

Designing for Risk:

Applying the Hierarchy of Risk Management Strategies in Public Spaces



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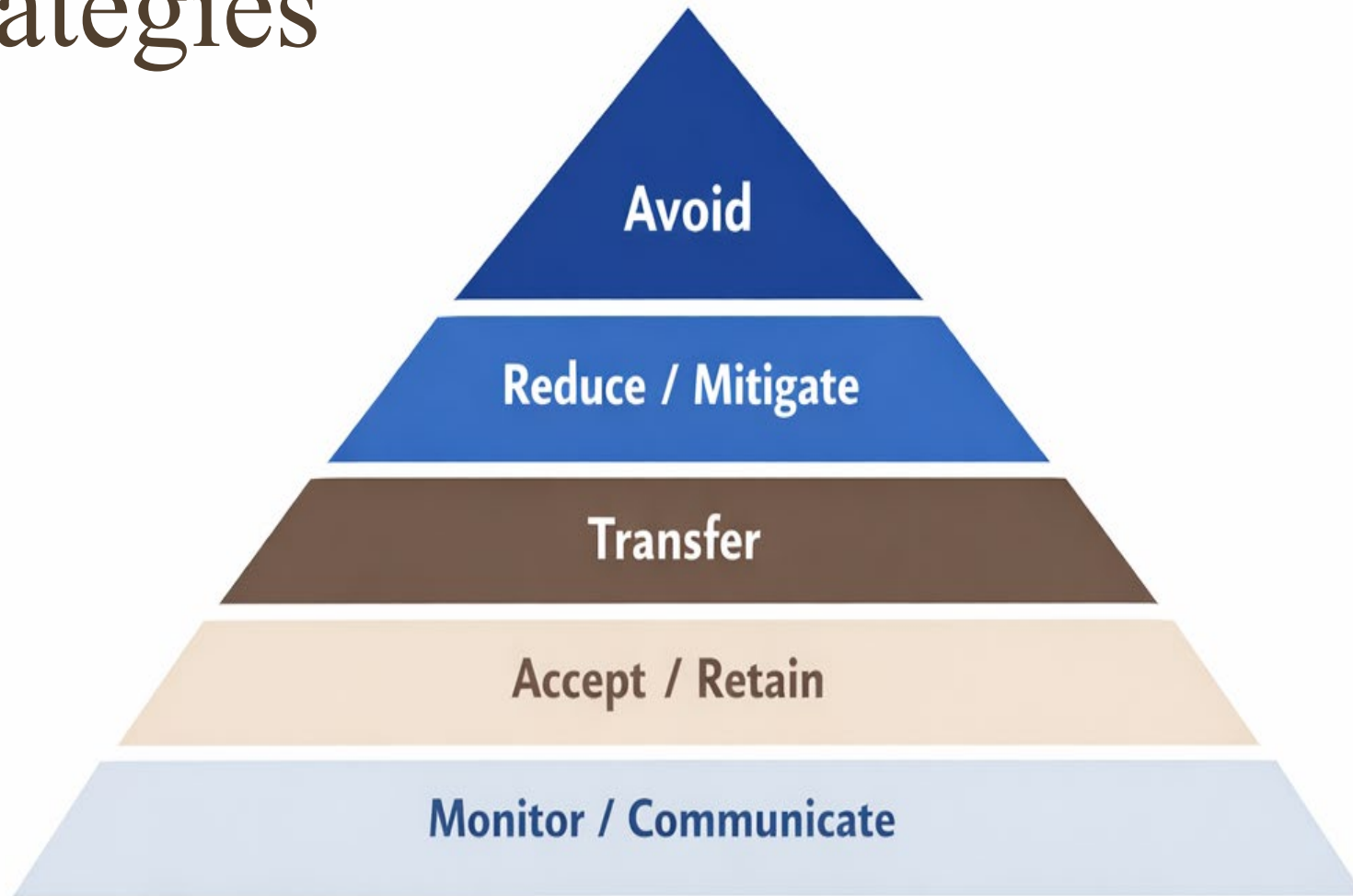
Managing Risk in Shared Public Spaces



Conceptual Depiction

- Parks, trails, plazas, and waterfronts bring community benefits but also varied risks.
- Climate, weather, and public use patterns create unpredictable conditions.
- Effective risk management requires intentional design, documentation, and communication.

Hierarchy of Risk Management Strategies



Applying the Hierarchy in Practice

Level	When to Use	Example in Local Government
Avoid	When exposure outweighs benefit	Close high-risk areas during extreme storms
Reduce/Mitigate	When risks can be controlled through design	Improve drainage or tree maintenance
Transfer	When third parties assume responsibility	Use event permits or contractor insurance
Accept/Retain	When risk is inherent and manageable	Allow limited trail use with clear signage
Monitor/Communicate	For dynamic or seasonal risks	Regular inspections, updates, and signage



Reviewing a Space: Identifying Risks Early

“What level of control would you apply first, and why?”



Broken sidewalk



Kids day camp in the park

Reviewing a Space: Identifying Risks Early



Gravel parking lot with no markings



Informal walking path



The Role of Design in Risk Reduction

- The way a space is designed affects how people use it.
- Planning with safety in mind helps avoid problems later.
- Simple choices matter! Durable surfaces, clear sightlines, good drainage, lighting, and easy maintenance access.
- Have operations staff review a design before it's finalized.

Design's Done – Now What?



- How the public is invited to use a space shapes what they expect and how they behave.
- Balance accessibility and accountability.
- Expectations are set through everyday tools like park maps, website updates, and seasonal notices.
- Example: setting hours of use or seasonal access helps guide how a space is used.

Communicating Risk: Using Signs to Guide Public Use



Clear, Consistent, and Defensible



Indicates Risk



Indicating behaviour required

Language That Informs Without Discouraging Use



Informative but not discouraging



Encouraging Safe Use

Sign Best Practice



Balance Sign Content

What is the message in this sign?

Reinforce messages through multiple channels



QR Codes to find out more. Sign is informational with expectation of no swimming (without indicating this)



Case Scenario: Trail Over a Culvert



Conceptual Depiction

Trail Over a Culvert

- A popular park trail crosses an aging culvert that is showing signs of deterioration.
- The condition creates a risk of collapse, especially during heavy rain or seasonal runoff.
- This situation requires deciding how to manage public use while repairs are planned and completed



What Steps Do We Take?

1

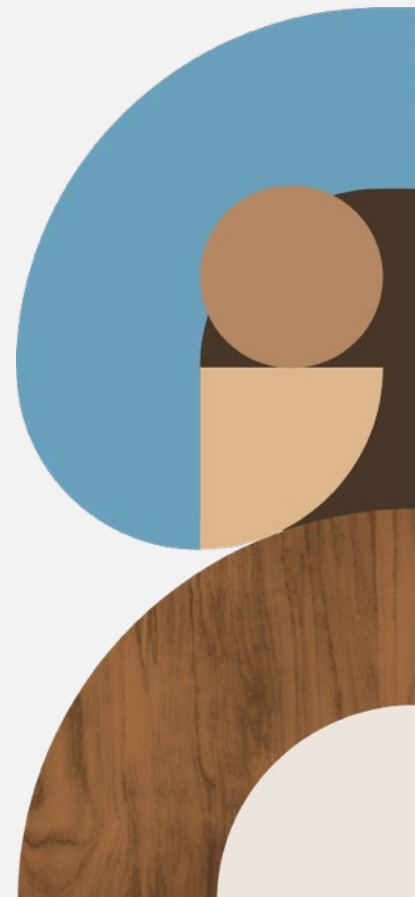
Identify hazard

2

Apply hierarchy

3

Document actions

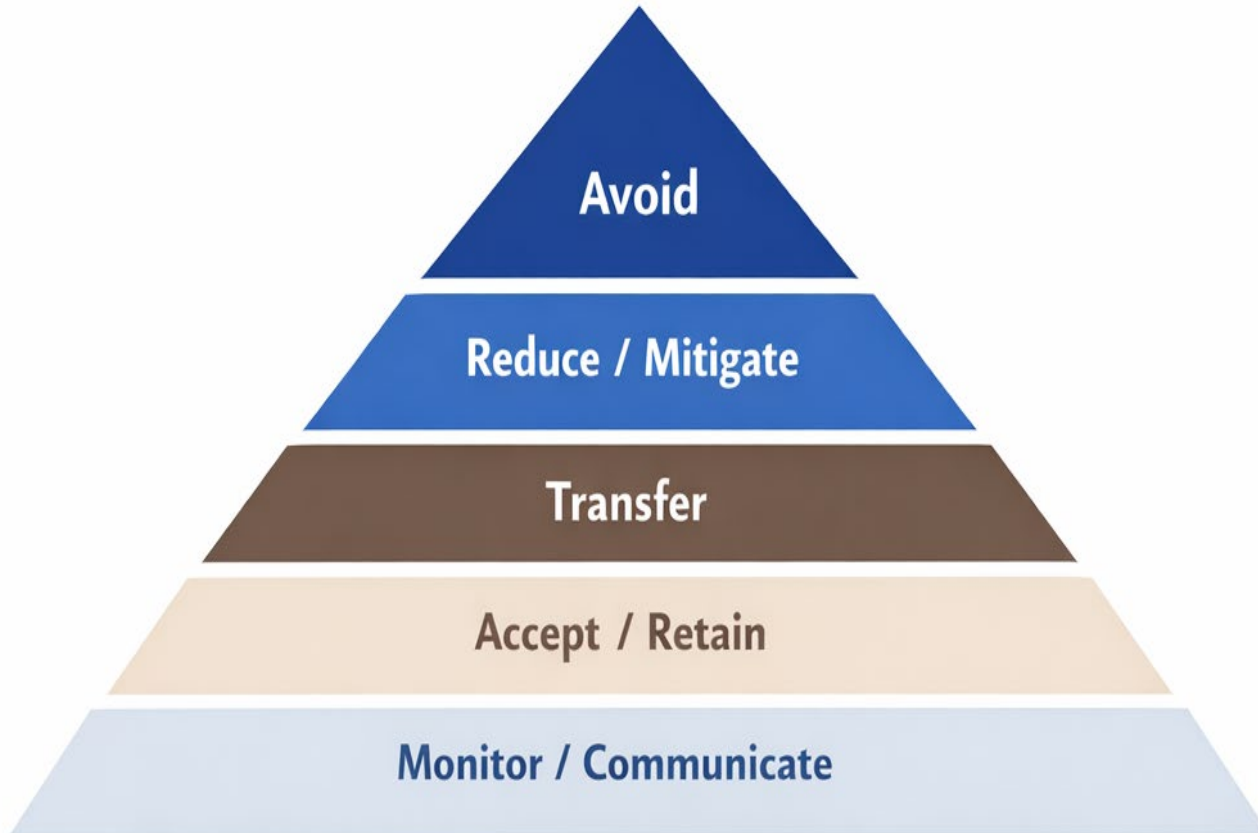


Identify hazard

- Risk of culvert collapse under foot traffic - could result in a fall or serious injury.
- Eroding or uneven trail surface above the culvert - trip hazard, especially for children, and seniors.
- Undermining during heavy rain or runoff - conditions can worsen quickly and reduce structural stability.
- Hidden hazard beneath the trail surface - may not be obvious to users, increasing the likelihood of injury.

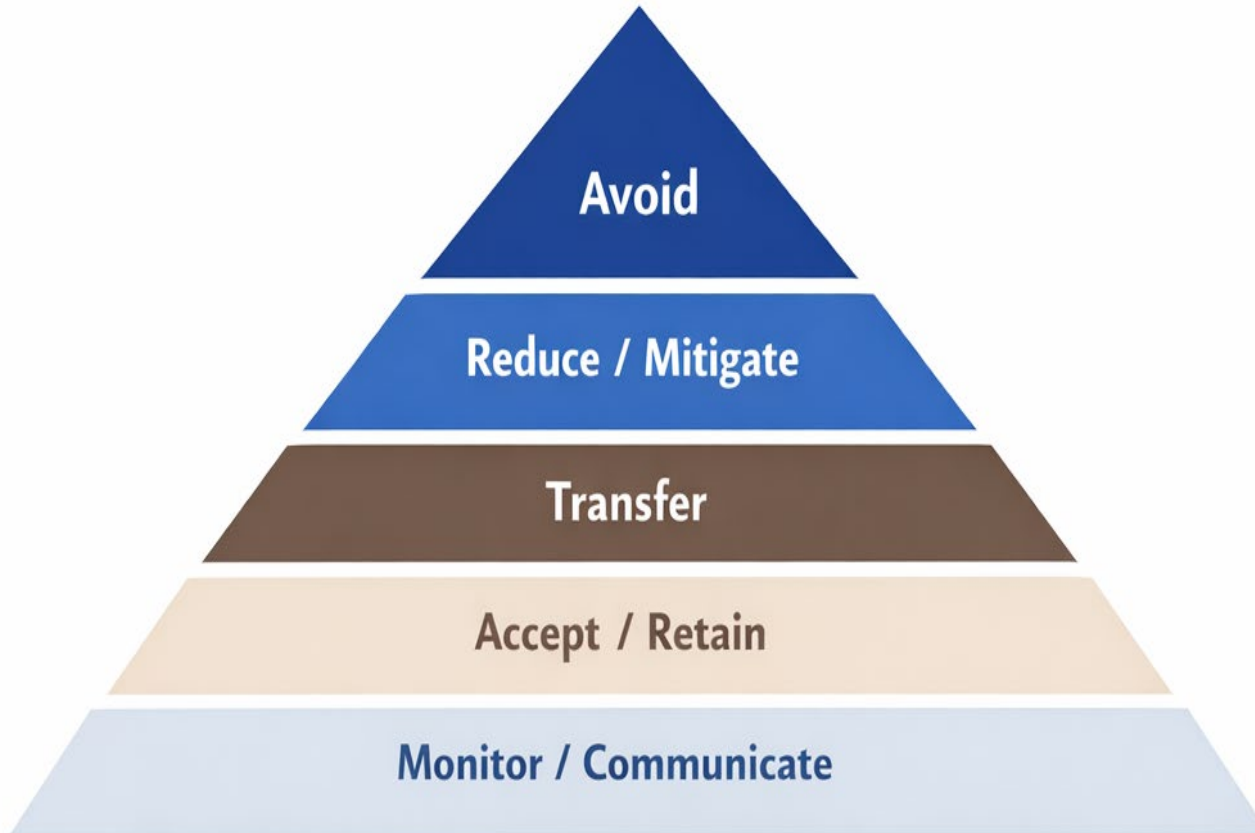


Apply hierarchy

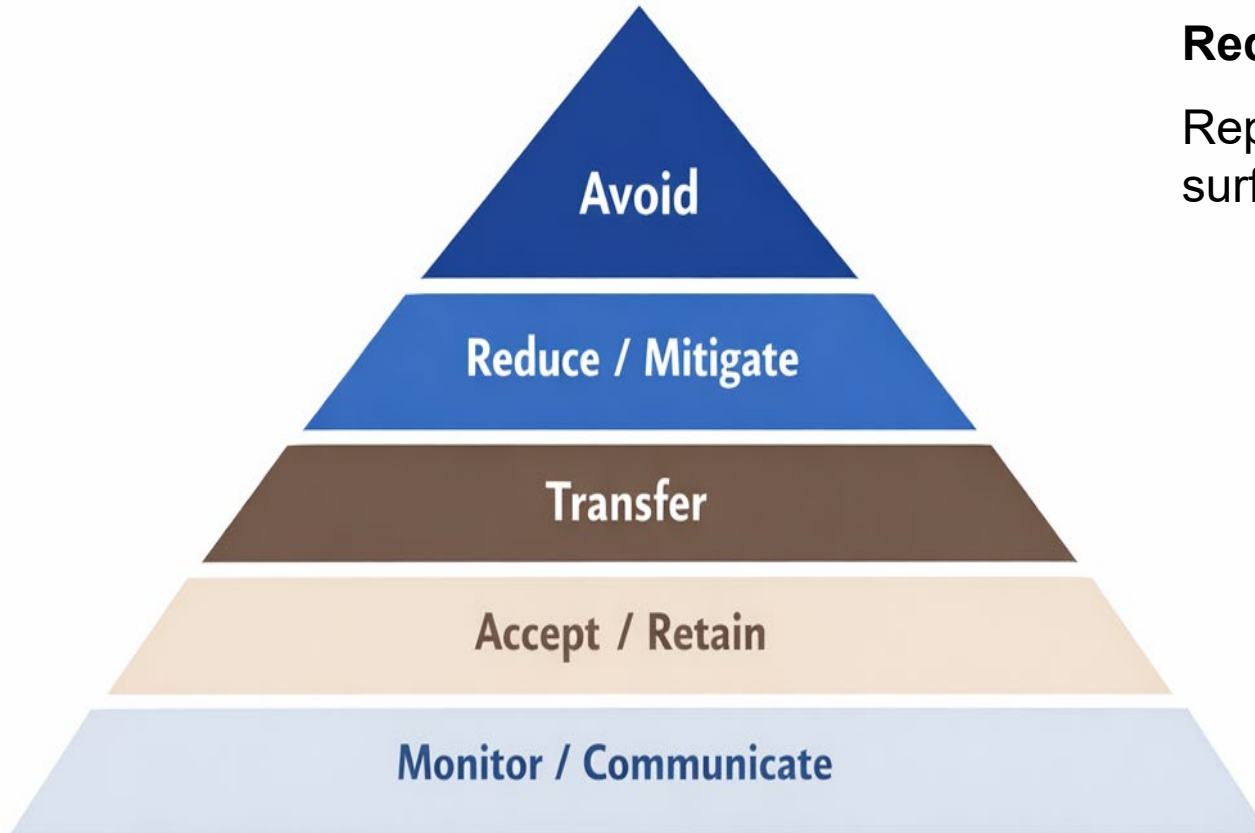


Apply hierarchy

Avoid:
Close the trail.



Apply hierarchy



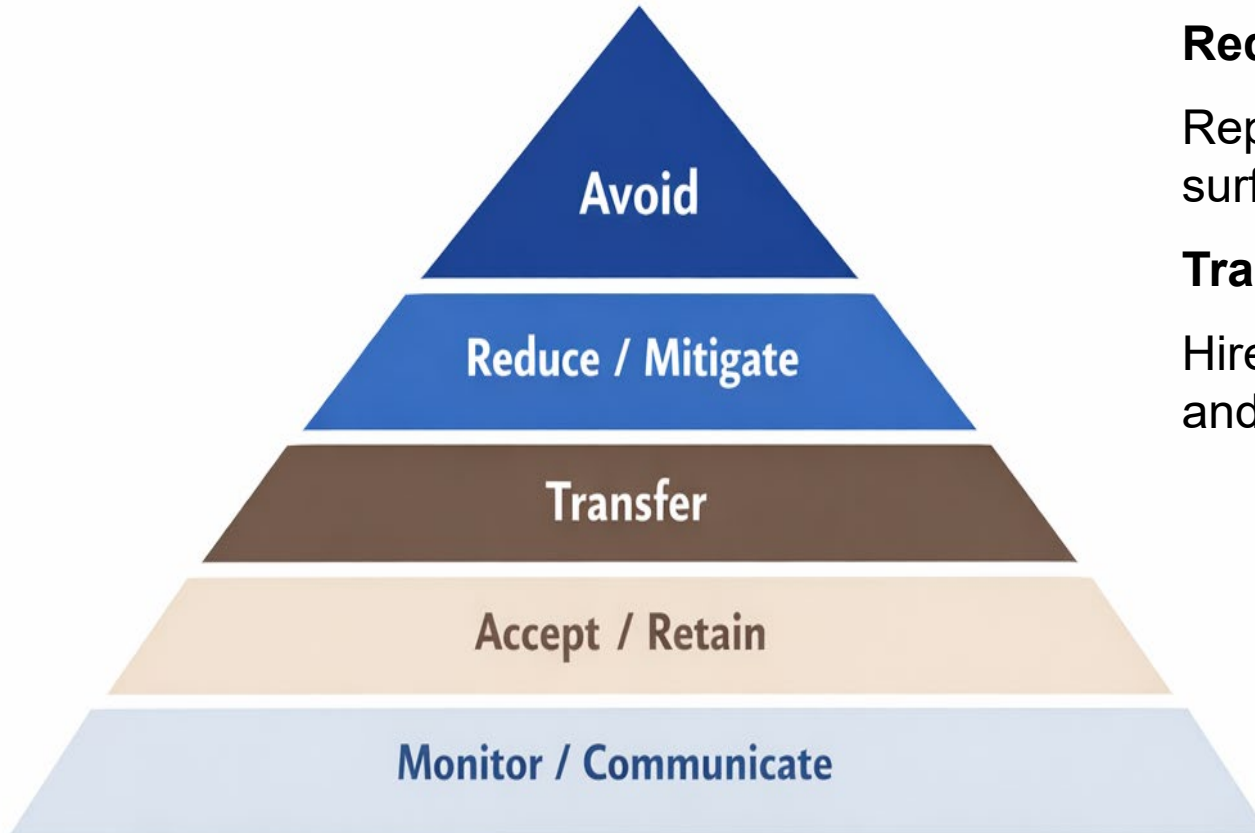
Avoid:

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Reduce/Mitigate:

Repair or replace the culvert and stabilize the trail surface.

Apply hierarchy



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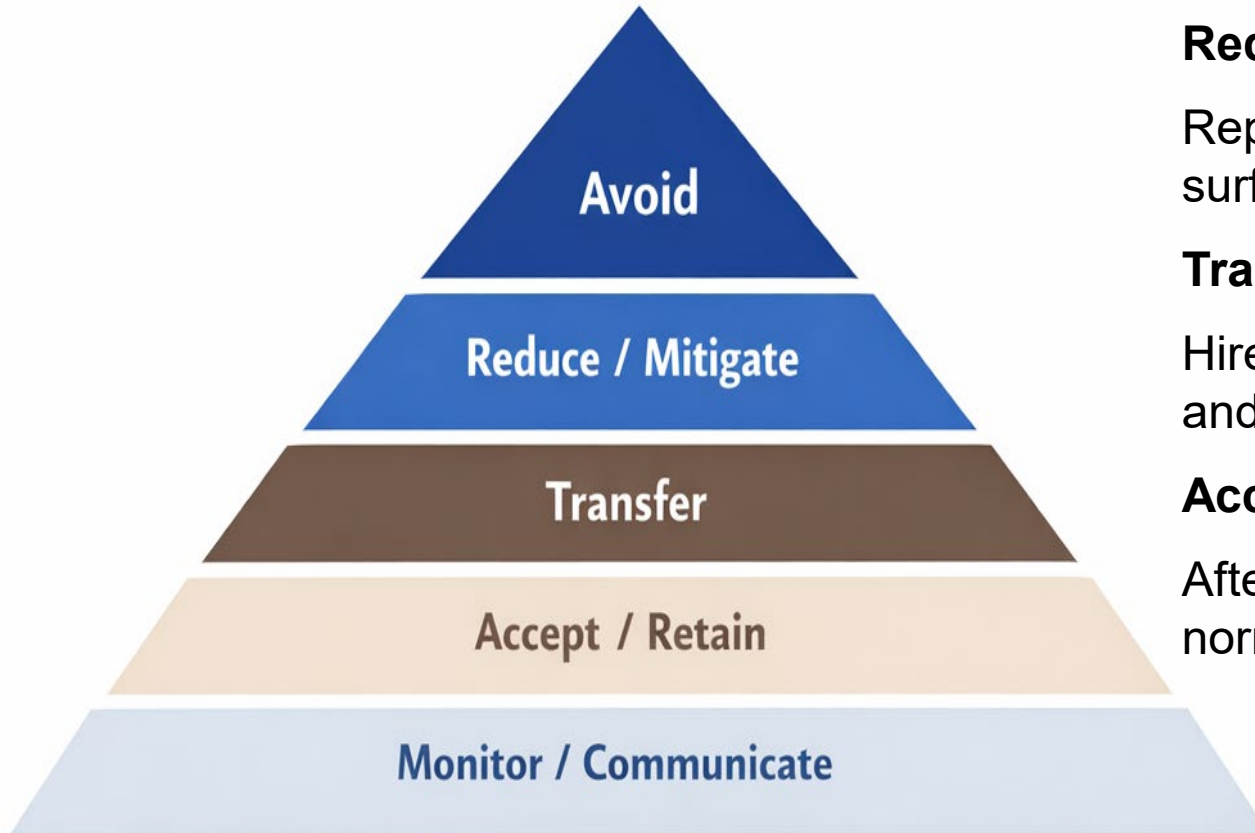
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Transfer:

Hire a contractor to complete repairs, with insurance and contractual responsibility.

Apply hierarchy



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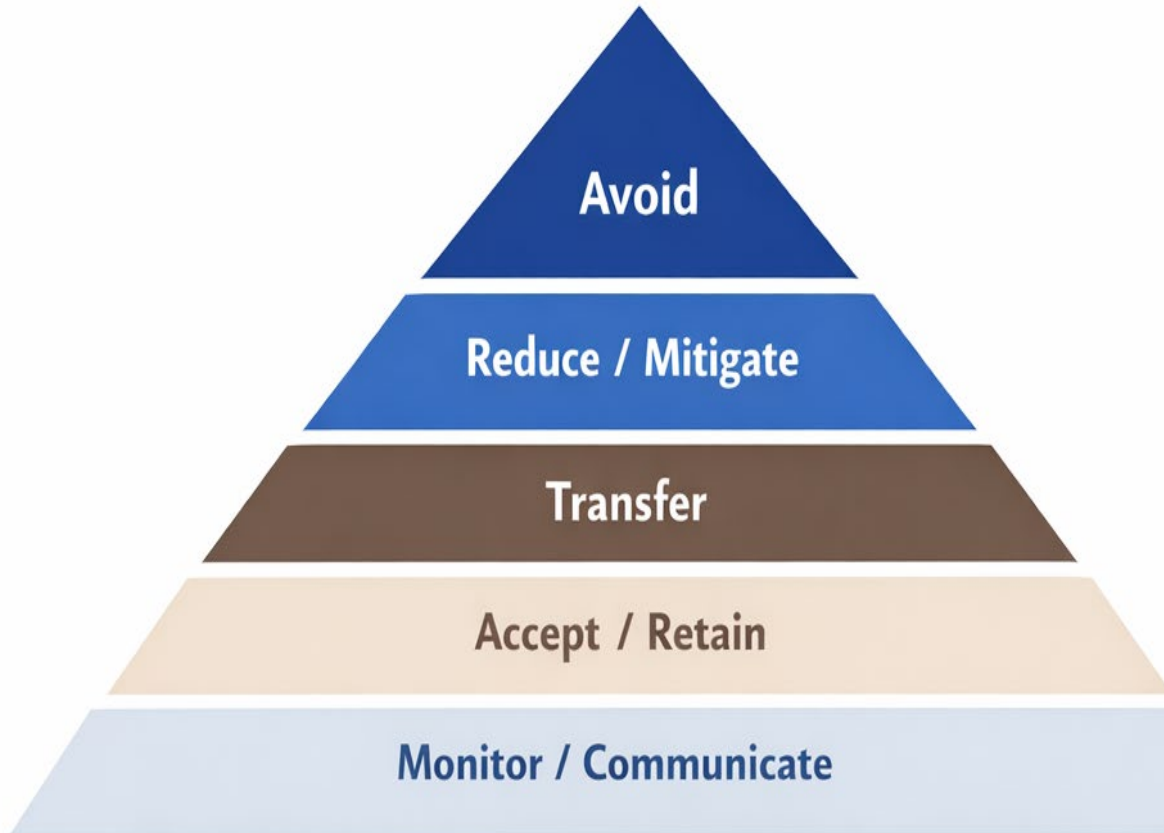
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Accept/Retain:

After repairs, reopen the trail and accept that some normal trail-use risk remains.

Apply hierarchy



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Monitor/Communicate:

Inspect regularly and update park maps, website info, or seasonal notices as conditions change.

Closing the Loop

Document actions

Record conditions, decisions, repairs.

Update the public

Website notice on closure/reopening.

Update park map or seasonal notice.

Track inspections

Log checks after rain.

Schedule follow-up inspection dates.



Conceptual Depiction

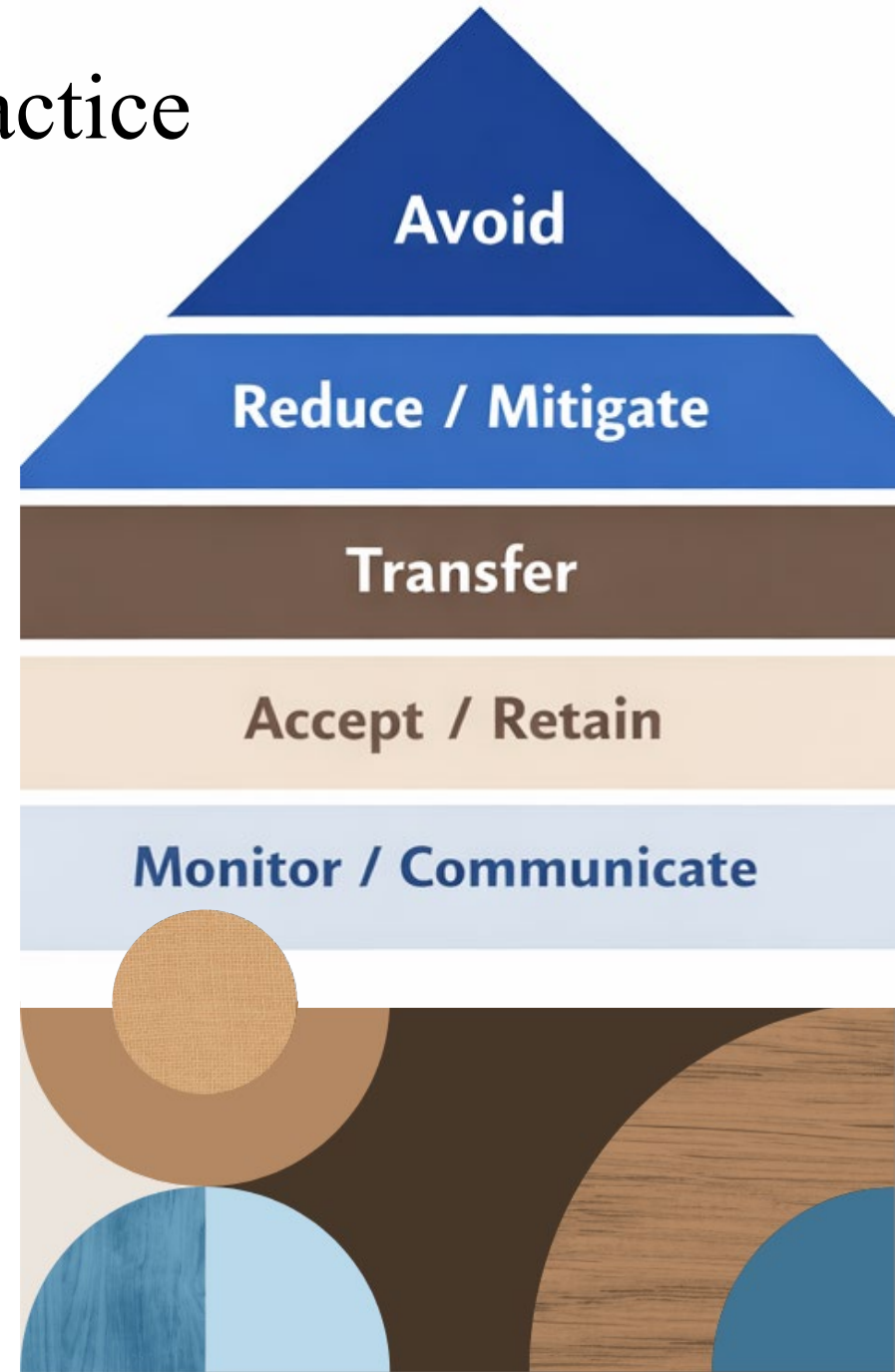
Integrating Strategies into Policy and Practice

This approach should be used consistently across your organization.

Where this shows up:

- Inspections of parks and facilities
- Event permit reviews
- Asset management and capital planning

Decisions should be documented and reviewed over time.





Key Takeaways

- Use the hierarchy to make clear, consistent decisions.
- Connect design, access decisions, communication, and documentation.
- Apply this approach across departments.
- Document decisions and revisit them over time.

Conceptual Depiction

“

Questions?