



# Code Green: Environmental Issues Facing the Health Care Industry

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# Construction Issues

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## Construction Issues

- Air Permitting
- Stormwater Permitting
- Wetlands
- Brownfields
- Land Use Planning and CEQA



## Air Permitting

- Need permits in hand before “commence construction”
- Commencement of construction may be interpreted broadly to include site preparation, grading, utilities
- Violators may face substantial penalties
- Legal counsel can assist with negotiating project-specific interpretation of “commence construction”



## Air Permitting (cont'd)

- Boilers and Emergency Generators
  - Usually minor source permit required
  - May qualify for expedited permitting option, e.g., registration permit
  - Check state-specific exemptions, e.g., boiler less than 10 MMBtu/hr, or generator less than 3000 kw
  - May also be subject to NSPS



## Air Permitting (cont'd)

- Ethylene Oxide Sterilizers
  - Stationary source permitting requirements
  - New U.S. EPA “HAP” standard
    - Notification of Compliance Status – due 180 days after startup (for existing sources, due June 27, 2009)
    - Management practice standard – sterilize full loads unless medically necessary
    - Recordkeeping – unless equipped with air pollution control device



## Air Permitting (cont'd)

- Medical Waste Incinerators
  - Stationary source permitting
  
  - New Source Performance Standard
    - Supplemental proposed rule issued Dec. 1
    - Strengthens existing (1997) NSPS, reducing emissions by 468,000 lbs./yr
    - Public comment period ends Feb. 17



## Air Permitting (cont'd)

- Parking Lots
  - Potential indirect source permitting
  
  - Permit required before “commence construction” if parking capacity above threshold
  
  - What counts as “parking capacity?”
  
  - Phased construction projects
  
  - May impose restrictions on construction such as use of low sulfur diesel, idling restrictions





## Stormwater Permitting

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- Phase I
- Phase II
- Applicability to health care facilities
- Municipal Separate Storm Sewer Systems
- Local Ordinances
- Enforcement



## Wetlands Regulation

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- Clean Water Act Provisions
  - Section 404
  - Section 401
- Review by the Army Corps of Engineers
- Individual Permits
- Section 404 Permits
- Enforcement
- Application to Health Care Facilities





## Brownfields

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- What is a Brownfield?
- Superfund a subset of Brownfields
- Issues surrounding Superfund cleanups
- Application to Health Care facilities



## Land Use Planning in California

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- Office of Statewide Hospital Planning and Development (OSHDP) and Facilities Development Division (FDD) oversee:
  - Building standards
  - Review of plans
  - Observation of construction progress
- FDD jurisdiction
- Approval process
- Backlog





## California Environmental Quality Act

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- What is CEQA?
- Application
- Substantive Mandate
- All approvals or discretionary projects
- Full analysis includes an Environmental Impact Report, “findings,” or a statement of overriding conditions.
- Mitigation measures required

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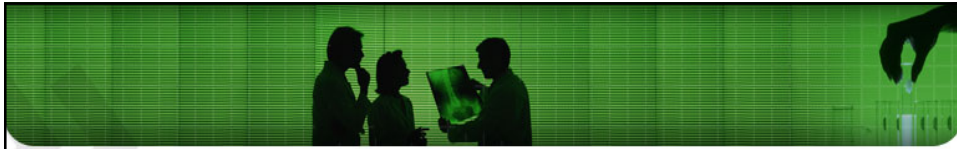
## CEQA Issues Relating to Health Care Facilities

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- Sustainable development and green building practices
- Greenhouse gas impacts and water supply issues
- CEQA challenges as a weapon
- Leverage in labor negotiations

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# Managing Wastes

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# Managing Wastes

- RCRA Hazardous Waste
- Medical/Infectious Waste
- Wastewater Permitting



## RCRA Hazardous Waste

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- Detailed regulations govern generation, transportation, storage, and disposal of “hazardous waste”
- E.g., labeling, accumulation time, manifesting, permitted disposal facilities



## RCRA Hazardous Waste (cont'd)

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- Hazardous waste may be listed or characteristic
- About 5% of all pharmaceuticals on the market are listed (“P” or “U”) hazardous wastes when discarded, e.g., nitroglycerin, warfarin, some chemotherapy agents
- Other listed wastes include solvents commonly used in labs, pharmacies, and morgues



## RCRA Hazardous Waste (cont'd)

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- Characteristic wastes often generated in health care facilities include:
  - Pharmaceutical compounding chemicals
  - Batteries used in electronic thermometers
  - Mercury-containing waste
  - Pesticides
  - Electronic waste
  - Certain maintenance and utility wastes

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## RCRA Hazardous Waste (cont'd)

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- Exclusion for wastes that pass through sanitary sewer to a POTW for treatment
  - Increasing state and federal concern with pharmaceuticals entering drinking water, surface water, and groundwater
- Reduced regulatory requirements for “universal wastes”
  - Mercury-containing wastes, batteries, bulbs, pesticides
  - Proposal to add pharmaceuticals – Dec. 2

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## RCRA Hazardous Waste (cont'd)

- E-Waste is increasingly being regulated at the state level
  - Not all e-waste will meet the toxicity characteristic
  - May be subject to state landfill ban
  - May provide for collection and disposal facilities or require manufacturer to take back obsolete equipment



## Medical/Infectious Waste

- Regulated at the state level
- Generally includes cultures and stocks of infectious agents, human pathological waste, human blood and blood products, animal waste, isolation wastes, and sharps
- Collection, transportation, disposal requirements





# Wastewater Permitting

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- Wastewater may include process water from x-ray development, pharmaceuticals, wastes from mechanical shop floor drains, other sources
  - When working with silver reclamation vendors, negotiate terms of services agreement to provide protection in the event of discharge exceedences
- Need a permit for direct discharge to surface water
- If discharging to sanitary sewer, permitting or notification may be required pursuant to local sewer utility ordinance
- U.S. EPA is studying whether to create new pretreatment standards for the health services industry



# Managing Hazardous Materials

Thomas K. Maurer

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- Purchasing
- Best Practices
- Storage
- Use
- Disposal
- Contracting



- Custodial Services
- Vehicle maintenance
- Landscaping
- Generators/Power supply
- Patient Care Supplies
- Food Service



## Pesticides

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- Registration – FIFRA
- Label directions
- Storage
- Contracting

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## Refrigerants

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- HCFCs
- Phase out 2010/2020
- Alternatives
- Service of Existing units

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## Asbestos

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- Survey
- O&M Plan
- Construction/demolition/renovation
- Certified Contractors
- Notice

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## Lead Paint

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- Assessment
- O&M
- Removal
- Waste Management

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## Hazardous Chemicals

- Worker Right to Know – MSDS
- EPCRA – thresholds & reporting
- OSHA – exposure levels & notices
- Prop65 – label and warn



## Oil/SPCC Plans

- Large storage of petroleum products and certain other substances
- Secondary Containment
- Spill Response



## Storage Tanks

- Registration
- Construction
- Inspection
- Reporting
- USTs/ASTs



## Mold

- Lack of Specific Standards
- OSHA General Duty Clause
- OSHA Enforcement Policy
- Civil Liability
- Careful consultant/contractor selection



## Other Wastes

- E-Waste
- Fluorescent lights
- Batteries
- Waste oil
- Thermostats



## Hot Topics

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## EPA Moving Toward Clean Water Act (CWA) Controls On Health Industry “Unused Pharmaceutical” Disposal Practices <sup>39</sup>

### CWA Basics:

- Controls “Direct” Discharges to Waterways
  - Usually through pipes into rivers, lakes, oceans
- Controls “Indirect” Discharges to Publicly Owned Treatment Works (POTWs), Which In Turn are “Direct” Dischargers to Waterways
  - Usually through drains, sinks, toilets into municipal sewer system
- Health Services Industry being actively considered for new CWA “indirect” discharger – known as “pretreatment” – regulations



## Extensive Discussion of Current EPA Efforts/Plans in September 15, 2008 Federal Register – 73 FR 53234-37 <sup>40</sup>

### EPA focusing on:

- Offices and Clinics of Doctors and Mental Health Practitioners
- Nursing and Personal Care Facilities (long-term care facilities)
- Hospitals, Hospices and Clinics
- Medical Laboratories and Diagnostic Centers
- Veterinary Care Services
- EPA has never before regulated “indirect” dischargers in this industry under CWA – only “direct”





### EPA finds standard practice at many health care facilities:

- Dispose of unused pharmaceuticals by flushing them down the toilet or drain
- EPA finds some federal regulations may inadvertently encourage disposal of unused pharmaceuticals via the sewer. E.g., under Controlled Substances Act (CSA), one acceptable method of destruction: witnessed disposal of controlled substances in a drain or toilet
- EPA finds some federal and state hazardous waste regulations effective in preventing some types of unused pharmaceuticals from being flushed into sewers, but coverage incomplete and spotty



### EPA studying options for requiring “Best Management Practices” (BMPs) under CWA authorities to eliminate current wide-spread flushing practices

Cites examples of model BMPs:

- Waste minimization and reverse distribution systems used by hospitals in California, Minnesota, and Washington
- Waste minimization techniques include maintaining inventories of high-use pharmaceuticals and identifying those close to expiring
- Short-dated pharmaceuticals redistributed to other areas of hospitals where needed





- To aid its decision-making, EPA intends to submit Information Collection Request (ICR) to the Office of Management and Budget (OMB)
- Hospitals, clinics, etc. can expect to be hit with this in the next few months
- EPA will use ICR to collect technical and economic information on unused pharmaceutical management and identify technologies and BMPs that reduce or eliminate the discharge of unused pharmaceuticals to POTWs
- EPA has published a separate Federal Register notice for this ICR and solicits comment on the potential scope of this ICR (see August 12, 2008; 73 FR 46903)



## U.S. EPA Proposal to Add Hazardous Waste Pharmaceuticals to the List of Universal Wastes

- Issued Dec. 2, 2008, comments due Feb. 2, 2009
- Anticipated to affect over 600,000 facilities, including over 7,000 hospitals and 300,000 physicians and dental offices
- Would reduce RCRA burden – e.g., can accumulate for one year, manifests not required, basic labeling and training requirements
- Authorized states would have to adopt rule







## Universal Waste Proposal

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- Waste is produced by large and diverse community of generators, often in small volumes
- Some hospitals may generate more than 10,000 tons of RCRA hazardous pharmaceutical waste annually, while a single pharmacy may generate only 5 pounds per year
- Concern with potential for mismanagement – may be generated in multiple locations (pharmacy, operating rooms, nursing stations, etc) by many individuals; not all pharmaceuticals are RCRA hazardous
- Proposal will encourage collection and proper disposal of both RCRA and non-RCRA pharmaceutical waste, and facilitate collection and take-back programs for both the health care industry and households



## Universal Waste Proposal

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- Definition of “pharmaceutical” meant to include pills, tablets, medicinal gums or lozenges, medicinal liquids, ointments, and lotions, IV solutions, chemotherapy drugs, vaccines, allergenics, medicinal shampoos, antiseptics, and medicinal dermal patches
- Definition not meant to include sharps or other infectious or biohazardous waste, dental amalgams, medical devices not used for delivery or dispensing purposes, equipment, contaminated personal protective equipment, or contaminated cleaning materials
- “Pharmaceutical universal waste” is any pharmaceutical that is a RCRA hazardous waste, and containers which have held hazardous pharmaceutical wastes



## Tougher CAA Standards Proposed for Hospital/Medical/Infectious Waste Incinerators

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- CAA Standards for hospital/medical/infectious waste incinerators adopted Sept. 15, 1997, required compliance by Sept. 2002
- New Source Performance Standards under CAA 111 for new incinerators; “MACT”-like standards under CAA 129 for existing incinerators
- Challenged by Sierra Club and NRDC
- Mar. 2, 1999 – D.C. Circuit remanded rule to EPA for explanation of reasoning in determining “floors” (1997 standards remain in effect)
- Feb. 6, 2007 – EPA issues proposed response to court’s remand
- Dec. 1, 2008 – following Brick MACT case, EPA reassess Feb. 2007 response and issues new proposal

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## Tougher CAA Standards Proposed for Hospital Incinerators

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- Applies to any device used to burn hospital waste or medical/infectious waste
- Establishes emissions limits for nine pollutants as well as opacity requirements (particulate matter, carbon monoxide, dioxins/furans, hydrogen chloride, sulfur dioxide, nitrogen oxides, lead, cadmium, mercury)
- Anticipated to reduce pollutant emissions by 468,000 pounds annually

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## California Developments

- Packaging, storage, transportation, treatment and disposal of medical waste regulated by the California Department of Health Service under the California Medical Waste Management Act
- The Act divides pharmaceutical wastes into three categories:
  - Solid wastes
  - RCRA hazardous wastes
  - California hazardous wastes
- DHS has adopted a statewide management program to permit and inspect offsite medical waste treatment facilities and transfer stations, oversees medical waste transporters, enforces management programs in local jurisdictions that have not implemented a local program, and provides support and oversight to locally enforcing counties and cities



## California-Only Medical Waste

### Medical waste in California if:

- Generated or produced by:
  - Diagnosis, treatment, or immunization of human beings or animals
  - Research activities
  - Production or testing of biologicals
  - Properly contained home-generated sharps waste
  - Removal of a regulated waste from a trauma scene
- The waste is either biohazardous waste or sharps waste
  - Includes laboratory waste, surgery specimens, animal parts or carcasses suspected of being contaminated with infectious agents, blood or blood products
  - Drug containers are also considered biohazardous wastes unless they are “empty”
  - Includes IV drip bags and drug dispensing cups





## Disposal Options in California

- Biohazardous waste must be treated by incineration, steam sterilization or discharged to the POTW (if permitted)
  - Sanitary sewer a limited option
  - Must also comply with all POTW requirements
  - New EPA universal waste proposal, possible preemption of California regulations



## Proposition 65

- Identification of chemicals, control of their use, and warning of their presence
  - Warning requirement
  - “Clear and reasonable”
    - Labeling a consumer product
    - Placing warnings in the user’s manual
    - Posting signs at the workplace
    - Publishing notices in a newspaper
  - Exemption from Prop 65

## Proposition 65 in the Health Care Industry

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- Phthalates
  - No federal preemption
- Prop 65 liability up the supply chain for goods and service providers
- Notification must be provided to employees, patients, and invitees
- Prop 65 enforceable by citizen suit
- Prop 65 another area of law susceptible to use by unions as a labor negotiation tool

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## Sustainability and Climate Change in the Health Care World

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- Green building and management
- Sustainable workplace solutions

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## Green Building Planning and Management Green Design

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- The U.S. Green Building Council, <http://www.usgbc.org>, LEED (Leadership in Energy and Environmental Design) Standard is becoming widespread
- Moving from smart practice to incentives and mandates for LEED or LEED equivalents

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## EnergySmart Hospitals

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- U.S. DOE's "Hospital Energy Alliance"
  - <http://www1.eere.energy.gov/buildings/hospital>
- New initiative – "EnergySmart Hospitals" launched July 2008
  - <http://www1.eere.energy.gov/buildings/energysmarthospitals>

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## EnergySmart Hospitals Goals

- Promote 20% improved efficiency in existing buildings and 30% in new construction over current standards
- Increase efficient and renewable energy applications in hospitals
- Reduce energy use and operating costs
- Create healthier healing and work environments
- Maximize successful hospital upgrades and design strategies
- Ensure reliable backup power during disasters
- Improve environmental performance

Remember: What government often recommends as voluntary often becomes mandatory



- 
- EPA's "greening" and pollution prevention recommendations specific to hospitals/health care facilities:  
<http://www.epa.gov/compliance/resources/publications/assistance/sectors/notebooks/health.pdf> (starting at page 59)

Remember: What government often recommends as voluntary often becomes mandatory







## Sustainable Workplace Solutions and Green Communications

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- Internal greening consists of energy, water and waste reduction
- Hard practices — examples
  - Using glass, compostable or recyclable cups in place of disposable plastics
  - Purchasing duplex printers
  - Purchasing office furniture made from sustainable or recycled sources
- Soft practices — examples
  - Encouraging two sided printing
  - Encouraging alternative commute options
  - Promoting locally grown menu choices
  - Discouraging bottled water

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## Questions & Answers

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