

WATERMAN CHEMICAL STORAGE AND HANDLING FACILITY PROJECT CHARTER – JANUARY 2019

EXECUTIVE SUMMARY

The purpose of this project is to replace the existing Waterman Pesticide Facility, Building 178, with a new, state-of-the-art facility. The new facility design will serve as a model for best practices in agricultural and environmental practices, and will double as a tool for experiential learning and outreach. The CFAES 2019 Facility Master Plan will identify an appropriate, secure, back-of-house site location.

BACKGROUND

Waterman, an oasis in an urban landscape, is a showcase and a hub of experiential learning and innovative discovery in the areas of food, agricultural, and environmental sciences, where people build community and connect to trusted information.

- Today outdated facilities, equipment, and technology affect both public perception, and the ability to conduct cutting-edge discovery and outreach.
- The future of Waterman will include more public engagement in agricultural and environmental education, broadly defined. The general public will connect more easily with where their food comes from; young people will explore agricultural careers; volunteers will learn and provide service as Master Gardener volunteers; and adults will learn more about everything from food safety to nutrition to turfgrass to pollinators.
- CFAES is poised to invest nearly \$50 Million in three new facilities.
 - The \$5 Million Kunz-Brundige Franklin County Extension Building is under construction, will open in 2019, and will bring staff and programs from the Franklin County Office of Ohio State University Extension and their Extension/outreach programming to Waterman. The new building will feature large, multifunctional meeting spaces and a demonstration kitchen.
 - The \$35 Million Controlled Environment Food Production Research Complex, with a state-of-the art greenhouse, is targeted to begin construction in 2019 and will include expansion opportunities in phenotyping, vertical farming, and aquaponics.



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- A \$15 Million multispecies animal learning center will bring people and animals together for hands-on learning, public events, and Extension programming. Construction is targeted to begin in 2019.

SCOPE

A new state-of-the-art facility at an appropriately sited, secure, back-of-house location, away from visitors. The facility will accommodate operational needs, as well as teaching demonstrations for best practices in agricultural and environmental sciences. This project includes, but is not limited to, all design, construction, utilities, landscaping, furniture, equipment, technology, and testing and monitoring required to provide a complete and functioning system. General facility requirements are as follow:

Siting and Architectural Concepts:

- Location should be coordinated with other long-term, back-of-house operations at Waterman, as aligned with the 2019 CFAES Facility Master Plan.

General Construction:

- Ideal construction is a pre-manufactured, wide-span, open-bay facility placed 1' above grade to promote positive drainage.
- Flexible design is required to meet the needs of multiple functions, multiple users, and multiple pieces of equipment.
- The general appearance of the facility must emphasize safety.
- Washable metal or glass board walls throughout.
- Heavy farm equipment must be able to drive through the building to accommodate best industry practices.
- Size openings to accommodate future equipment models. Interior space to accommodate space to work on and around a fully open 30-foot boom sprayer for calibrating, maintenance, and teaching purposes.
- Careful placement of overhead door thresholds should accommodate positive drainage.
- Prefer open ceiling and walls insulated with spray foam to reduce condensation issues and maximize use of space.
- Provide space for intermediate pallet rack storage.
- Organic programs require outdoor wash bays.
- Bollards as required.
- Provide appropriate placement and storage of PPE.
- Native landscaping.

Chemical Storage and Mixing:

- Needs to accommodate long-term and short-term needs.
- Mixing activities primarily include direct injections with some minimal batch mixing for small plots.
- Benches and cabinets are required.
- Shared open space with washable walls for multi-occupant chemical storage.
- Subdivide with gating and/or high-density shelving systems. No walls except where specifically required by code.
- Accommodate FOD Landscaping needs.
- Creative design and placement of rinsate tanks should enable staff to effectively pump out and remove rinsate.

MEP Considerations:

- Include all utilizes required to open and operate a functioning facility.
- Include OSU Wireless.
- Radiant in-slab floors with supplemental heating to reduce the amount of time necessary to bring work surface and equipment back up to temperature due to frequent opening of large overhead doors.
- Provide ventilated mixing space for corrosive pesticides.
- Preferred method of lighting controls is occupancy-sensors and photocells due to ease of maintenance.
- City water is necessary for chemical mixing control.
- Backflow preventer with air breaks. (Managed and inspected by FOD.)
- Include large water filling pipe and orifice to establish sufficient volume and flow.
- Accommodate use of induction cones.
- Prefer under-slab bulk water storage to prevent damage, free up space, and eliminate need for bollards.
- Sanitary decontamination and disposal will be managed in coordination with OSU EHS.

EXCLUSIONS

- This project does not include occupied space (offices.)

DELIVERABLES

Communication:

- A Project Manager from CFAES Facilities and Capital Planning Department will be the primary contact for the college.
- The Executive Team includes:
 - Director of Facilities and Capital Planning
 - Director of Agricultural Operations
- This project must coordinate calendar and disruptions with multiple departments and activities.

Schematic Design Phase Deliverables:

- Rough design concepts for base scope and all alternates.
- Construction estimates for base scope and all alternates.

Construction Phase Deliverables:

- 100% Completion of Facilities
- Closeout Documents & Warranties (hard and electronic).

ANTICIPATED PROJECT MILESTONES

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|--------------------------------------|------------------|
| • Design Consultant Contract: | Winter 2018-2019 |
| • Complete Design and Bids Received: | Summer 2019 |
| • Construction: | 2019-2020 |

BUDGET

- The total project budget for this project is \$1,000,000.

APPENDICES

- CFAES Equipment Inventory
- CFAES Chemical Inventory
- FOD Landscape Chemical Inventory
- NRAES-79 On-Farm Agrichemical Handling Facilities (August 1995)
- Pesticide Storage: One Step Ahead, by Gary W. Bogdanski (March/April 1997)