

Risk Management Plan **Response: This document has been reworded.**

**Suggest providing a flow chart for this process. Response Rejected. This is a reference document. Flowcharts aren't applicable to reference documents. If you have a flowchart suggestion, please provide to the P2 team.**

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**Recommend sample plans be included for different scope projects and programs as well as for organizations to facilitate application and use – reducing the workload and improving understanding.**

Scope **This whole process is appropriate for classical engineering, construction, dredging, environmental remediation, etc. project work. It is not appropriate for a master plan, a real estate easement, or developing a HQ regulation. Make the PMBP scaleable & tailor our processes to our products! Size does matter – and one size doesn't fit all! Response: The risk management plan should be limited to assumptions made on deliverables and what impacts could occur if those assumptions are not valid.**

**. It is mentioned that RM should be viewed from the life cycle perspective. This concept is important in that the earlier you identify a hazard the better you can manage it. But the section never really elaborates on the meaning or intent. We need to have people looking at RM from the design view, construct view and the facility usage view in the planning phase. Response BP team will review and respond.**

This reference document describes Risk Management, a systematic process of identifying, analyzing, and responding to risk for the entire project life cycle. A risk analysis is performed for five categories of project risk: health and safety, scope, quality, schedule, and cost. The level of detail of the risk analysis and Risk Management Plan is based on the complexity of the project. The Risk Management Plan is a supporting plan that facilitates the implementation of the Project Management Plan (PMP). Risk Management, *Quality Management*[REF1024], *Communications*[REF1022], and *Change Management*[REF1025] Plans are developed concurrently in the iterative Program/Project Planning Phase.

In accordance with AR 385-10, Army Safety Program, a risk analysis will be performed for all USACE managed projects **What is definition of USACE managed project? . Reference is made to AR 385-10 in this section. It should be noted that this regulation has an accompanying pamphlet which spells out risk management in great detail. Relevant concepts from DA Pam 385-10**

**needs to be incorporated into the entire RMP section.** When a project is determined to be other than low-risk, as defined in the risk management plan, the risk must be identified, and associated control procedures defined in the PMP. Only the responsible district or division Commander may provide final PMP approval in the event of an overall project risk rating of high, or very high, respectively. **It is mentioned in this section that other than low risk must be identified and associated control measures defined in the PMP(RMP?). Even projects with low risks need to be evaluated. This plan appears to say nothing needs to be done for low risks. Changes may be made which can change the risk level. Conditions may change that would also change risk.**

## **Responsibility**

The PM will initiate the development of the Risk Management Plan. The Project Delivery Team will participate in the development of the Risk Management Plan by identifying and defining potential risks and appropriate responses to risks for the project. **There is a need for the PDT to designate a person responsible for risk management. The current philosophy of the PMBP Manual is that the entire PDT is responsible. The problem with this is direct ownership or accountability is not established.**

**How are taskings generated by the RMP transferred to responsible parties? Who will track them?**

**Need to define expertise required for specific risk identifications for severity and probability determination. There needs to be professionals (in-house or contractor) who can perform assessments related to basic life safety, ventilation (HVAC and local exhaust), Indoor Air Quality, chemical process safety, industrial hygiene, safety engineering, etc**

**The PAO is part of the PDT and should be included in the development of the risk management plan.**

## **Distribution**

Project Manager (PM)

Project Delivery Team (PDT)

**Safety and Occupational Health Office**

**Risk Owner**

## **Ownership**

The USACEBP/P2 Program Office is responsible for ensuring that this document is necessary and that it reflects actual practice.

### **Risk Management Plan Format & Content**

Identify what the risk management activity is in WBS and describe how often risk management will be performed throughout the project life cycle.

Describe the budget for risk management plan development and monitoring. **Why do we describe budget?**

Customer and Stakeholder Risk Thresholds – Describe the amount of risk that is acceptable.

Methodology:

- a. Identify Risks and Characteristics
  - List of Risks
  - Triggers
- b. Evaluation and Analysis of Risks - Determine Probability and Severity Ratings
- c. Overall Risk Table
- d. Describe Highest-Level Risk
- e. Describe Risk Response Control Procedures - Document identified risks, descriptions, causes, what is affected in the WBS, and impact on project objectives, risk owner and responsibility, agreed response to risk, and expected result of response.

Risk Monitoring – Describe how the PDT will keep track of identified risks, identify new risks, determine if agreed responses to risks have been executed, and evaluate the effectiveness of risk responses to reduce identified risks. .

**Development of Risk Management Plan:**

Methodology

Address Risk Management in the Activity Development Process and Resource Estimate Development Process by insuring an activity is added in the WBS and budget for the activity.

Initiate risk management assessment meeting.

Identify health and safety hazards and risks to project scope, quality, schedule, and cost. **Can the PDT use a tool to help guide them through the process on projects that are not a high hazard? The PM and PDT members should be trained on how to do RM as well as how to develop a RMP.**

Risks	Triggers	Potential Impact
Example: Failure to meet a milestone could represent an early warning that a schedule delay may occur.	Milestone exceeded	Schedule will be delayed

Note: Inputs to Risk Identification include but are not limited to the following:

- All project background information
- Customer quality expectations
- Customer and stakeholder risk tolerance(s)
- Historical records
- Past Lessons Learned
- Scope

WBS  
Network Diagram  
Cost & Time Estimates  
Project Team Personnel Assignments

### Customer Preliminary Hazard List (PHL)

**Note:** Safety hazards are potential sources of danger that could be faced while performing a project activity, including environmental and human factors. In addition, consider potential risks that could be associated with accomplishing the project's activities, schedule, and fiscal resources.

Evaluate and analyze each hazard and risk identified above. Determine the appropriate probability rating and severity rating (should the hazard/risk event occur) for each hazard and risk from the tables below.

**Note:** Exercising judgment on how to eliminate or reduce hazards and risks to lessen the overall project impacts is inherent in the risk assessment process. Use the descriptions provided below to describe hazard and risk probabilities and severities.

**Probability Rating Table.** Based on the likelihood that an event will occur.

Probability	Description
Frequent	Occurs often, continuously experienced.
Occasional	Occurs several times.
Likely	Occurs sporadically.
Seldom	Unlikely, but could occur at some time.
Unlikely	Can assume it will not occur.

**Severity Rating Table.** Based on the degree of injury, property damage, or other mission-impairing factors, to include the degree of impact on the project's Baseline cost, schedule, scope, and quality thresholds as described in the table below.

- **The indicators in the table for safety and health do not provide the user enough definition to make a good judgement. This is based on the lack of specific detail at this preliminary stage of the project. What might be better indicators are severity based on type of project as shown below:**
  - ❑ **Negligible.** Severity pertaining to typical design and light construction or smaller scope or non-hazardous end use.
  - ❑ **Marginal.** Severity pertaining to typical design and heavy construction or larger scope or moderate hazardous end use.
  - ❑ **Critical.** Severity pertaining to complex design or high hazard construction or complex scope or high hazard end use.
  - ❑ **Catastrophic.** Severity pertaining to highly complex design or extremely high hazard construction or highly complex scope or extremely high hazard end use.

**Terminology for indicators such as high hazard construction should be**

defined with examples (i.e., tunneling or dredging work) for clarification.

Also suggest providing a few examples taking the user through the entire process

- such as a users guide appendix.

	<b>Negligible</b>	<b>Marginal</b>	<b>Critical</b>	<b>Catastrophic</b>
<b>Health and Safety</b>	First aid or minor medical treatment	Minor injury, lost workday accident	Permanent partial disability, temp. total disability > three months	Death or permanent total disability
<b>Cost</b>	Insignificant cost increase	5-10% cost increased	10-20% cost increase	> 20% cost increase
<b>Schedule</b>	Insignificant schedule slippage	5-10% schedule slippage	10-20% schedule slippage	> 20% Overall Project schedule slippage
<b>Scope</b>	Scope change barely noticeable	Minor areas of scope are affected	Scope change unacceptable to customer	Project end item is effectively useless
<b>Quality</b>	Quality degradation barely noticeable	Quality reduction requires customer approval	Quality reduction unacceptable to customer	Project end item is effectively unusable

Enter probability and severity ratings from above into the Overall Risk Table below to characterize overall project risk as E, H, M, or L (described below) for each of the five risk categories.

- E (Extremely High) – Loss of ability to accomplish project.
- H (High) – Significantly degrades capabilities to accomplish project.
- M (Moderate) – Degrades project accomplishment capabilities.
- L (Low) – Little or no impact on project accomplishment.

**Example of Overall Risk Table.**

		<b>Health and Safety Hazard Probability</b>				
		Frequent	Occasional	Likely	Seldom	Unlikely
<b>SEVERITY</b>	Catastrophic	E	E	H	H	M
	Critical	E	H	H	M	L
	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L
		<b>Scope Risk Probability</b>				
		Frequent	Occasional	Likely	Seldom	Unlikely
<b>SEVERITY</b>	Catastrophic	E	E	H	H	M
	Critical	E	H	H	M	L
	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L
		<b>Schedule Risk Probability</b>				
		Frequent	Occasional	Likely	Seldom	Unlikely
<b>SEVERITY</b>	Catastrophic	E	E	H	H	M
	Critical	E	H	H	M	L
	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L
		<b>Cost Risk Probability</b>				
		Frequent	Occasional	Likely	Seldom	Unlikely
<b>SEVERITY</b>	Catastrophic	E	E	H	H	M
	Critical	E	H	H	M	L
	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L
		<b>Quality Risk Probability</b>				
		Frequent	Occasional	Likely	Seldom	Unlikely
<b>SEVERITY</b>	Catastrophic	E	E	H	H	M
	Critical	E	H	H	M	L
	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L

Evaluate the above results and determine the highest-level risk of all five categories. Overall project risk level is determined by the highest risk rating. Decisions to accept risks must be made at a level equal to the degree of risk. Project and Program Managers and Commanders must weigh the risks against the benefits of performing an activity.

- ❑ **It is more logical to have the discussion about risk acceptance decision making in the Risk Control section. Risk control decisions are based on many factors – some base on law, regulations or good management practices. Each one represents a quantum leap in accepting risk. Once a control procedure and resultant (residual) risk has been determined, the risk acceptance authority will accept accountability for both the control procedure and the residual risk.**

**The use of an overall project “highest level risk” of all five categories seems too simplistic and doesn’t appear to take into possible account risk reduction actions. Is an overall project risk necessary? First it is suggested that overall risk be determined by the residual risk keeping all five categories of risk separate.**

**Note:** Unnecessary risk can be as great a hindrance to project completion as any other factor. The levels at which USACE risk decisions can be made are: E (extremely high)- division commander; H (high)- district commander; M (moderate)- program manager; and L (low)- project manager. In all cases, the benefits of taking the risk must be greater than the possible consequences.

Establish Risk Control procedures for activities that are identified as either M moderate, H high, and E extremely high. Determine and document action(s) required reducing or eliminating hazards and risks. Risk Control Response – This information could be displayed as follows.

**Suggest providing examples of control procedures for the user – possibly in an appendix. The Corps has standard control procedures built into some processes and varies by geographic district on other control procedures. Some may be more effective than others.**

**Is the “Expected Result of Response” from the control response table in fact the residual risk (reassessment of risk w/ control implemented)? If so, this definitely needs to be there and should be explained better in the write up for the user.**

Risk	Description	Cause	WBS Item Affected	Impact on Project Objectives	Risk Owner and Responsibility	Agreed Response to Risk	Expected Result of Response

**Note:** Controls may be as simple as referencing an SOP or conducting a job-site briefing.

Risk Monitoring is conducted during the Project Execution & Control Phase. See *Project Execution and Control*[PROC1017] and *Change Management*[PROC1004] processes. **When will risk assessments get performed? They should be scheduled for the beginning of each phase and prior to modifications.**