

INCIDENT INVESTIGATION

Fishbone Root Cause Analysis (RCA)

Integrated Water Services, Inc. (the Company)

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Purpose

The purpose of this procedure is to establish a consistent and effective method for conducting a Root Cause Analysis (RCA) using the Fishbone Diagram (Ishikawa) method. This procedure is used to identify contributing factors and underlying root causes of recordable injuries and to develop corrective and preventive actions to prevent recurrence.

Scope

This procedure applies to all recordable injury incidents occurring at any worksite where employees or subcontractors are under operational control. It is intended for use by supervisors, safety personnel, and RCA team members during incident investigations.

Procedure

Define the Problem (The Head of the Fish)

Clearly state the injury or incident being investigated. Write this at the head (right side) of the Fishbone Diagram.

Example: 'Employee suffered a recordable injury: laceration to hand while stacking equipment.'

Identify Major Cause Categories (The Bones)

Use the following common categories to start your Fishbone Diagram:

- People: Training, behavior, fatigue
- Methods: Procedures, instructions, permits, JHAs
- Equipment: Tools, PPE, machinery
- Materials: Quality or type of materials
- Environment: Weather, lighting, workspace
- Management/Systems: Supervision, safety culture, schedules

Brainstorm Contributing Factors

For each category, brainstorm possible contributing factors with the team. Ask questions like:

- What could have contributed under this category?
- Were there missing or ineffective controls?

Continue asking 'Why?' or 'What else?' until all ideas are exhausted.

Analyze for Root Causes

Review the completed diagram:

- Look for repeated issues or common failures
- Identify failed or missing controls
- Prioritize potential root causes



Ask: 'If this were corrected, would the injury have been prevented?'

Define Corrective and Preventive Actions

For each root cause identified:

- Define corrective actions to fix immediate issues
- Define preventive actions to prevent recurrence

Assign responsible persons and deadlines for each action.

Document and Follow Up

Document the Fishbone RCA findings and outcomes:

- Create a summary report
- Track action items to closure
- Share lessons learned with relevant teams or organization-wide

Tips for a Successful Fishbone RCA

• Maintain a blame-free environment where we focus on systems, not individuals

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- Involve a diverse team for better insights
- Use visual tools like whiteboards or large posters
- Preserve the diagram for records and further analysis