

Egan Research Center Ventilation Optimization Project

Northeastern University
Joe Ranahan – Energy Manager

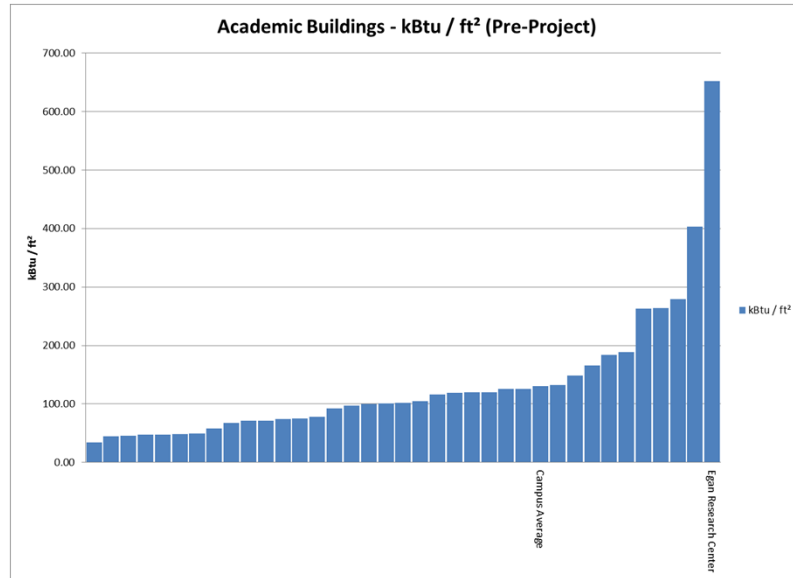


Key Contributors:

- Northeastern University Office of Energy Management, Sustainability and Regulation
- Northeastern University Office of Environmental Health and Safety
- Northeastern University Operations
- NSTAR
- Santoro Associates, Inc.
- Automated Building Systems Inc.

Project Development / Analysis:

- Campus Building Energy Utilization Index (EUI)



Project Development / Analysis:

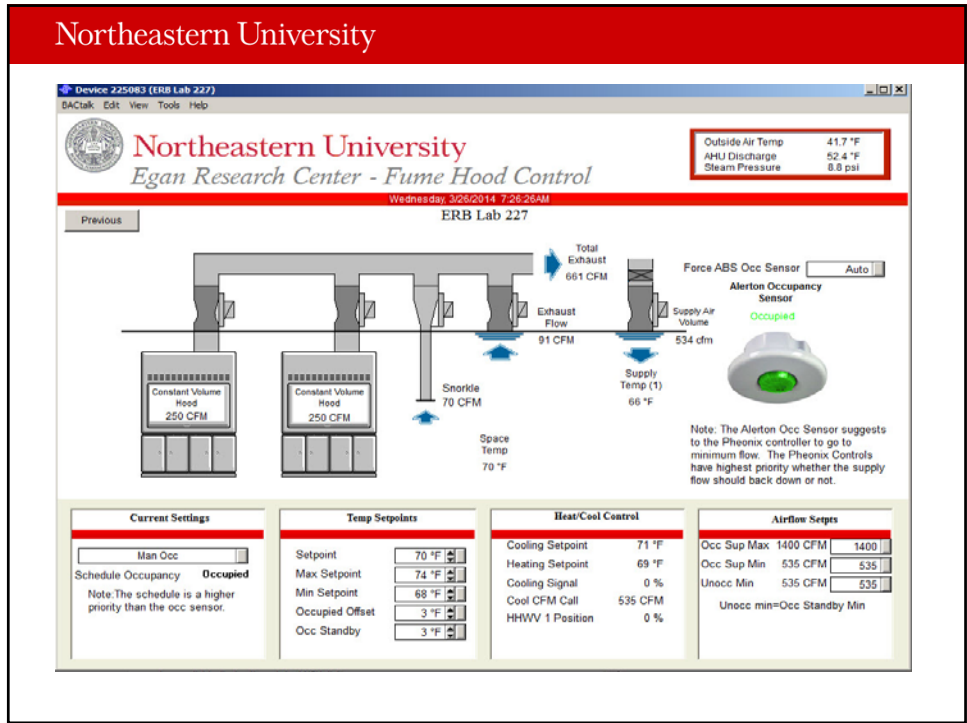
- Campus Building Energy Utilization Index (EUI)
- Existing Operating Conditions
- Develop Improved Sequence of Operations
- Meet with Stakeholders on New Sequences
- Repeat Step 3

Project Development / Analysis:

- Campus Building Energy Utilization Index (EUI)
- Existing Operating Conditions
- Develop New / Improved Sequence of Operations
- Meet with Stakeholders on New / Improved Sequences
- Repeat Step 3 (Several More Times)
- Present Final Plan to Senior Management

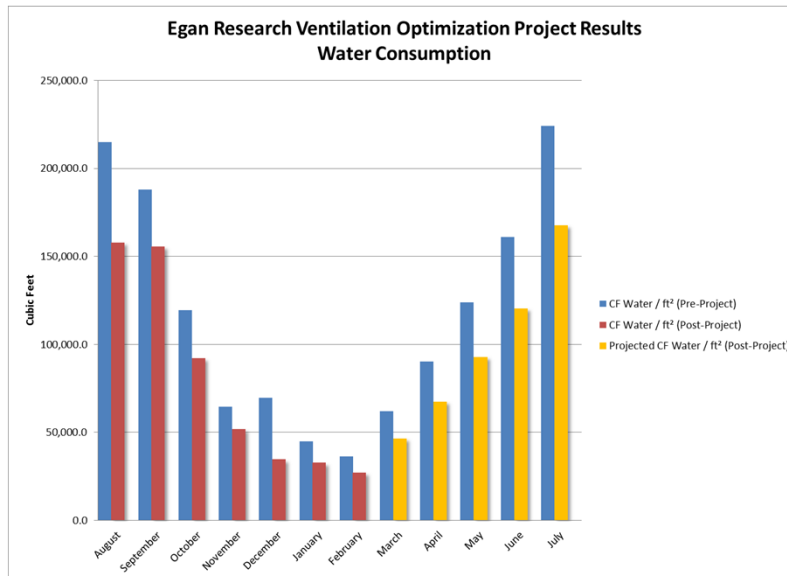
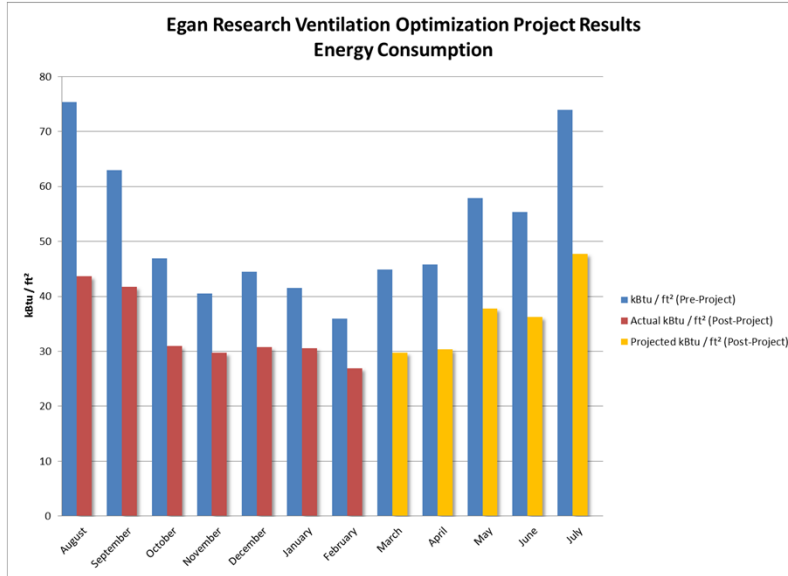
Project Components:

- New Terminal Device Controllers
- New EMS Communication backbone
- Occupancy Sensors
- Electronic Flow Sensors (Ebtron ELF)
- CO₂ Monitoring in Conference Rooms
- EMS Programming For New Control Points
- Total Air Balance to New Air Flow Targets



Projects Results

- 1,200,000 kWh Saved Annually
- 100 kW Monthly Electrical Demand Savings
- 205,000 Therms Saved Annually
- 424,131 Gallons of Water Saved Annually



Lessons Learned

Questions?

Joe Ranahan
Energy Manager
Northeastern University
j.ranahan@neu.edu