Geosyntec consultants

GIMME SHELTER!
STORMWATER PERMIT BENCHMARKS VS. NO EXPOSURE

Thursday, July 31, 2025

Introductions

- With Geosyntec Consultants since March 2025
- Worked with the Clean Water Act Compliance Group
- Located in St. Louis, MO

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Project Scientist

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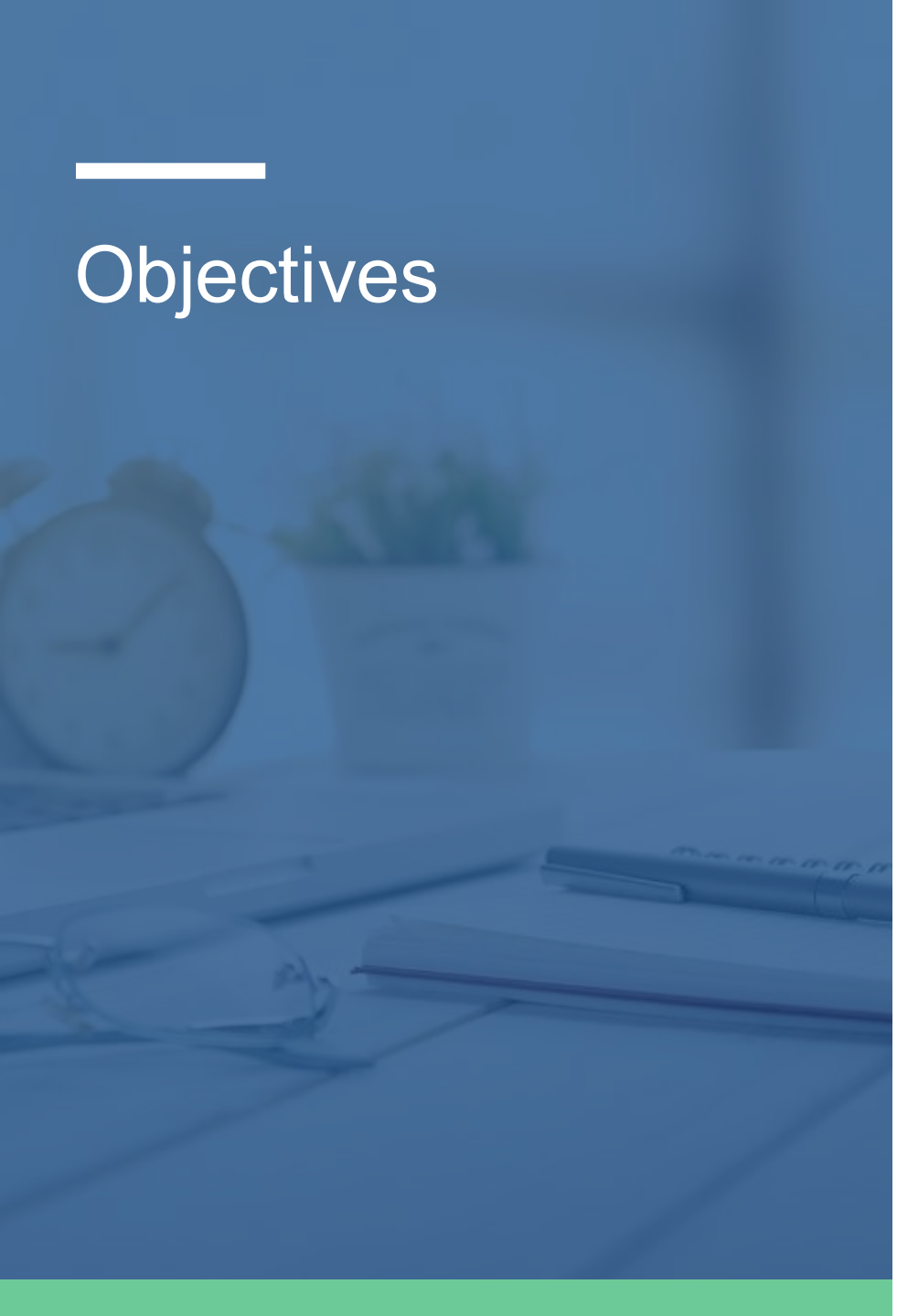
Senior Scientist

- With Geosyntec Consultants since 2021
- Works with the Field Services Group
- Located in St. Louis, MO

Objectives



Background and Definitions

Pros and Cons

Examples and Decision Making

By the Numbers

Wrap-up

No Exposure Certification

Background

1990

- Federal stormwater program identified 11 categories of industrial activities that must obtain NPDES Permit.
- Category (xi), “light industry” facilities were exempt from stormwater permitting.

1992

- Ninth Circuit court remanded EPA for further rulemaking.
  - No evidence or explanation, open to the interruption of the facility operator
- Ruling: Required a revised no exposure exemption.
- All categories except category X (construction activities) could claim the no exposure exemption as long as industrial activities and material are under shelter.

Storm-resistant Shelter: Completely roofed and walled structures or structures with only a top cover but no side coverings, provided material under the structure is not subject to any run–on/runoff of stormwater.

USEPA, June 2000, “Guidance Manual for Conditional Exclusion from Storm Water Permitting Based on “No Exposure” of Industrial Activities to Stormwaters”

No Exposure Certification

Current

- Under 40 CFR 122.269(g) if a condition for no exposure exists then permits are not required for stormwater discharges.
- Facilities must submit a certification to the permitting authority.
  - MDNR
- Facilities must maintain their condition of no exposure or will be required to obtain coverage under a stormwater permit.

USEPA, June 2000, “Guidance Manual for Conditional Exclusion from Storm Water Permitting Based on “No Exposure” of Industrial Activities to Stormwaters”

No Exposure Certification

Cons

- Not for individual outfalls, facility wide only.
- Permitting authority can determine reasonable potential to violate and can deny.
- Any change that results in exposure of industrial activities and materials can cause the exclusion to cease to apply.
- Past sources of stormwater contamination that remain onsite cause of a condition of exposure.
- Contaminants can come from other potential sources.

Industrial materials and activities: include, but are not limited to, material handling equipment or activities; industrial machinery; raw materials, intermediate products, by-products, and final products; or waste products.

USEPA, June 2000, "Guidance Manual for Conditional Exclusion from Storm Water Permitting Based on "No Exposure" of Industrial Activities to Stormwaters"

No Exposure Certification

Pros

- All Phase I industrial categories (except construction) are eligible to apply.
- No exposure exclusion has been adopted in Missouri via permitting authority, MDNR.
- Sampling, reporting, and inspections are not required.
- Materials and activities may be stored under temporary covers until permanent enclosure can be created.
- Some materials do not need to be stored under storm-resistant shelters.
  - Trucks, barrels, tanks, etc. in good condition

USEPA, June 2000, “Guidance Manual for Conditional Exclusion from Storm Water Permitting Based on “No Exposure” of Industrial Activities to Stormwaters”

NPDES Permit Stormwater Benchmarks

- Numeric benchmark values are based on:
  - Technology in place
  - State or federal standards
  - Criteria Maximum Concentration or acute standard
- Best Management Practices Plan to improve stormwater management and reduce site benchmark exceedances.
- Stormwater monitoring, numeric benchmark compliance, and visual inspections used to determine BMP effectiveness.
  - Electronic discharge monitoring reports
- Benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation.
- If a benchmark exceedance occurs the facility must:
  - Review the SWPPP and BMPs and make improvements or additions as necessary
  - Complete a Corrective Action Report (CAR)
- The facility can request changes to the benchmark values via the permitting process.

MDNR Permit Standard language

Stormwater Permit Benchmarks

Pros

- Benchmarks can be individualized to each outfall.
- Benchmarks are not limits and therefore a benchmark exceedance alone is not a permit violation.
- Industrial activities and materials may not need to be covered at all times.
- Available DMR data may support removing parameters at certain outfalls.
- When no reasonable potential is found, limits may be replaced with a technology-based benchmark.

Stormwater Permit Benchmarks

Cons

- Sampling, reporting, and inspection requirements.
- SWPPP and BMPs necessary.
- Log of Corrective Actions.
- Failure to take corrective action and/or make measurable progress towards achieving the benchmark(s) is a permit violation.
- Repeated benchmark exceedances may need to be addressed with MDNR.
- Available DMR data may support adding parameters at certain outfalls.

Benchmarks

- NPDES Permit
- Individualize to each outfall
- Utilizes BMPs and SWPPP
- Numeric target
- Sampling required
- Failure to perform CAR can lead to permit violation
- Cost includes permit fees, lab costs, labor costs, etc.

- MDNR Approval
- Some SW management is required
- 5-year renewal
- Inspections
- Cost

No Exposure

- Certification
- Site-wide
- Utilizes stormwater resistant shelters
- No numeric targets
- No sampling required
- Any exposure can end the exclusion certification
- Cost includes shelter construction or rental of storage space

Examples

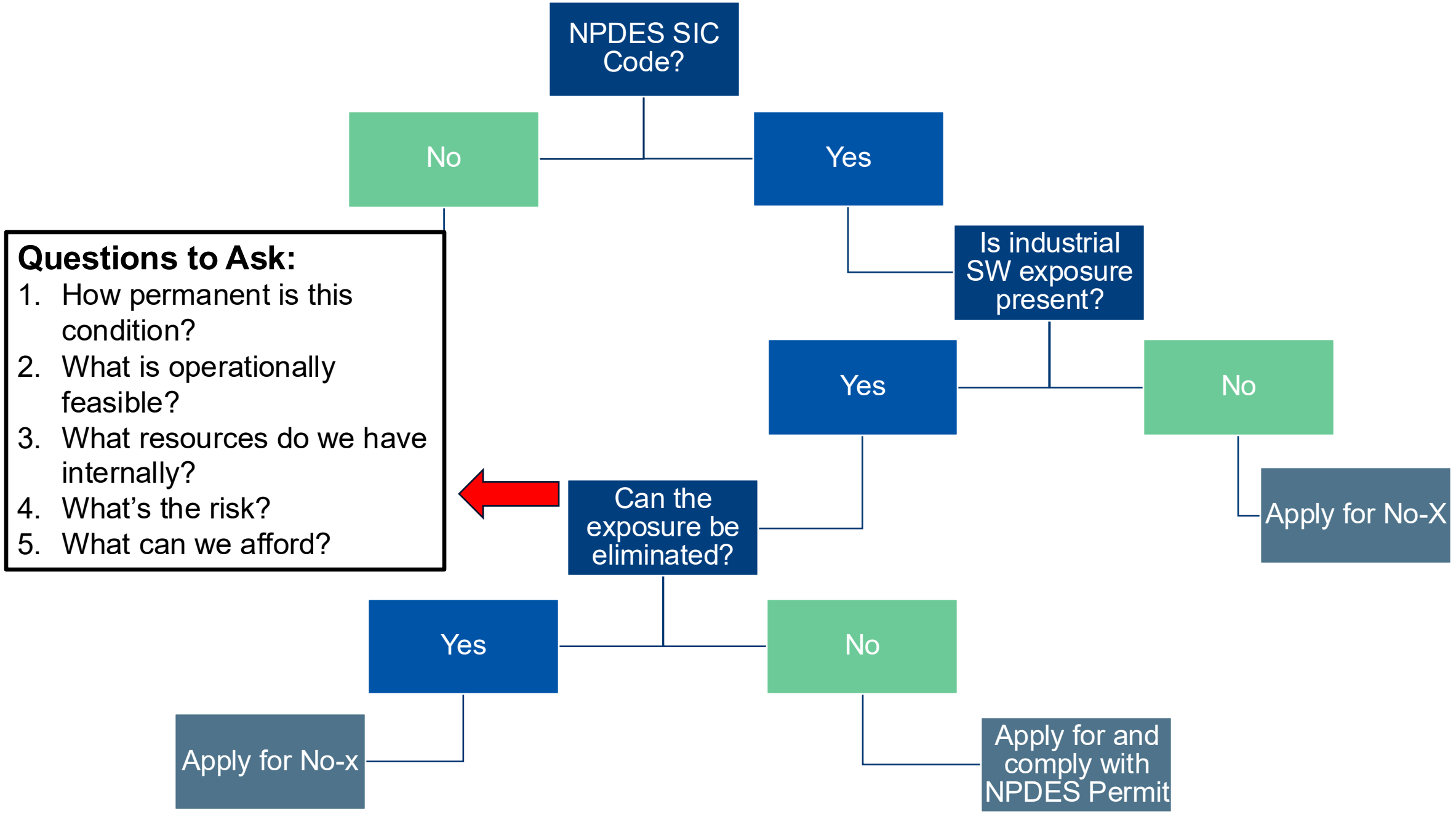
Parks and Recreation Office

Metal Fabrication Facility

When/why Benchmarks?

Special Conditions?

Example 1 – Parks and Rec, Problem


NPDES SIC Code?
No
Yes
Is industrial SW exposure present?
Yes
No
Apply for No-X
Can the exposure be eliminated?
Yes
No
Apply for No-x
Apply for and comply with NPDES Permit
Questions to Ask:
1. How permanent is this condition?
2. What is operationally feasible?
3. What resources do we have internally?
4. What's the risk?
5. What can we afford?

Example 1 – Parks and Rec, Resolution

Questions to Ask:

1. How permanent is this condition? **Foreseeable future!**
2. What is operationally feasible? **Plenty of room for SRS!**
3. What resources do we have internally? **Not enough!**
4. What's the risk? **Too high!**
5. What can we afford? **Nothing – But we'll pay more up front to minimize risk and long-term costs!**

https://toughcovertent.com

https://www.usga.org/content/usga/home-page/course-care/green-section-record/60/13/stop-wasting-sand.html

https://greenincomaha.com/mulch-rock-dirt/

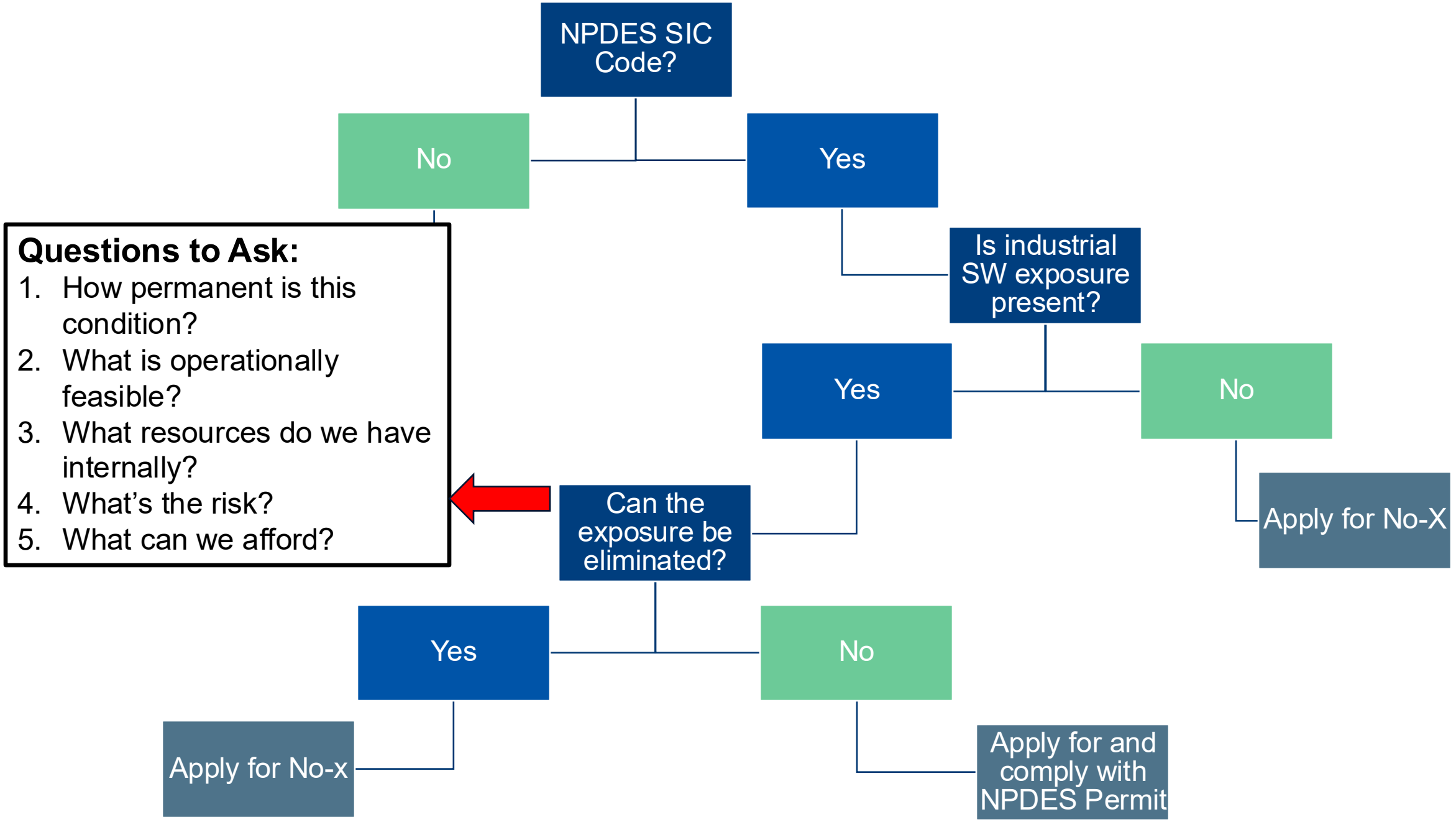
Example 2 – Metal Fabricator, Problem

Current Conditions

- Producing 5,000 tons of steel products per year from 5 manufacturing lines.
- Two stormwater outfalls.
- Outdoor scrap storage (RP).
- NPDES permit with benchmarks at each OF.
  - Copper, Zinc, Iron, Aluminum
  - Generally samples are below BM

Proposed Conditions

- Production moving largely offshore, reducing to 1,000 tons per year.
- Shutting 4 lines down, focusing on specialty products.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3. What resources do we have internally?
4. What's the risk?
5. What can we afford?
Can the exposure be eliminated?
Yes
No
Apply for No-x
Apply for and comply with NPDES Permit

Example 2 – Metal Fabricator, Resolution

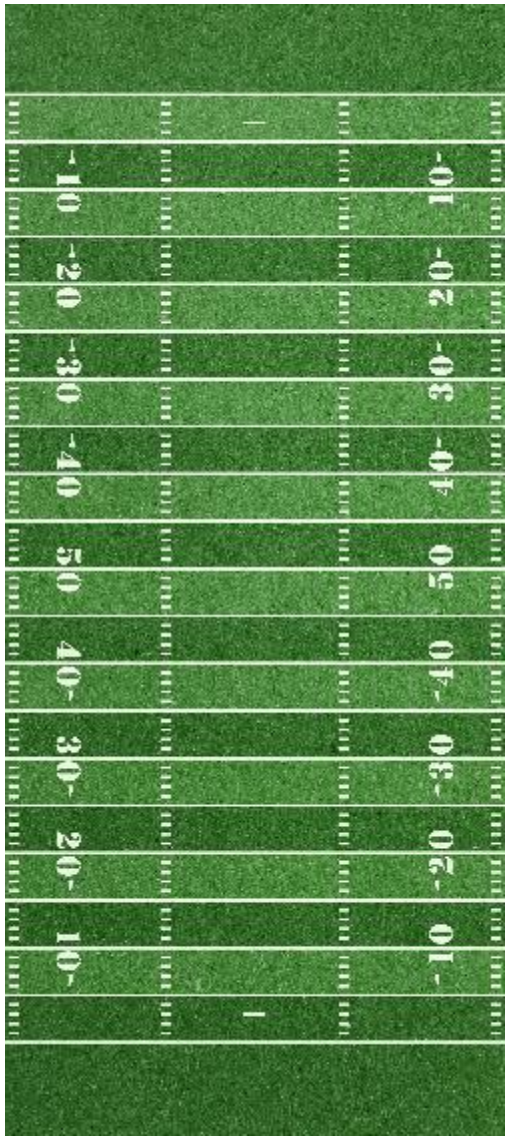
Questions to Ask:

1. How permanent is this condition? **Foreseeable future!**
2. What is operationally feasible? **We have flexibility!**
3. What resources do we have internally? **Our EHS staff is being cut!**
4. What's the risk? **Seems manageable!**
5. What can we afford? **Less than we used to be able to!**

No-X

Example 3 – When are Benchmarks Better?

- Cost of no exposure is too high?
  - Would need to be a football field sized cover
- Too many moving parts?
  - Massive effort to train contractors, staff, and maintain no-x
  - 24/7/365
- Inconsistent site conditions
  - Production or site conditions change frequently
- Legacy contamination
  - Going to be difficult and costly to remove RP



Example 4 – Can No Exposure be a Special Condition?

It can!

- Permit Writer Discretion
- Facility has a site-specific MSOP
  - Continuous wastewater discharge
  - Stormwater only outfalls, No-X conditions met
  - Could be issued as a special condition rather than a formal No-X
- What's the difference?
  - More discretion on the part of the Permit Writer
  - No-X certifications need to be provided to the MS4, if the stormwater is in an MS4 jurisdictional area

By the Numbers

84 – Effective NO-X certifications in STL County

20 – Facilities owned by municipal governments

12 – Biotech and pharmaceutical facilities

9 – Package handling and shipping centers

4 to 6 – Aerospace, food products, mechanical manufacturers, and medical facilities

25 – “Other”

Wrap-Up

- No-X Certification can reduce overall compliance costs, but can be difficult to maintain
- Consider long term planning, operations, risk, and cost when deciding if No-X is feasible
- There are situations where benchmarks make more sense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THANK YOU!