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# Water Leak Detection System

**Possible Academic Connections:** Civil Engineering, Business

**Recommended project length:** Semester

[**Experiential Learning**](https://www.ohio.edu/academic-excellence/experiential-learning/overview)**?** No

[**Community Engagement**](https://www.ohio.edu/university-college/campus-community-engagement)**?** No

**Remote learning possible?** Yes

**Connection to** [**OHIO Sustainability & Climate Action Plan**](https://www.ohio.edu/sites/default/files/sites/sustainability/files/2021%20OHIO%20Sustainability%20and%20Climate%20Action%20Plan.pdf)**:** Water,Buildings

**Brief description:** Determine which leak detection system is the most effective and will cost the least for the University.

**Project description:**

 Investigate various products that detect water leakage and will automatically shut valves to minimize losses; create written recommendations for purchase of water leak detection systems.

 The written recommendations must include a triple bottom line cost-benefit analysis of the water leak detection system purchase with an expected payback period. Cost must include at a minimum system purchase cost, operating and maintenance costs. Benefits must include at a minimum savings from reduced water leakage, from reduced carbon emissions and some financial measure of water users’ health, comfort or convenience.

**Resources available to students/faculty to complete project:**

* “Specifying Plumbing Leak Detection” PDF
* Case study: “Shutting Down Plumbing leaks in Commercial Mechanical Rooms” PDF
* Water Flow (GPM) based on pipe ID and pressure chart
* [Water loss due to leakage calculator](https://moruralwater.org/water-tools/)
* Staff time

*Resources available upon request*

**Project alignment to OHIO Sustainability & Climate Action Plan:**

* [Water](https://www.ohio.edu/sustainability/operations/water) (goal #3)
* [Buildings](https://www.ohio.edu/sustainability/operations/buildings) (goal #2)

**Please send final project deliverables to****sustainability@ohio.edu****for tracking and reporting purposes.**