

Case Scenario

Chemical Storage Enclosures



Chris Donaldson (based on inspection by Elias Kauders)
Environmental Inspector
Watershed Enforcement
June 30, 2021



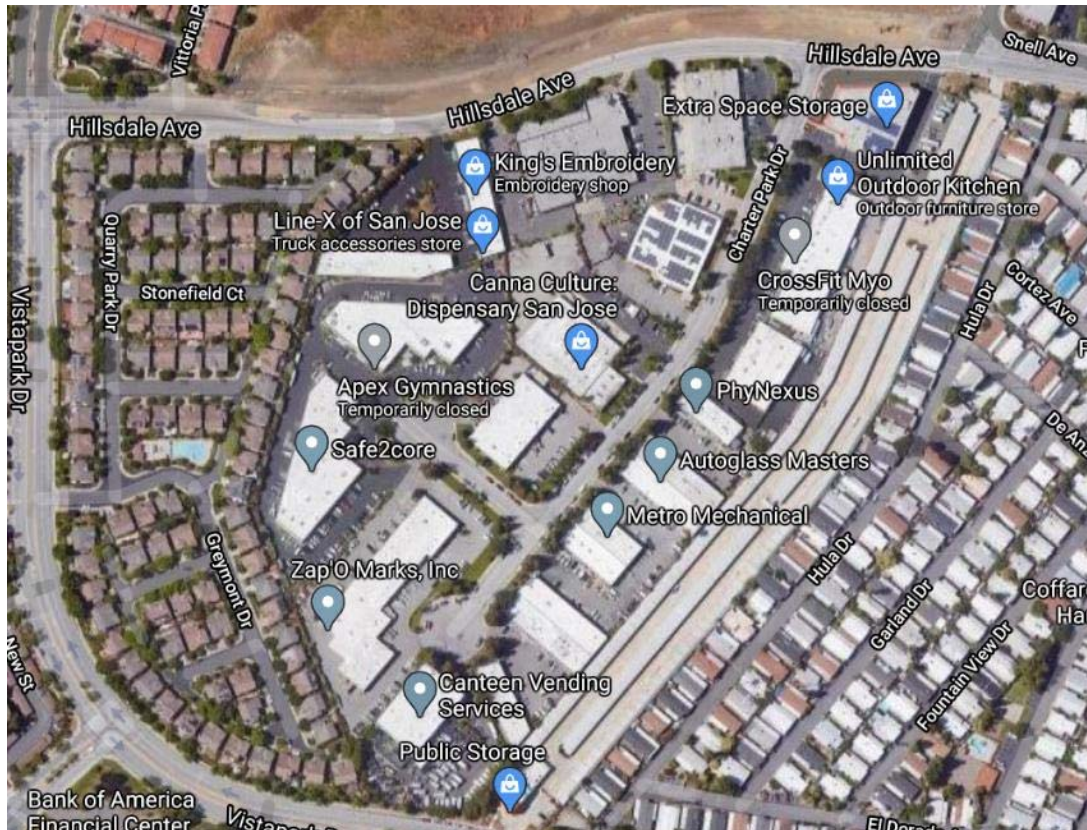
Environmental Services



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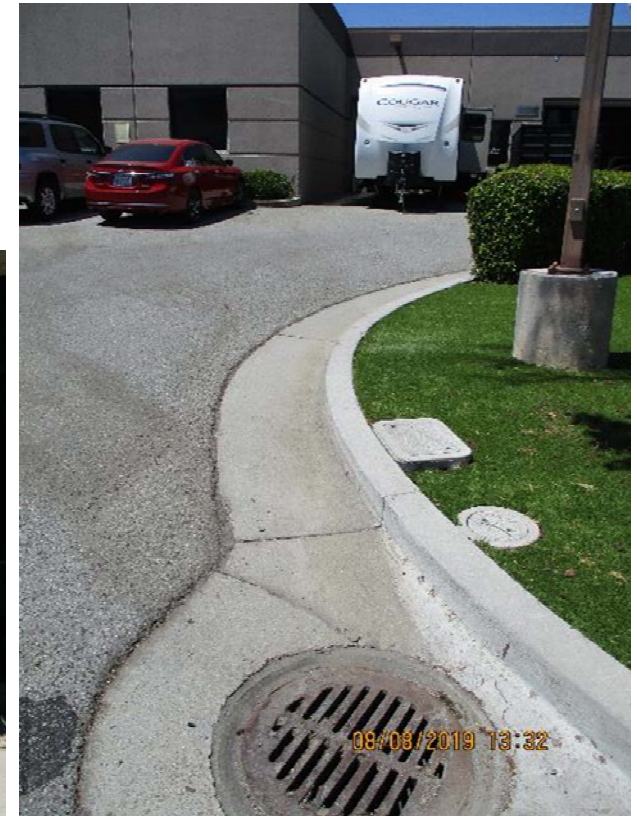
Back in July 2019...

Conducting regular, unscheduled inspections of several businesses in a large industrial park



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What's This?



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■ Introducing: No Problem Pools

- Created & inspected a new facility
- Initial inspection included a small office and single roll-up door, with an RV trailer parked in front
- RP claimed minimal material storage at the office, as most work is done at client sites; contractors sometimes leave small piles before or after specific jobs

Initial Inspection – some vehicle AOCs



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Initial RAs and Recommendations

Violation / Remedial Action	Due
7/19/19 Storage and handling of raw materials, products	
<ul style="list-style-type: none"> • Cover <ul style="list-style-type: none"> - Store chemicals under cover (such as indoors or under a tarp or sheltered enclosure) • Store off ground <ul style="list-style-type: none"> - Store chemicals off the ground and out of the path of rainwater or other runoff (such as indoors or raised on pallets) 	7/26/19
7/19/19 Equipment and vehicle storage	
<ul style="list-style-type: none"> • Effect method to protect storm drain <ul style="list-style-type: none"> - Effect method to prevent chemicals, dust/debris, and oil from migrating into the storm drain from the beds or undercarriages of vehicles parked on site. Use dry clean methods to clean existing oil stains/spills and chemical spills. 	7/26/19

Recommendations

- Use dry-clean methods to clean existing oil/liquid stains and chemicals spills/leaks in the parking area, including under the trailer. Dry methods can include, but are not limited to: sweeping, scraping, vacuuming, using absorbent pads/towels, and dry absorbents (kitty litter). Have a spill kit available for outdoor cleanup of any future spills/leaks
- Store pool cleaning and remodeling chemicals away from wind and/or rain that could cause migration into the storm drain. Solutions may include storing these materials indoors or outside on pallets and under tarps or covered enclosures
- Coordinate with employees and independent contractors to prevent dust, debris, oil, or chemicals from being washed or blown from commercial vehicles and migrating into the storm drains
- Keep dumpster lids closed or covered at all times when not in use

■ A few days later...

■ While inspecting a different facility in the same area, I came across this:



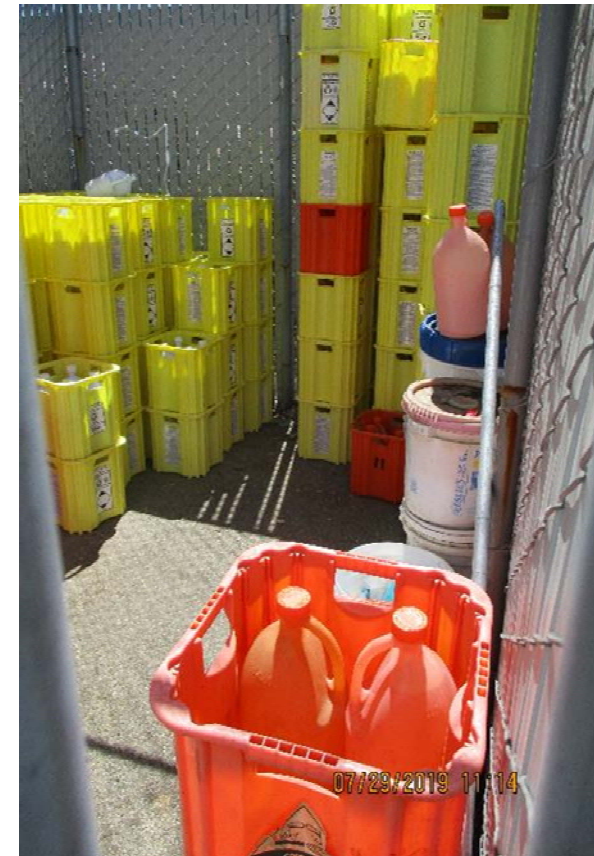
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08/01/2019 11:32

QUESTION:

Based on these pictures, what stormwater concerns do you see?



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What's in the bottles?

- Orange bins: Muriatic acid bottles
- Yellow bins: Sodium hypochlorite bottles
- Buckets: Concentrated chlorine tablets (probably calcium hypochlorite)
- Bags: Pool salts (probably sodium chloride); pool conditioner (probably cyanic acid); and diatomaceous earth



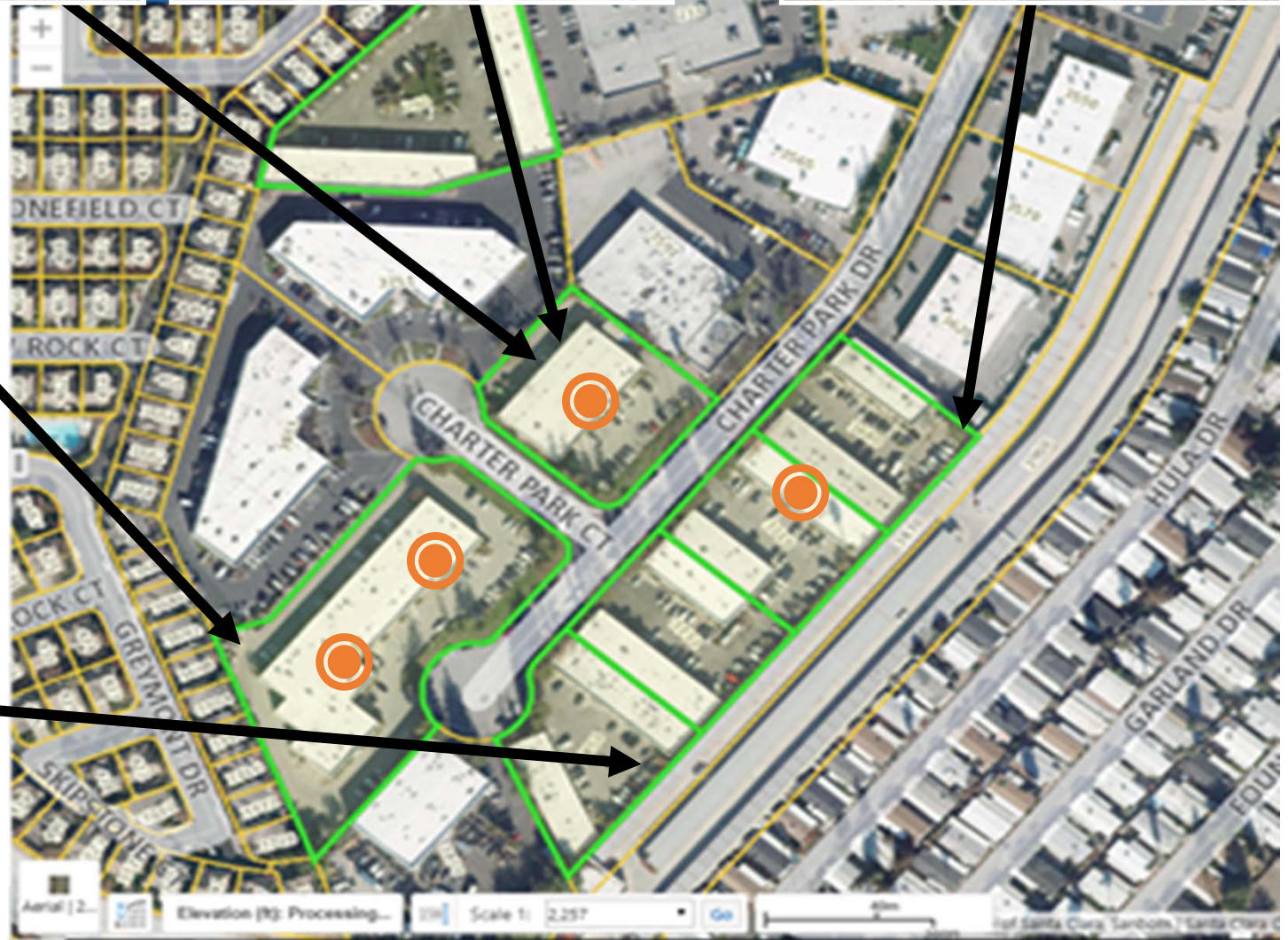
What's the big deal?

- Pool chemicals are designed to physically and/or chemically alter water quality and kill micro- and macro-organisms living in water
- Warning labels of “oxidizer” and “corrosive”
- Enclosure is uncovered
- Many chemicals not raised or in secondary containment
- Some visibly spilling onto the ground. Not good!

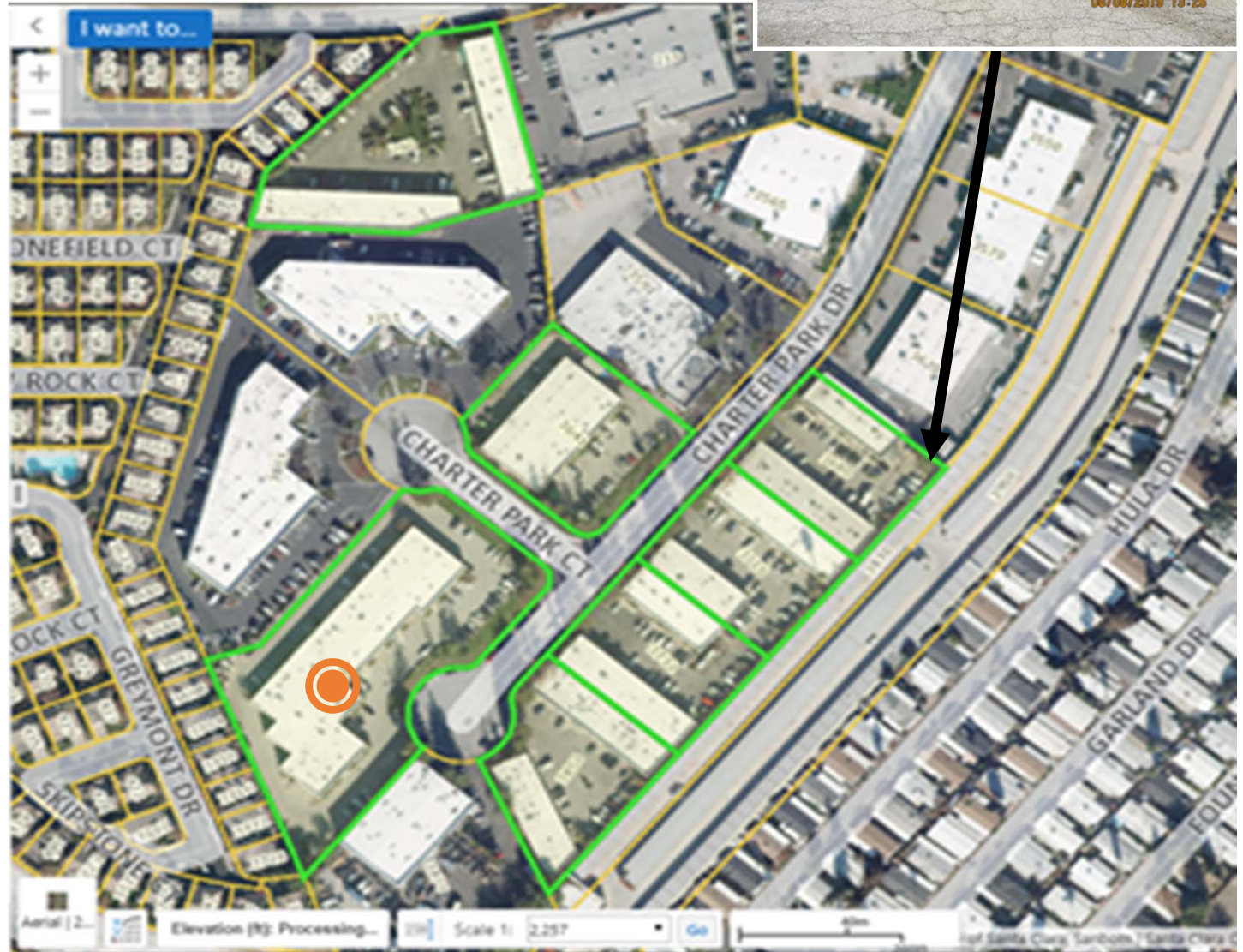
Who's responsible?

- Clear violations, but enclosure was unlabeled and no pool companies in the nearest buildings
- No Problem Pools was several buildings away & had insisted they have no outdoor material storage

What would you do?

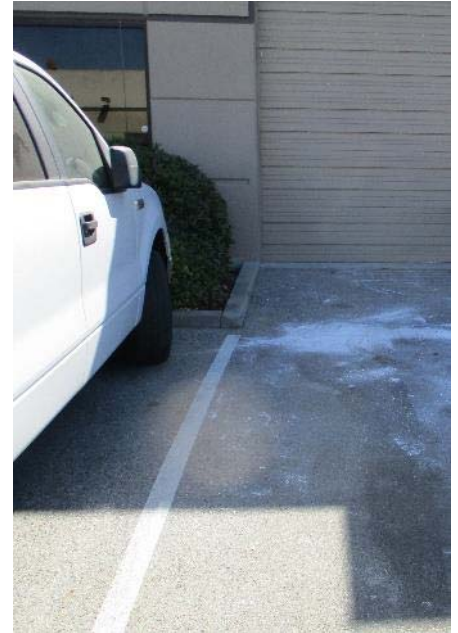


No Problem Pools



Back to No Problem Pools

- RPs still denied having an outdoor enclosure
- Conversations with contractors & PMs tied initial enclosure to No Problem Pools
- Now ‘Cover’ and ‘Store off ground’ RAs applied to office chemical pile and to this enclosure
- But... ‘Cover’ granted numerous extensions while waiting for a fire inspector to verify whether or not the enclosures could be safely covered



Storage & spills near
the office...

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...and in and around their chemical enclosure

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Fire Safety

- 8/27, Fire Inspector issued a Correction Notice to properly label the enclosure and properly separate reactive chemicals
- RPs initially denied receiving the Fire Inspector CN
- No mention of covering or not, so that RA was enforced beginning with 9/3 inspection, resolved on 9/16





Still no 2nd
containment



Finally!

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Key Takeaways

- Outdoor chemical enclosures have high potential for pollution
- Enclosures may not be in obvious locations; RPs may not be forthcoming about their outdoor storage locations & practices. Be creative and utilize additional enforcement, detection methods (PM/PO; fire inspectors; contractors; neighboring businesses)
- All regular considerations apply to these enclosures – chemicals must be off the ground and covered, and hazardous materials stored within 2nd containment
- Utilize additional Responsible Parties when necessary to achieve compliance.

Questions?



Image from <https://helpfulhome.co.uk/using-bleach-vinegar-cleaning/>

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