

Applying the Simple Risk Matrix

Top Notch Consultants

This example uses a fictitious geotechnical and environmental consulting firm to demonstrate a step-by-step process to identify hazards and use the **Simple Risk Matrix** to evaluate risks.



The Company

Top Notch Consultants provide geotechnical consulting services to clients in the oil and gas and pipeline industries. The three senior partners work in the North Vancouver office and periodically travel to locations throughout BC to meet with clients, deliver reports and conduct site works. Two administrators and two project managers keep the North Vancouver office organized, but they do no work-related driving. Top Notch employs 24 engineers and assistants based in Fort St John, Vanderhoof, Nelson and Kitimat. Although they sometimes drive in Vancouver while attending quarterly meetings, most of their work is in the field. Each one puts on plenty of miles – most days involve 100 – 200 km of highway travel and driving on resource roads – most of them are busy with other contractors, logging trucks, low beds, tanker trucks and road maintenance crews.

Top Notch owns a fleet of three (3) late-model SUVs that the senior partners use. Each of the 24 other employees drives a vehicle they own and charges Top Notch a mileage rate. Top Notch requires that employee-owned work vehicles must be ½-ton or ¾-ton four wheel drive pickups, with not more than 250,000 km.

The Top Notch Risk Assessment

The Top Notch safety committee recognizes there are important similarities and differences in the driving environments Top Notch drivers encounter. Essentially, the three senior partners do far more city driving than any of the engineers. They put on fewer km on bush roads and highways, and far fewer km overall during the course of the year than the engineers and assistants.

The safety committee reasons that even though the proportions of city versus highway and resource road driving vary among Top Notch staff, all of the drivers are exposed to roughly the same set of hazards. Field employees need to be prepared to deal with city driving when they encounter it, and senior partners need to be prepared to deal with bush roads. Rather than conducting two separate risk assessments, they agree to use the Simple Risk Matrix Assessment Tool.

After deciding which hazards and contributing factors apply to their operations, the safety committee members collaborated to assign a "High", "Medium" or "Low" ranking to each risk element - probability and severity.

From the 50 hazards and contributing factors they identified, the safety committee selected the five (5) highest-ranking hazards in each category, and decided those would be their top priorities for action.

Table One on the next page shows their results.

Table One – Top Notch Road Safety Priorities

Hazard Category	Hazard / Contributing Factor	Probability of Occurrence	Severity of Consequences	Risk Ranking
driver	does not recognize driving hazards or hazardous conditions and/or adapt driving accordingly	High	High	9
driver	distraction - texting or talking on cell phone, other electronic device (e.g. GPS, radio, etc.)	High	High	9
driver	insufficient orientation or training: driver lacks necessary competencies or is unfamiliar with operating procedures	Medium	High	6
driver	fatigue - reduced vigilance, slower reactions, poor decisions	Medium	High	6
driver	failure to pay attention to driving responsibilities; complacency	Medium	Medium	4
journey	poor traction conditions - transition seasons: freeze / thaw cycles, shaded corners, etc.	Medium	High	6
journey	poor visibility - fog, excessive dust, driving at sunset / sunrise	High	Medium	6
journey	no check-in procedure, emergency procedures or communications device	Medium	High	6
journey	aggressive or high risk driving (failing to yield right of way, passing when unsafe) by others	Medium	High	6
journey	collision with oncoming vehicle (their fault)	Medium	High	6
vehicle	improperly adjusted seat and headrest - MSI strain, visibility	High	Medium	6
vehicle	loose items in cab, disorganized driving workspace	Medium	High	6
vehicle	vehicle not equipped with winter equipment - e.g. tire chains, windshield washer fluid, blankets, shovel, etc.	Medium	High	6
vehicle	vehicle not equipped with standard year-round emergency equipment - first aid, tools, spare tire, hi-vis vest, etc.	Medium	High	6
vehicle	vehicles not regularly inspected	Medium	Medium	4

With their road safety priorities set, Top Notch Consultants started thinking about the measures they could take to address each of the hazards and contributing factors. For several of those, the answers seemed clear.

- A distracted driving policy prohibiting cell phone
- A more diligent approach to their existing check-in procedures
- A process to ensure vehicle inspections included checking for emergency equipment

To help determine what controls would work best for tougher hazards, and to help build and implement measures to eliminate those hazards and minimize associated risks, the safety committee used resources in our [Building Strong Policies](#) section and the [controls and safe work procedures](#) section.

