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MITIGATING RISK THROUGH WATERSLIDE INSPECTIONS

BY MIKE SHAW



INTRODUCTION

Behind the thrills and excitement of waterslides lies a crucial responsibility for waterpark operators and maintenance staff—ensuring the safety and integrity of these structures through regular, comprehensive inspections. Though waterslides may seem simple, they are subject to constant wear and tear from environmental factors and

heavy use. Regular inspections are not only a good practice, but also a necessity according to ASTM International and other industry or jurisdictional standards, codes, and regulations. Beyond compliance, these inspections are essential for protecting guests, maintaining operational efficiency, and safeguarding the park's reputation. This article outlines best practices for waterslide inspections and highlights some commonly overlooked scenarios.

WHY REGULAR INSPECTIONS MATTER

The primary goal of waterslide inspections is to proactively identify any potential safety hazards or structural and equipment failures before they result in injuries or operational downtime. A thorough inspection program ensures the safety of your guests, keeps slides in optimal condition, maximizes the lifespan of your investment, and protects the organization. By identifying issues or concerns early through routine inspections, teams can proactively mitigate risks before they become serious problems.

COLLABORATION BETWEEN OPERATIONS AND MAINTENANCE TEAMS

Inspections are not just the responsibility of one group—successful risk management requires close collaboration between operations and maintenance staff. Ongoing communication between these groups ensures that issues are identified quickly and addressed effectively. Additionally, these inspections, along with proactive, preventive maintenance help staffs build maintenance and lifecycle plans, which can be tremendously helpful for the budgeting process.

KEY ELEMENTS TO INSPECT

Inspections should cover several critical areas to ensure waterslides remain safe and operational:

- **SLIDING SURFACE QUALITY:** Inspect the slide's surface for wear, damage, or other

deficiencies to prevent friction burns, abrasions, or injury.

- **STRUCTURAL INTEGRITY:** Check for expanding cracks, rust, corrosion, or separations in flume joints, welds, or supports. Ensure bolts and fasteners are secure, and the tower structure is stable.
- **RUST AND CORROSION:** Corrosion is a significant concern for waterslides, particularly at indoor waterparks, tropical climates, or coastal areas. Steel components are vulnerable to damage from environmental moisture, chloramines, and other chemicals used in water treatment. Regular inspections should focus on identifying signs of corrosion early, as it can quickly lead to structural failures.
- **WATER FLOW SYSTEMS:** Verify that water volume and flow are adequate to prevent abrupt stops or excessively high speeds that may put riders at risk.
- **OPERATIONAL SAFETY:** Monitor slide operations during use to ensure dispatchers communicate effectively with riders, that rules are enforced, and safety processes are followed.

Other often-overlooked items that should be considered and periodically evaluated include slide vehicles (rafts, tubes, etc.), posted signage and rules, walkways and stairs, grounding and bonding systems.

TYPES OF INSPECTIONS

Inspections may vary based on their purpose and scope. Some common inspection types include:

- **DAILY, PRE-OPENING INSPECTIONS:** These visual activities are essential to identifying immediate safety concerns, including damaged flumes or ride path surfaces, and high-use areas such as stairs, catch pools, or run-out zones. A test ride should be conducted (and documented) to verify proper function, ensuring that the slide is operating normally and safely for guest use.
- **PRE-SEASON AND ANNUAL INSPECTIONS:** Conducted before the season, or at least annually, these inspections are more comprehensive. Assess the structural integrity, including visual inspections of welds, support arms, and steel structures; bolts, fasteners, and other hardware; and mechanical systems such as pneumatic or automated dispatch systems.

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- **REGULATORY OR COMPLIANCE INSPECTIONS:** Waterparks are subject to various legal and regulatory requirements, depending on the location and jurisdiction. Some require regulatory inspections of slides as amusement rides. While many of these inspections are conducted by a third party (e.g., state agency, insurance company, etc.), it is important to understand the scope and purpose of these compared to potentially more comprehensive internal evaluations.
- **OTHER INSPECTIONS:** In addition to routine checks, consider inspections after severe weather events (e.g., high winds or hail) or major repairs or modifications. This ensures the structure remains safe. If the slide undergoes significant alterations, it may require recommissioning by the manufacturer to assure it meets technical standards.

Always refer to the manufacturer's operations/maintenance manual and any applicable laws, standards, or codes for guidance on the scope and frequency for inspections.

DOCUMENTING INSPECTIONS: PROTECT YOUR PARK FROM LIABILITY

"If it's not documented, it didn't happen." This phrase is particularly relevant in the event of an accident or legal claim. Accurate, thorough documentation is critical to demonstrate that inspections were performed, and potential hazards were addressed.

Following are some best practices for documentation:

- **USE CHECKLISTS:** Whether digital or paper-based, checklists ensure that all areas are inspected, and nothing is overlooked.
- **FOLLOW THE MANUFACTURER'S RECOMMENDATIONS:** Review the operations/maintenance manual for suggested frequency of inspections and documentation. Some may even limit or void warranties if not accordingly completed.
- **CAPTURE PHOTOS:** Photos help maintenance and operations teams track issues and provide visual proof of problems or completed repairs.
- **DOCUMENT CORRECTIVE ACTIONS:** Ensure that any noted deficiencies are followed up with corrective actions, and document the steps taken to fix the problem, including dates and personnel involved.

- **RECORD RETENTION:** Inspection records should be maintained according to local or organizational requirements and be easily accessible for future reference. In the event of an accident or injury, these records can serve as a valuable defense against liability claims.

TIPS FOR EFFECTIVE WATERSLIDE INSPECTIONS

To enhance the inspection process, consider the following tips:

- **USE TRAINED STAFF:** Those completing inspections should be experienced and understand what to look for. Sending inexperienced staff to inspect a slide flume may lead to oversights.
- **HAVE THE RIGHT TOOLS:** Some tools that may prove useful include knee pads, flashlights or headlamps, smartphones for documentation, flagging tape, markers or grease pencils, and rulers for measuring cracks or other damage.
- **TAKE YOUR TIME:** Don't rush the inspection. A thorough inspection protects your guests, your park's investment, and its reputation.
- **FOLLOW UP:** Verify that any identified issues or deficiencies are addressed, and document as to how and when they were corrected. This could be crucial in defending against future claims.
- **BUDGET ACCORDINGLY:** Ensure adequate funds are allocated to address any expenses associated with inspections as well as ongoing preventative maintenance or repairs, even at newer facilities.

CONCLUSION

Waterslide inspections are vital to the safety, efficiency, and reputation of your waterpark. By implementing a robust inspection process and maintaining clear documentation, operators and maintenance personnel can work together to provide a safe, enjoyable experience for guests while protecting the park from unnecessary risk and liability. •

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