



U.S. Geological Survey Manual

Appendix A  
Part 445-2-H, Chapter 6

**Risk Assessment System (RAS) Risk Assessment Codes (RACs) Matrix**

<u>Risk Assessment Codes</u>				
<p>RAC levels are identified by a numerical scale 1-5, with RAC-1 being the most critical requiring immediate response and RAC-5 being the least critical. RACs are annotated by the RAC Number, followed by the Frequency and Severity. Examples of RAC annotations are 1(A)(I) for a RAC 1 that has Catastrophic consequences and a Immediate Danger Frequency A 4(IV)(B) would be a low level risk, with a minor severity with a likely probability</p> <p><b>RAC-1 (Critical)</b> represents an immediate danger to life, health or infrastructure and requires emergency correction or hazard controlled to a lower level of risk.</p> <p><b>RAC-2 (Serious)</b> represents a high level of threat to life, health or infrastructure and requires hazard correction or hazard controlled to a lower level of risk as soon as possible.</p> <p><b>RAC-3 (Moderate)</b> represents a medium level risk to life, health or infrastructure, with correction planned and completed, or hazard controlled to a lower level of risk.</p> <p><b>RAC-4 (Minor)</b> represents a low level risk, with correction planned and completed, or hazard controlled to a lower level of risk.</p> <p><b>RAC-5 (Negligible)</b> represents the lowest level risk and is considered minor. The correction of these risks can be planned in the out-years.</p>				
Probability Code	Frequent (A) Immediate danger to health and safety of public, staff, or property and resources; occurs frequently or continuously.	Likely (B) Probably will occur in time if not corrected, or probably will occur once or more times during the life of the system.	Occasional (C) Possible to occur in time if not corrected.	Rarely (D) Unlikely to occur; May assume exposure will not occur.
Severity Code				
<b>Catastrophic (I)</b> Immediate and imminent danger of death or permanent disability, chronic or irreversible illness, major property or resource damage.	<b>RAC 1</b>	<b>RAC 1</b>	<b>RAC 2</b>	<b>RAC 3</b>
<b>Critical (II)</b> Permanent partial disability, temporary total disability greater than 3 months, significant property or resource damage.	<b>RAC 1</b>	<b>RAC 2</b>	<b>RAC 3</b>	<b>RAC 4</b>
<b>Significant (III)</b> Hospitalized minor injury, reversible illness, period of disability 3 months or less, loss or restricted workday accident, compensable injury illness, minor property or resource damage.	<b>RAC 2</b>	<b>RAC 3</b>	<b>RAC 4</b>	<b>RAC 5</b>
<b>Minor (IV)</b> First aid or minor medical treatment. Presents minimal threat to human safety and health, property or resources, but is still in violation of a standard.	<b>RAC 3</b>	<b>RAC 4</b>	<b>RAC 5</b>	<b>RAC 5</b>