Maximum Allowable Quantities (MAQs)

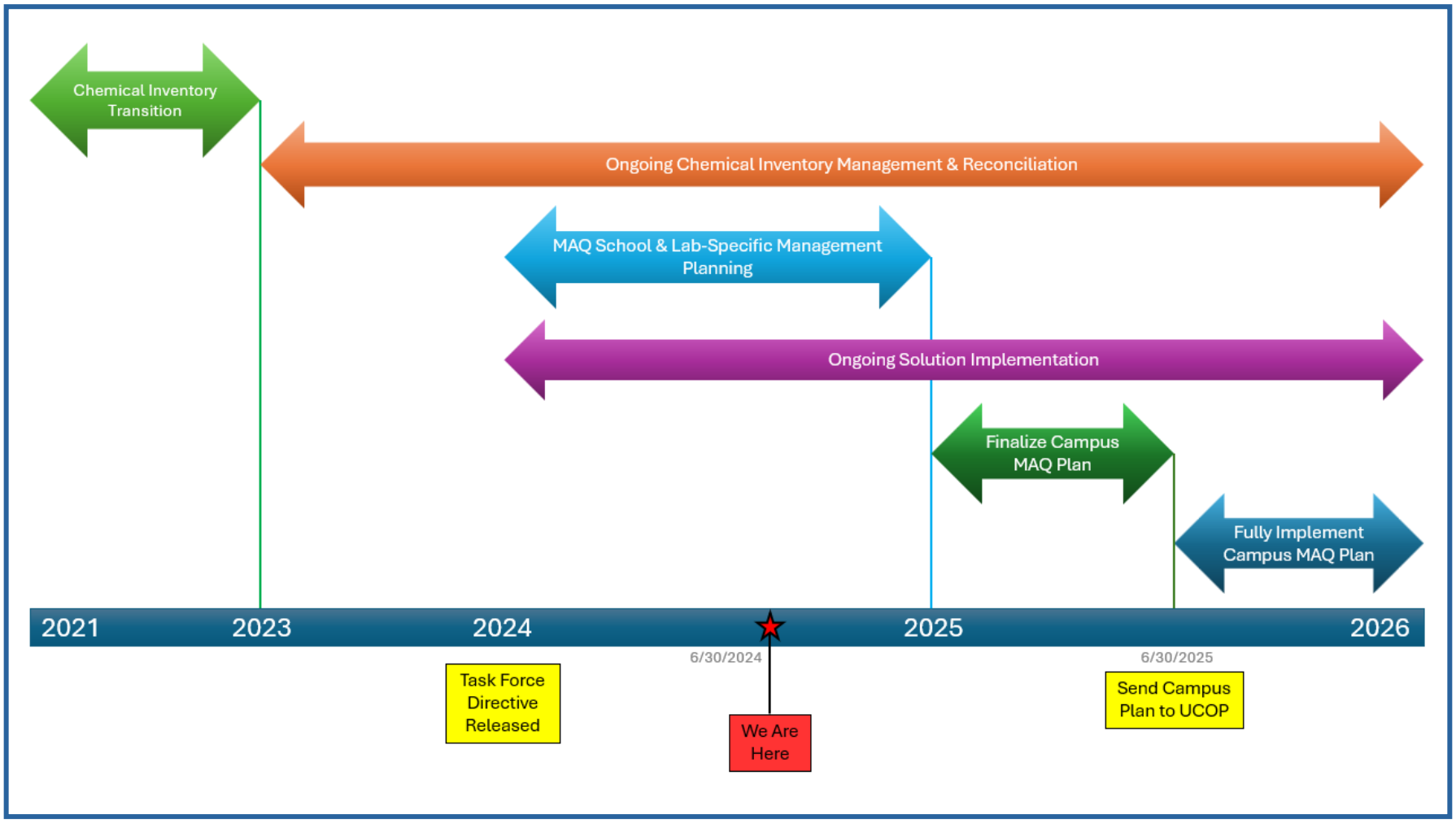
Objectives

- UCOP MAQ Initiative and Overview
- UCI MAQ Timeline
- UCI MAQ Executive Committee
- UCI's Progress & Accomplishments
- Campus Expectations
- School / PI / Lab Responsibilities
- Potential Options and Solutions
- MAQ Resources

MAQ Initiative and Overview

- UCOP driven effort to ensure compliance with fire code, Task Force formed 2019 (Task Force Report)
- Goal: Overall UCI MAQ Management Plan by end of FY 2024-25
- **MAQ Overview**
  - MAQs are categorized by material state (solid, liquid, gas) and hazard class (flammable, corrosive, etc.), and the material storage or use conditions.
  - Certain building features or storage conditions impact MAQs.
    - *In most cases* MAQs double in buildings equipped with a sprinkler system throughout entire building.
      - Even if your lab is sprinklered, your MAQ limits will not be affected unless the entire building is sprinklered.
    - *In most cases* MAQs double when stored in approved storage.
    - MAQs decrease on higher floors of a building.
      - Based on ease of access for firefighters

UCI MAQ Timeline



UCI's MAQ Executive Committee

Campus Responsible Official:

Pramod Khargonekar, Vice Chancellor for Research

UCI MAQ Executive Committee Members:

Pramod Khargonekar, Vice Chancellor for Research

Rick Coulon, Senior Associate Vice Chancellor, DFA

Matt Gudorf, Assistant Vice Chancellor, Facilities Management

John Sterritt, Executive Director, EHS

Sandra Conrrad, Assistant Director Research Safety, EHS

Sara Willman, Chemical Hygiene Officer, EHS

UCI's Progress & Accomplishments

- Communication of 6–12 month MAQ planning process with:
  - Schools
  - Executive Vice Chancellor
  - Office of Research
  - Lab Safety Committee
  - Campus Counsel
- Chemical Inventory migrated into and managed on UC Chemicals
  - 1st year inventory reconciliation completed
  - Ongoing reconciliation annually
- Designated Campus Fire Marshal has established building-specific control areas
- Generated MAQ overage and summary reports for 4 lab Schools (ongoing)

UCI's Progress & Accomplishments

- EHS has published Reference Guides on programs related to MAQs and hazard classes
- A project is underway to build H-occupancy chemical storage rooms in Reines Hall.
- Conducting site visits at other UCs to review and collaborate on respective MAQ plans
- Established UCI MAQ Executive Committee
- Drafting school-specific MAQ plans - in progress
    - Starting with significant overages (MAQs >200%)
    - EHS School Coordinators working with labs with significant overages

Office of Research Communication

Recent New UC Guidelines for the Management of Hazardous Chemicals

Dear Deans, Chairs, and Division Heads,

In December 2023, UC President Drake **issued new UC guidelines for the management of hazardous chemicals**. Over the coming months and next three years, the Office of Research and Environmental Health and Safety (EHS) will be working closely with campus departments and units to implement the directives outlined in the UC Chemical Storage Maximum Allowable Quantities (MAQ) Task Force Report.

This effort will require the engagement of all Principal Investigators, Lab/Shop/Building Facility Managers and Facilities Services leads whose labs, instructional labs, and facilities use hazardous chemicals. We write to solicit your support to facilitate engagement from your faculty and staff leadership to work with EHS to ensure timely implementation. Deans and Chairs are asked to pass this message on to your Instructional Labs if they use chemicals.

In the next few months, EHS will contact Department Chairs, Managers, Facilities Directors, and work unit Safety Representatives to initiate the project in each department and will welcome the help of Department Chairs to encourage lab members' attendance at informational town halls and scheduling of lab visits.

A brief overview of the new requirements is provided on the EHS website: Maximum Allowable Quantities (MAQ) of Hazardous Materials // Environmental Health & Safety // UCI. If you have questions or would like more information, please contact Sandra Conrrad, EHS Assistant Director of Research Safety at sconrrad@uci.edu.

Campus Expectations

- Campus will submit UCI's overall plan to UCOP by June 30, 2025.
- Each School with labs must develop a school-specific plan to contribute to UCI's overall MAQ plan.
- Need involvement from key School and campus stakeholders:
  - PIs with MAQ overages
  - Department Chairs
  - School Leadership
  - Lab Safety Committee
  - Chemical Safety Committee/MAQ Steering Committee (in development)
- Reduce quantities of hazardous materials on campus or identify approved storage locations/options.

School / PI / Lab Responsibilities

- Ensure the lab's chemical inventory is up to date. Add and remove chemical containers in real time and reconcile at least once per year.
- Dispose of old, expired, and non-viable chemicals whenever possible.
- Pursue less hazardous alternatives wherever possible.
- Understand the specific MAQ limits for your control area by hazard class.
- Analyze current and future research needs and coordinate with UCI EHS, Fire and Life Safety, and Facilities Management to ensure the lab is equipped to store necessary hazardous materials.

Potential Options and Solutions: Chemical Inventory

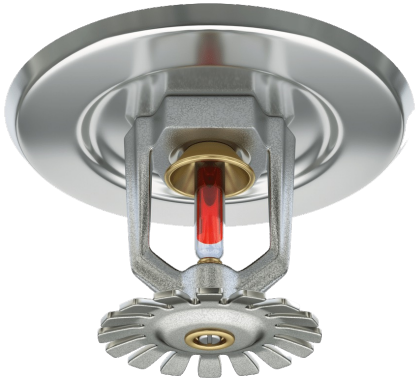
- Update and reconcile chemical inventory regularly for accuracy
- Reduce quantities
- Order chemicals strategically
- For pyrophorics, use a day box (Example) for transportation to/from lab and PS Stores

RISK & SAFETY SOLUTIONS

EL531 Type3

Potential Options and Solutions: Construction/Renovation & Lab Moves

- MAQs must be taken into consideration for any new buildings, renovations, research, or onboarding of new faculty.
- Implement Approved Storage
- Consider moving location of lab
- Construct new buildings
- Renovate/retrofit existing buildings



Examples of Approved Storage

- Flammable (UL 1275) and Hazardous Materials Cabinets
- Safety Cans (UL 30)

- The interior of the cabinets shall be treated, coated or constructed of materials that are nonreactive with the hazardous materials stored.
- Doors shall be well fitted, self-closing and equipped with a self-latching device.

Potential Options and Solutions: Administrative

- MAQ Steering Committee
- Education and communication
  - No research groups should move spaces or onboard new faculty without planning for MAQ limits
- Control Area review and verification

MAQ Resources

- UCOP Task Force Report
- UCI EHS MAQ Website
- UCI EHS Reference Guides
- Letter from President Drake
- Regulations
  - California Fire Code
  - Cal OSHA Storage of Hazardous Substances
  - Cal OSHA Lab Standard

Questions?

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