IMPROVING SAFETY ON UNSEALED ROADS

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Collaborating with the road industry to turn knowledge into practice
Road safety coverage

• Crash statistics
• Causes of crashes
• Typical hazards
• A road safety strategy
• Low cost countermeasures
Additional chapter added to improve road safety
Accident statistics - unsealed roads

Crash results (New Zealand)

- 65% involve single vehicles
- 35% on weekends
- 71% occur on curves
- 61% run-off-road
- 40% are vehicle rollovers

<table>
<thead>
<tr>
<th>Crash causation category</th>
<th>Sealed</th>
<th>Unsealed</th>
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</thead>
<tbody>
<tr>
<td>100 - Alcohol or Drugs</td>
<td>21.0%</td>
<td>19.7%</td>
</tr>
<tr>
<td>110 - Too fast for Conditions</td>
<td>21.8%</td>
<td>28.1%</td>
</tr>
<tr>
<td>120 - Failed to Keep Left</td>
<td>11.6%</td>
<td>27.8%</td>
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<tr>
<td>130 - Lost Control</td>
<td>33.8%</td>
<td>57.7%</td>
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Casualty crashes on rural roads
Australia 14 %, NZ 5 %
Main causes of accidents

• Poor road geometry
• Low cost facilities and inadequate maintenance
• Higher incidence of risky behaviour
• Excessive speeding
• Poor levels of enforcement
• Changing road surface conditions
Typical hazards

- Loose gravel
- Tight curves
- Inadequate superelevation
- Poor sight distance
- Lack of signs/guideposts
Road ‘surprise’

How would you drive this road?

Would you have expected this?
Example of a poor intersection layout
Dangerous causeway
Safety strategy for unsealed roads

- Must help motorists ‘drive to conditions’
- Low cost measures include:
  - Identify high risk sites (i.e. those with surprises)
  - Improve sight distances
  - Increase delineation
  - Add road signs at selected sites
  - Eliminate unsafe maintenance practices
  - Upgrade road conditions where possible
NETRisk and ROAD SAFETY
RISK MANAGER
SOFTWARE PACKAGE

Helps identify high risk sites and determine the most effective low risk treatment for a given safety problem
Low cost counter measures

Use standard road signs to alert drivers to conditions
Use standard signs on tight curves

Avoid use of Speed Advisory signs
Maintenance practices that can lead to a safety issue
Intersection safety

(a) modification of a T intersection angle

(b) a right to left staggered intersection
Provide horizontal sight distances
Provide good causeway designs
Summary

• be pro-active - identify high risk sites (i.e. surprises)

• help a motorist to drive to conditions (provide sight distance)

• adopt in the first instance low cost safety measures (i.e. sign, guide posts etc.)

• establish a works safety program to reduce high risk sites over time with available resources
Any questions ????