage, mitigated safety hazards, and restored the system within a few hours.

Facilities Emergency Calls (190 in December/January)



PROJECTS SUBSTANTIALLY COMPLETED AND CLOSED OUT–DECEMBER/JANUARY

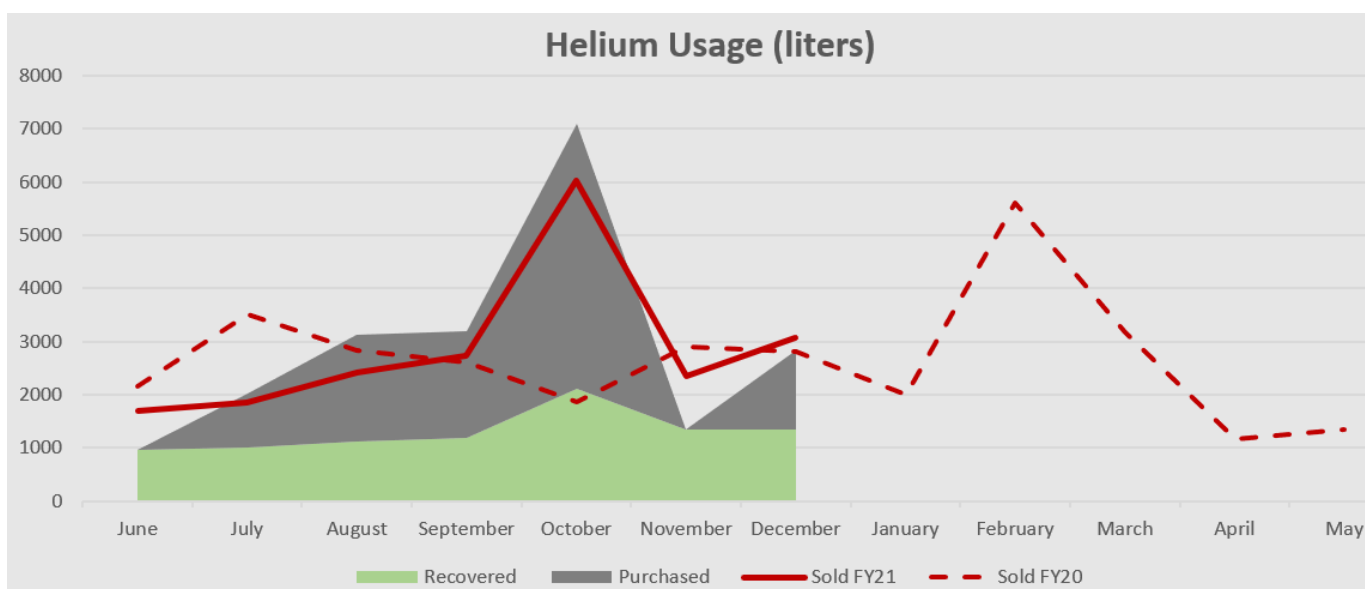
Nine projects (worth \$615K) reached substantial completion during the past two months.

Project Number	Building	Description	Value
04021904	Noland Hall	Upgrade Wall Material	\$25K
05451814	Vilas Communication Hall	Remodel Multiple Rooms (Phase 2)	\$150K
05451805	Vilas Communication Hall	Renovate Spaces & Access Control	\$118K
PRJ-20-001759	Social Science	Upgrade Study Area	\$76K
PRJ-20-001838	Engineering Centers Building	Install a Coiling Door	\$84K
PRJ-20-001941	Medical Sciences Center	Renovate Spaces & Create Offices	\$98K
PRJ-21-002049	Art Lofts	Merge Rooms	\$51K
PRJ-21-002145	Computer Sciences	Modify Signage	\$9K
PRJ-21-002270	UW Medical Foundation Centennial Building	Reconfigure Space	\$4K
Total Value of Work (Final Amount TBD)			\$615K

HELIUM PLANT ASSISTS IN SUCCESSFUL STARTUP OF NEW NMRFAM MAGNET

Physical Plant provides helium services, including recovery, to the campus research community. As a non-renewable resource, maximizing recovery is an important aspect of the supporting the university's research activities.

- In October 2020, the helium plant provided more than 4,000 liters of helium to the National Magnet Resonance Facility at Madison (NMRFAM) for the start-up of a new 750WB magnet. Helium recovery upgrades completed prior to start-up helped achieve a high recovery rate of approximately 80 percent.
- NMRFAM has been having purifier water contamination issues in their recovery system since October and as a consequence has been sending more helium back to the central plant.
- In November and December, average helium sales of 2,700 liters were slightly less than the prior year's average sales of 2,860 liters.
- The helium plant is in full operational status. However, slight oil carryover into the liquefier has been observed. We are working with our maintenance technician to solve this issue.

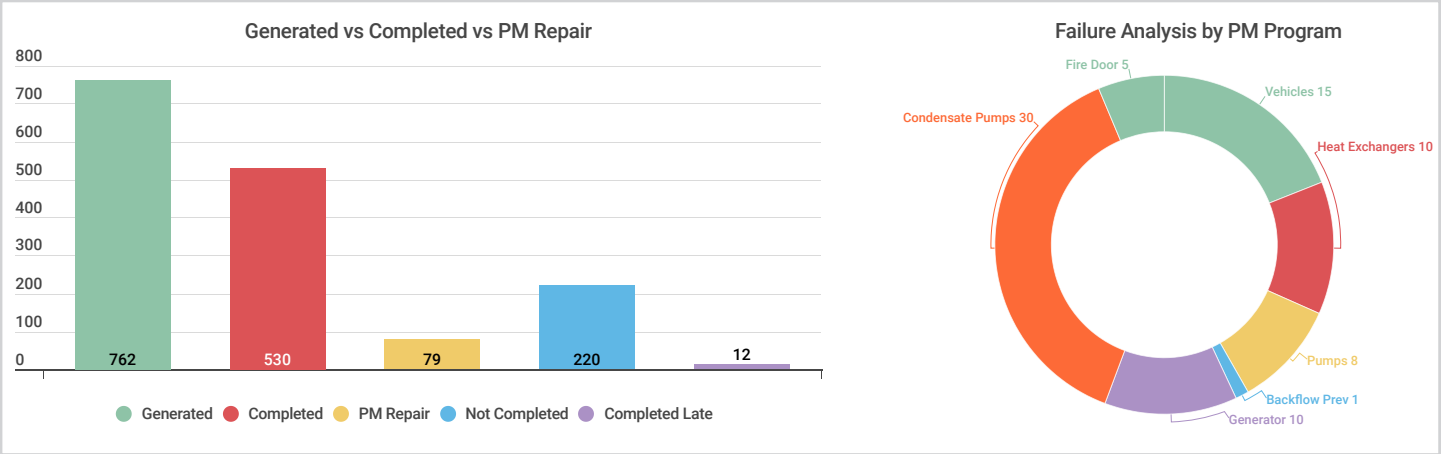


PREVENTIVE MAINTENANCE PROGRAM

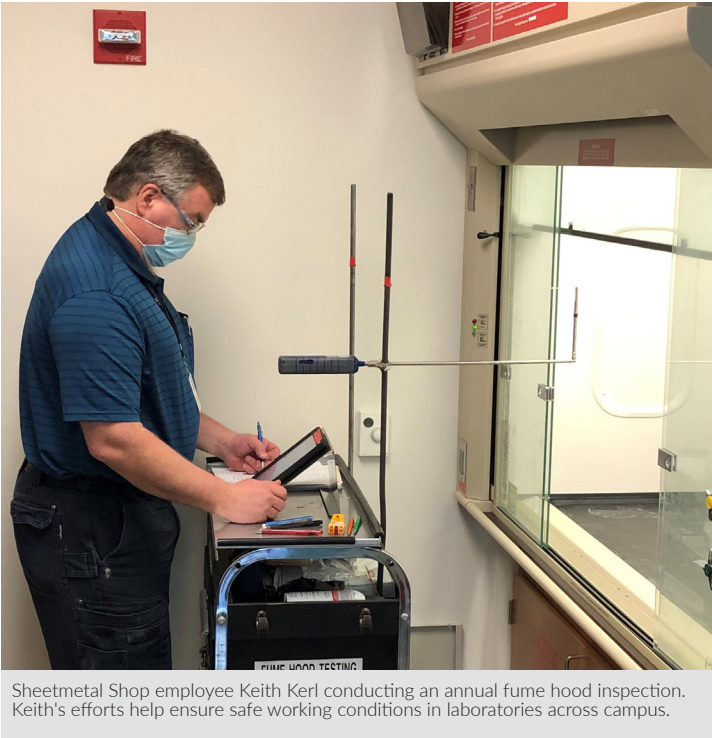
The Physical Plant preventive maintenance (PM) program helps keep equipment in good working condition, reduces equipment downtime, and supports stewardship of university resources. Fewer breakdowns also helps reduce risks to safety and university operations.

Preventive maintenance includes scheduled inspections, regular routine maintenance, and identification of issues for more in-depth attention. Our Integrated Work Management System (AssetWorks) plays a key role in the management, scheduling, and completion of these PM activities. In January 2021, Physical Plant technicians completed more than 500 scheduled PM activities and identified 79 proactive repairs. We also expect the number of PM activities to grow in the coming months, as we align resources and this new program continues to mature.

Preventive Maintenance (PM) Summary | January 2021



There are currently more than 6,000 pieces of equipment in the preventive maintenance program, and we continue to expand the program to cover additional equipment. In 2020, Physical Plant conducted more than 13,000 preventive maintenance activities and initiated more than 2,000 proactive repairs.



ACTIVE FACILITIES-RELATED INSURANCE CLAIMS (LOSS EXCEEDING \$25K)

All work to address claims incurred prior to October 19, 2020 is substantially complete, with four exceptions:

- **Polar Vortex (February 1, 2019).** Replacement of network cabling in the Chemistry Building is the single remaining item from this claim, with an expected completion date of March 2021. This event has a facilities-related cost of approximately \$826K.
- **Wind & Hail Damage (July 27, 2020).** ARS Peninsular repairs are at 30 percent; expected completion in May due to the need for warmer spring weather. Approximate cost: \$40K.
- **Vandalism (July 31, 2020).** The replacement of the Hagenah Fountain metal cover due to damage by skateboarder is 10 percent complete. Expected completion by contractor in May 2021. Approximate cost: \$26K.
- **Electrical Failure (August 25, 2020).** Microbial Science Substation repair is expected to continue until July 2021. A number of long-lead time items are required for the repair. Work is scheduled to begin the week of February 8. Approximate cost: \$600K.

After October 19, there were nine water/steam related events, one fire, and two property-related events totaling approximately \$228K. Small claims (<\$25K) are not included below.

- **Fire at Russell Labs (December 17, 2020).** Mitigation and content removal are complete and repairs are 20 percent complete, with the schedule still to be determined. Estimated facilities cost: \$135K.

MECHANICAL ROOMS

A mechanical room is defined by the International Fire Code (IFC) as “boiler rooms, mechanical rooms and electrical equipment rooms.” Besides the equipment specifically listed, air handlers, pumps, electrical distribution panels, motors, control valves, and other building systems are also housed in these rooms. Both the International Fire Code and the National Fire Protection Association (NFPA, a nonprofit standards organization), write that “combustible material shall not be stored in boiler rooms, mechanical rooms, or electrical equipment rooms” (IFC 315.3.3, NFPA 10.19.5). Although there are some narrow exceptions to this requirement, they do not apply to storage of anything not specifically related to operating the equipment in the mechanical room.

Mechanical rooms on the UW-Madison campus are kept locked and very few non-Physical Plant employees should have access to them. Yet, over the years, some mechanical rooms across campus have become ad hoc storage rooms for all types of materials. Because of fire code issues, Physical Plant is now conducting a systematic review of mechanical rooms on campus and working with departments to ensure safety. In part, safety is improved by removing anything that does not adhere to IFC/NFPA standards.

Pictured at right: a campus mechanical room before and after cleanup and reorganization.



A SAMPLE OF PHYSICAL PLANT ACCOMPLISHMENTS FROM 2020

OPERATIONS & MAINTENANCE

- 22,000+ work requests completed
- 13,000+ preventive maintenance activities
- 2,000+ proactive repairs
- 20,000+ assets entered in the asset management system

 completed
22K+
customer service work requests


 **2K+**
proactive repairs


 completed
13K+
preventive maintenance activities

SAFETY

- OSHA recordable injuries reduced by half since 2017
- Five shops with zero recordable injuries
- Other shops reduced recordable injuries by 50-75 percent

 **5**
shops with zero injuries

 **50%+**
decrease in recordable injuries in other shops

 reduced OSHA recordable injuries by
1/2

FACILITIES SERVICES

- Managed held mail for more than 40 campus buildings during closures
- Filled and distributed more than 2,000 tubs of disinfectant wipes
- Filled and distributed more than 6,000 disinfectant spray bottles

 **6K**
disinfectant bottles

 **2K**
tubs disinfectant wipes

CONSTRUCTION & RENOVATION

designed
60
projects totaling
\$5 mil+
of work

33%
increase in output

189
courtesy project consultations

- 189 courtesy project consultations
- 105 technical project consultations
- Engineering consults more than 3x faster
- Increased output by 33 percent
- Completed 83 percent of projects within one year
- Completed more than 40 percent of projects in less than 6 months
- Reduced closeout time by more than two-thirds.
- Completed 60 projects worth more than \$5 million

 **105**
technical project consultations

UTILITIES

\$80k
savings/year

- Zero heating and cooling plant outages from operator error
- Projected savings of \$80k/year from new electric tariff addition

GROUNDS

42
new trees

40K
annual plants

5
new project landscapes

- 9 new planted beds with 42 trees, 337 shrubs, and 580 perennials
- 5 new project landscapes with 86 new trees
- Grew, planted, and maintained 40,000 annuals and 17,000 bulbs
- Trapped and relocated 146 animals