



2019 PNWS-AWWA Conference

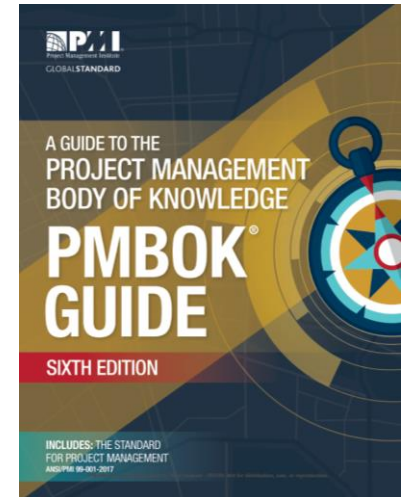
# Cocktail Napkin or Four-Inch Binder? Rightsizing Your Project Management Plan

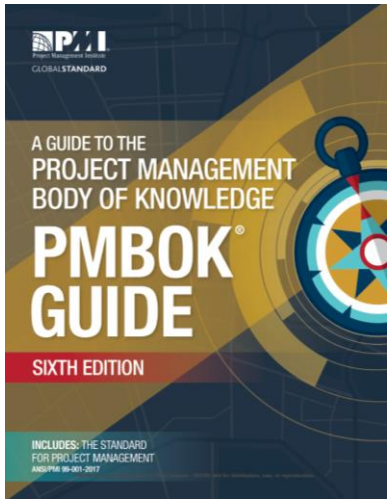


Mark Graham, P.E. PMP

“A **project** is a **temporary** endeavor undertaken to create a **unique** product, service or result.”

- Project Management Body of Knowledge, 6<sup>th</sup> Ed.

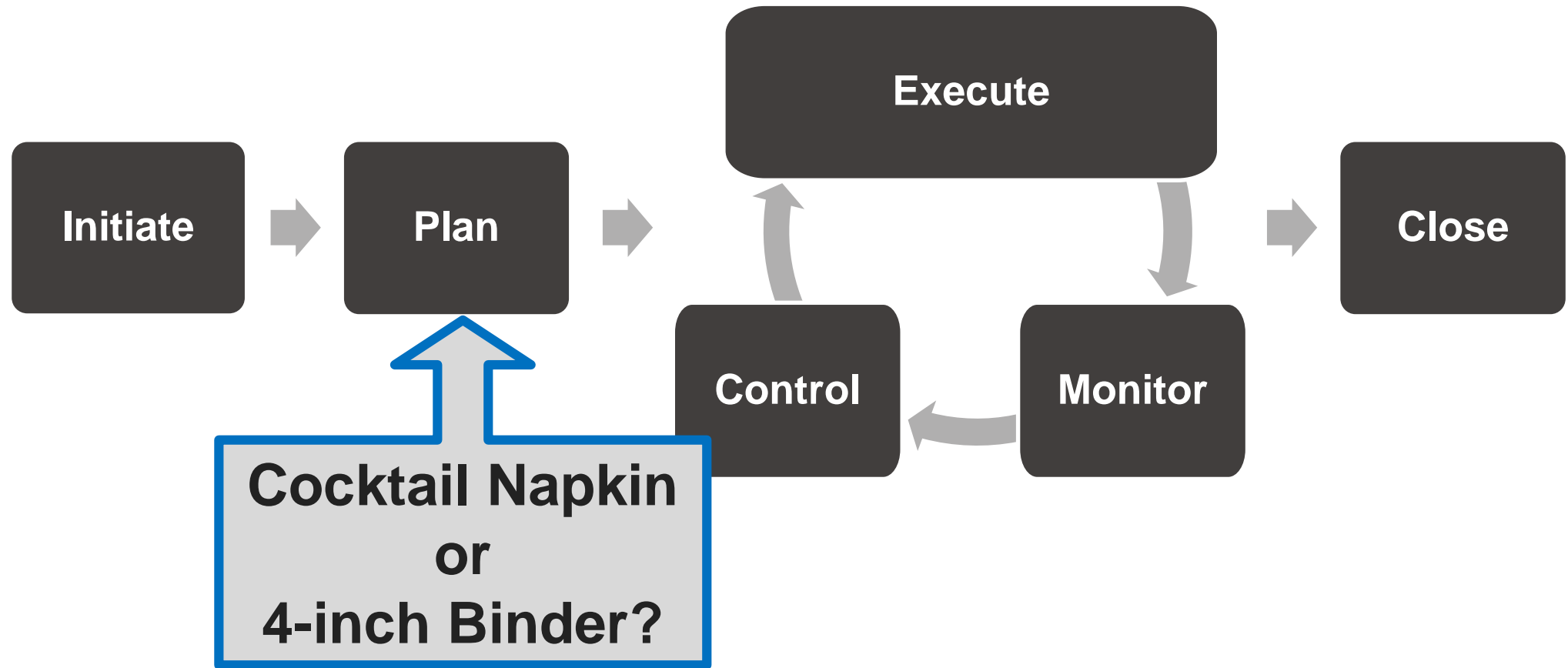




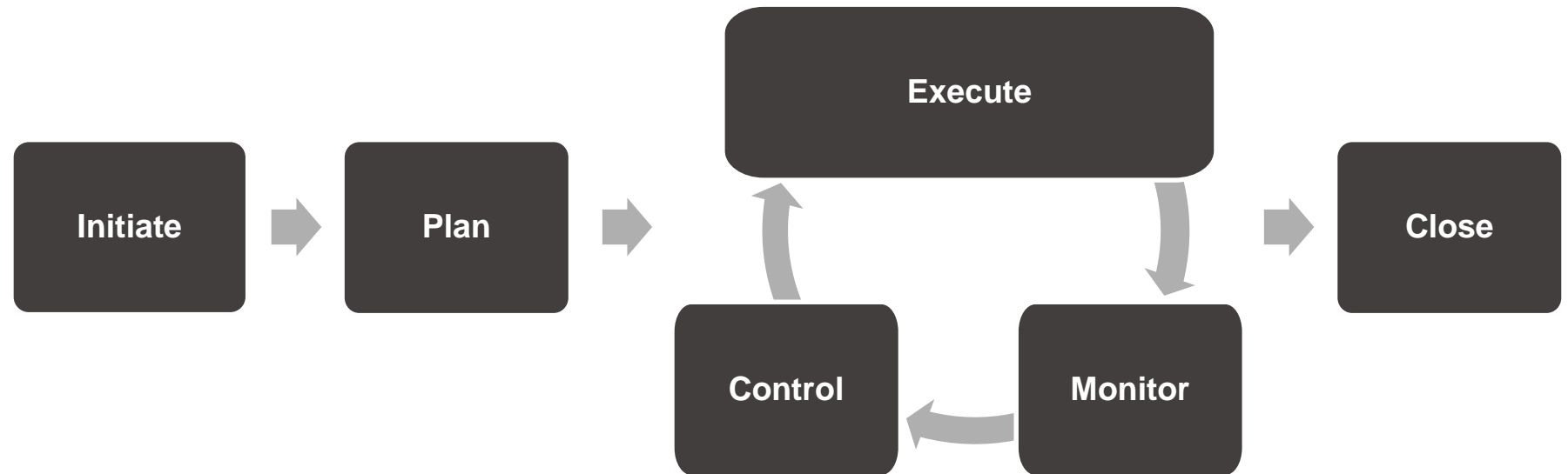
“The **project management plan** describes how the project will be executed, monitored and controlled, and closed. It integrates and consolidates all of the subsidiary management plans and baselines, and other information necessary to manage the project.”

- Project Management Body of Knowledge, 6<sup>th</sup> Ed.

# Project Management Processes



“A **project management plan** is a **temporary** endeavor undertaken to create a **unique** product, service or result.”



**The Project Management Plan Project Lifecycle**

Why Prepare a  
Project Management Plan?

# Reasons for Preparing a Project Management Plan

- I want my project to succeed
- I was told to

“Plans are nothing; planning is everything.”

- Dwight D. Eisenhower

# Reasons for Preparing a Project Management Plan

- I want my project to succeed
  - I want to thoroughly plan the project before beginning the work
  - I want the team executing the project to work efficiently
  - I want to be prepared for unexpected events
- I was told to
  - I want the email harassment to stop
  - I want to assure others that I am a competent PM
  - I want to cover my butt if the project does not succeed



# Reasons for Preparing a Project Management Plan

- I want my project to succeed
  - I want to thoroughly plan the project before beginning the work
  - I want the team executing the project to work efficiently
  - I want to be prepared for unexpected events

Scope

Requirements

Schedule

Budget

Quality

Risk

Resources

Communication

Procurement

“The **project management plan** describes how the project will be **executed, monitored and controlled**, and **closed**. It integrates and consolidates all of the subsidiary management plans and **baselines**, and other information necessary to manage the project.”

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# Planning a Project Management Plan

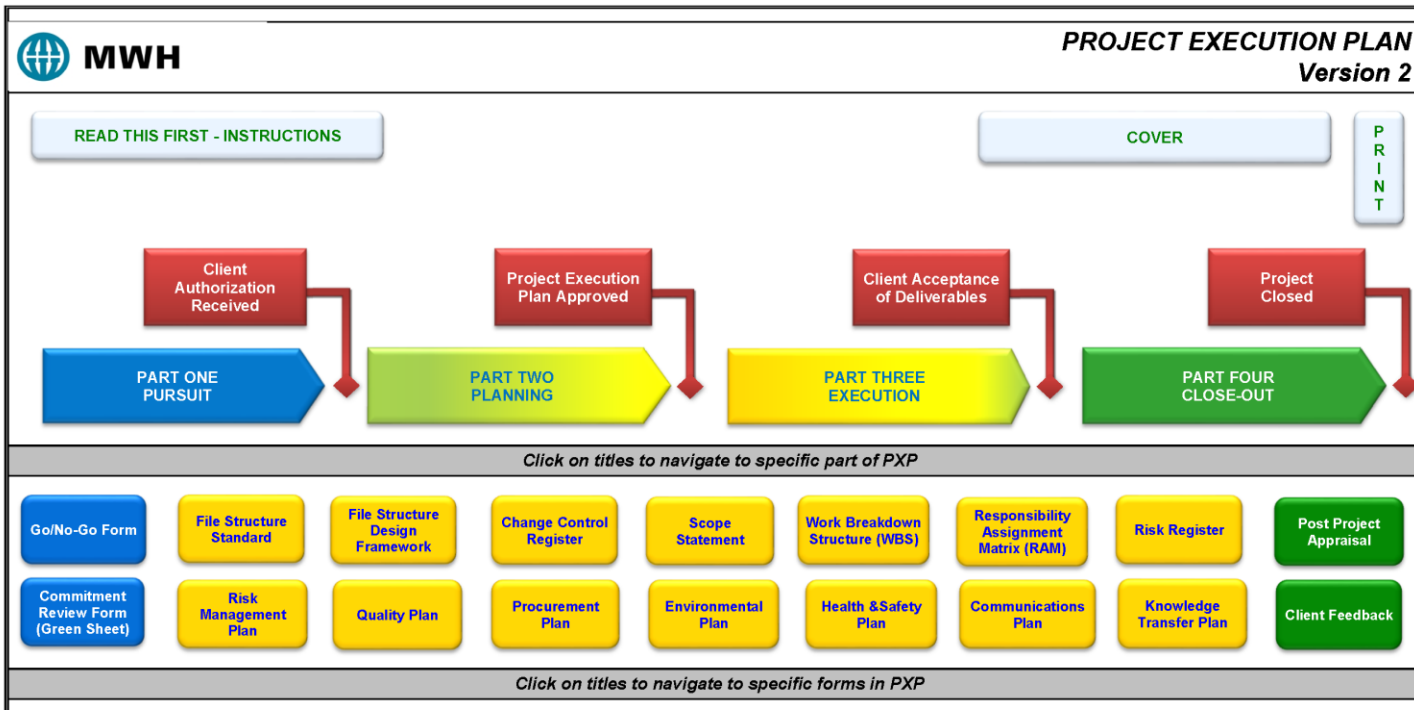
# Level of Effort to Prepare a Project Management Plan

Table 1-1 General Budgeting Guidance – Project Execution Plans

Task Description	Personnel	Key Activities	Estimated Level of Effort by Project Size		
			< \$500,000	\$500,000 – \$2,000,000	> \$2,000,000
			(Hrs)	(Hrs)	(Hrs)
Project Execution Plan (PxP)	PM	Prepare draft and final	4 - 16	12 - 24	20 - 40
	Project Team	Input and review	0 - 1	2 - 4	4 - 6
	Sr. PM	Review/approval	0 – 2	2 - 4	4 – 8
	DPM	Review/approval	N/A	N/A	4 - 8

~0.5% of Total Project Cost  
~5% of PM Budget

# The Wrong <sup>Reduce</sup> Templates Improve Planning Efficiency and Quality

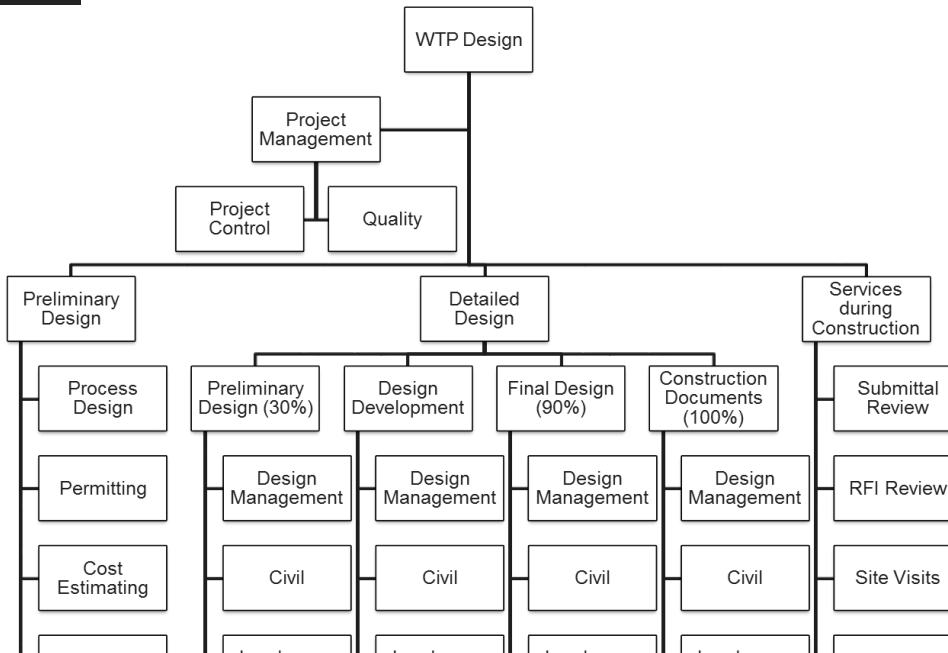


Internal Resources

External Resources  
PMI.org  
projectmanagement.com

# Preparing a Project Management Plan

# Breaking Down the Work into Manageable Pieces



2018 WOW Presentation - Guess What? You're a PM

No.	Name	Objectives and Activities	Team	Inputs	Deliverables	Pre Post	Start Finish
101	<b>Outline</b>	- Review previous presentations - Review abstract with Talley	Lead: Graham Support: Talley	- Previous presentations - Abstract	- Outline	-	Thu 3/15
	Prepare outline for presentation					102	Fri 3/16
102	<b>First Draft</b>	- Develop first draft of presentation - Identify graphics needed	Lead: Graham Support: Estrada	- Outline - Template	- Draft Presentation Slides	101	Mon 3/19
	Develop first draft of presentation					103	Tue 3/20
103	<b>Review</b>	- Review for content - Suggest additional graphics	Lead: Talley	- Draft Presentation	- Comments	102	Wed 3/21
	Review first draft of presentation					105	Fri 3/23
104	<b>Format and Graphics</b>	- Format presentation - Generate graphics	Lead: Estrada	- Draft Presentation - Graphics Library	- Revised Presentation Slides	102	Wed 3/21
						105	Fri 3/23
105	<b>Finalize Presentation</b>	- Incorporate comments into formatted presentation - Practice presentation - Make final revisions	Lead: Graham Support: Estrada	- Revised Presentation Slides	- Final Presentation Slides	103, 104	Mon 3/26
	Finalize presentation slides					106	Tue 3/27
106	<b>Deliver Presentation</b>		Lead: Graham	- Final Presentation Slides	- Presentation	105	Wed 3/28
						107	Wed 3/28
107	<b>Review Feedback</b>	- Compile notes from feedback at conference - Review feedback provided following conference	Lead: Graham	- Attendee feedback	- Feedback notes	106	Wed 3/28
	Review feedback received from conference attendees					108	Tue 5/1

Scope

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# SMART Scope Definition

- Specific
- Measurable
- Achievable
- Realistic
- Timebound

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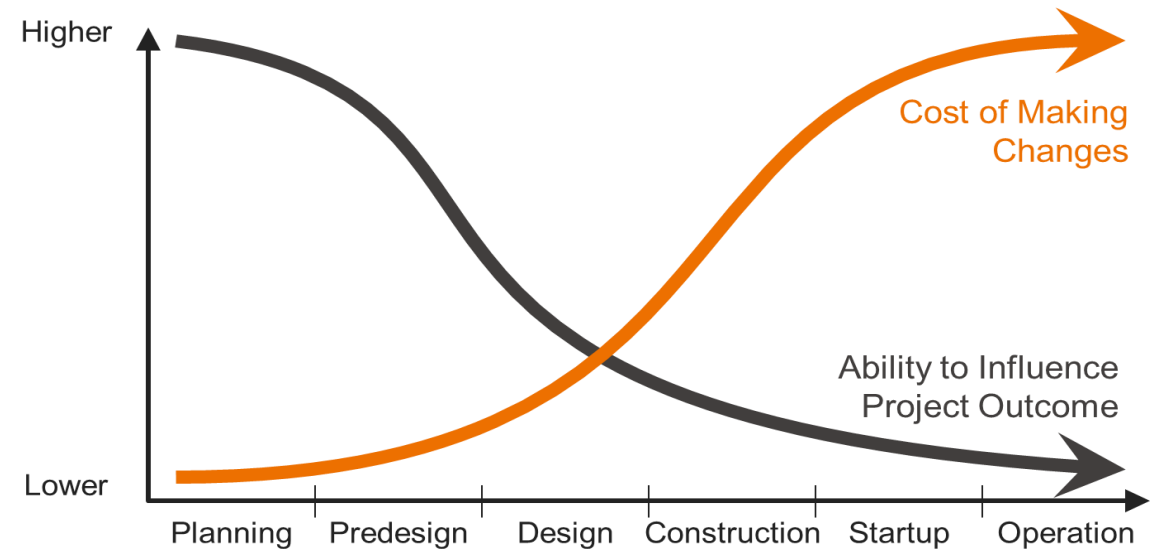
Communication

Procurement



# Plan for Change

- Avoid over constraining the team
- Avoid over-defining future tasks
- Proactively manage changes to the project scope, budget, requirements, quality, risk...



Scope

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# Understand the Project Constraints

- Who are the Stakeholders?
- What are their goals and objectives?
- How do these relate to the Scope?

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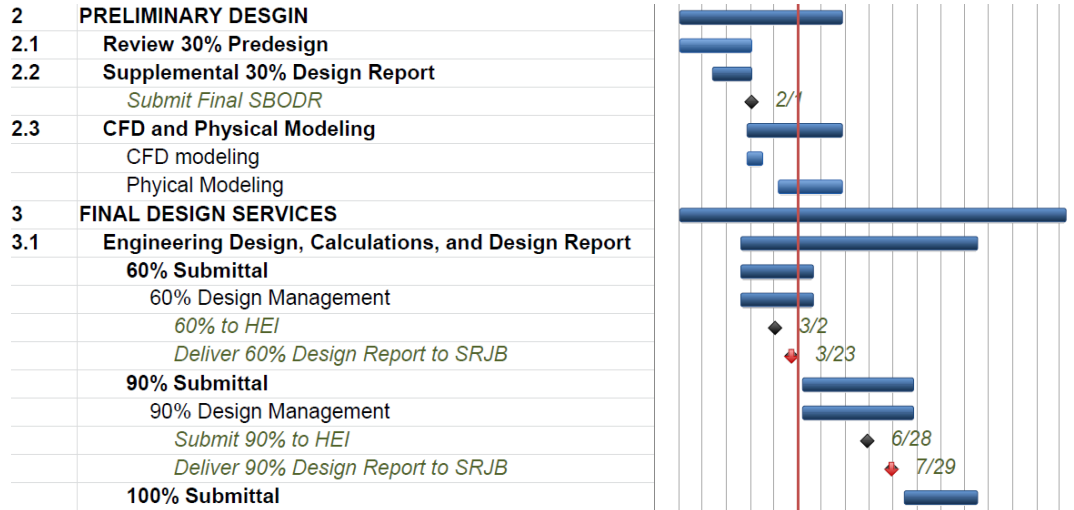
Resources

Communication

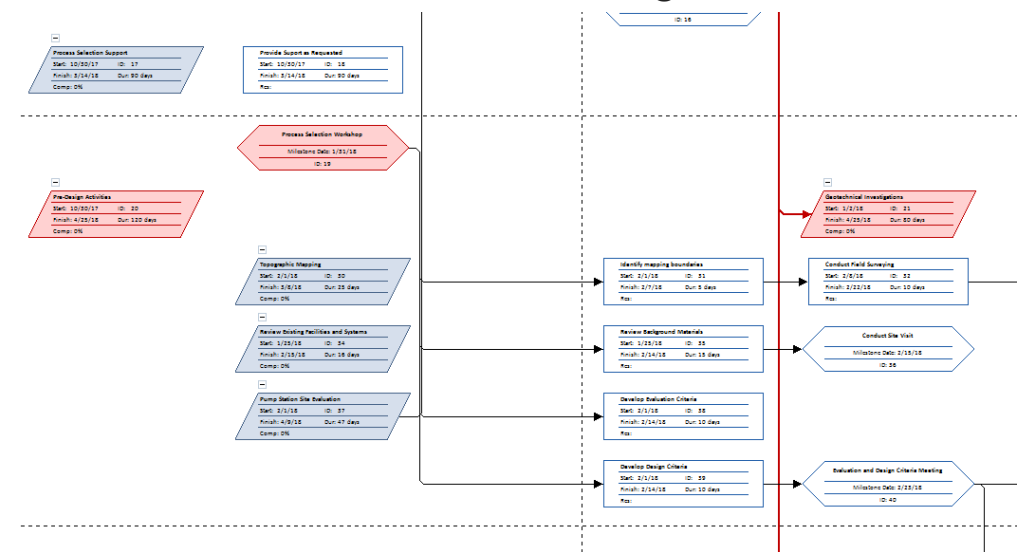
Procurement

# Define a schedule to at least the same level of definition as the scope.

Gantt Chart



Network Diagram



Scope

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# Match the Budget Definition to Your Progress Tools

Task	Task Description	Stantec Fee Estimate				Fee by Subconsultant (* D/M/W/ESB participation)									Total Fee
		Labor	ODC	Sub Markup	Total	HDR	Akana*	Elcon*	HK Electric*	JLA*	David Mills*	Nevue Ngan*	Shur*	Total Subs	
<b>1</b>	<b>Project Management</b>	<b>30,533</b>	-	-	<b>30,533</b>	-	-	-	-	-	-	-	-	-	<b>30,533</b>
1.1	Project Coordination & Direction	5,549	-	-	5,549	-	-	-	-	-	-	-	-	-	5,549
1.2	Project Controls	22,022	-	-	22,022	-	-	-	-	-	-	-	-	-	22,022
1.3	Quality Management	2,962	-	-	2,962	-	-	-	-	-	-	-	-	-	2,962
<b>2</b>	<b>Process Selection Support</b>	<b>43,980</b>	-	<b>99</b>	<b>44,079</b>	<b>1,976</b>	-	-	-	-	-	-	-	<b>1,976</b>	<b>46,055</b>
2.1	Cost Estimating & Value Engineering	18,410	-	-	18,410	-	-	-	-	-	-	-	-	-	18,410
2.2	Constructability Review	7,940	-	-	7,940	-	-	-	-	-	-	-	-	-	7,940
2.3	Operations Review	17,630	-	99	17,729	1,976	-	-	-	-	-	-	-	1,976	19,705
<b>3</b>	<b>Pre-Design Activities</b>	<b>94,816</b>	-	<b>1,361</b>	<b>96,177</b>	<b>988</b>	-	-	<b>912</b>	<b>8,659</b>	<b>5,360</b>	<b>4,350</b>	<b>6,960</b>	<b>27,229</b>	<b>123,406</b>
3.1	Geotechnical Investigations	25,412	-	-	25,412	-	-	-	-	-	-	-	-	-	25,412
3.2	Topographic Mapping	9,230	-	648	9,878	-	-	-	-	7,872	5,080	-	-	12,952	22,829
3.3	Review Existing Facilities and Systems	15,140	-	222	15,362	-	-	-	-	-	140	2,320	1,980	4,440	19,802
3.4	Pump Station Site Evaluation	29,708	-	298	30,006	988	-	-	912	787	140	1,160	1,980	5,967	35,974
3.5	Land Use Permitting Support	15,326	-	194	15,520	-	-	-	-	-	-	870	3,000	3,870	19,390
<b>9</b>	<b>Mitigation</b>														-
	<b>Total</b>	<b>169,329</b>	-	<b>1,460</b>	<b>170,789</b>	<b>2,964</b>	-	-	<b>912</b>	<b>8,659</b>	<b>5,360</b>	<b>4,350</b>	<b>6,960</b>	<b>29,205</b>	<b>199,994</b>

Suitable for:

- Progress Tracking (Earned Value)
- Estimate to Complete
- Resource Allocation

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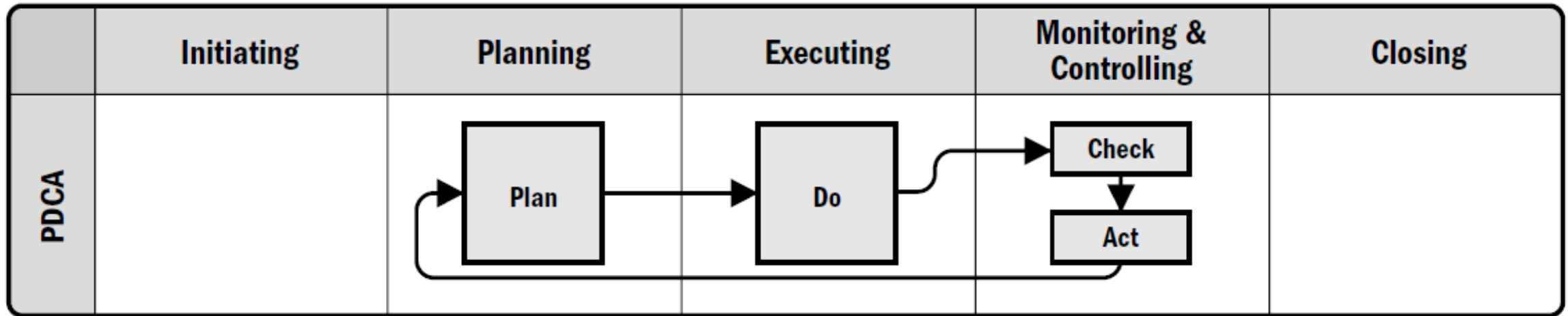
Risk

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# Define the Expected Level of Quality



Scope

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Quality

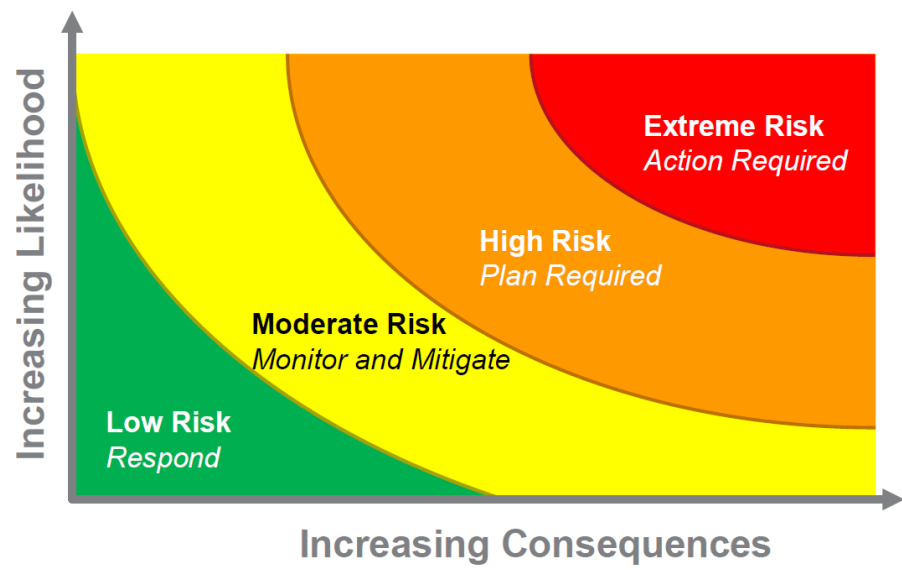
Risk


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# Identify and Manage Risks





MWH

RISK REGISTER

Project Name:

Green River Filtration Facility - Phase 3 ESDC

Client:

Tacoma Department of Public Utilities, Division of Water (Tacoma Water)

File path:

Project\Phase 3\Risk Register\Phase 3

Job Number:

10500705

Project Manager:

Mark Graham

Date Prepared:

4/4/2012

Dates Updated:

1/4/2013

Risk ID	Date Identified	Identified By	Risk Description	Project Lifecycle Phase	Risk Type	Status	Probability (%)	Impact (\$)	Expected Loss (\$)	Approach	Strategy Description	Indicators	Lead	Action Date	Action Description
1	4/4/2012	C Bromley	Construction period may extend past schedule included in contract	Execution	Schedule	Identified	25%	\$ -	\$ -	T	Obtain additional budget (from management reserve of \$150k) if time extension is likely.	Delay shown against construction schedule	M. Graham	Ongoing	Monitor scheude monthly.
2	4/4/2012	C Bromley	Cost to provide services described in approved contract exceed budget.	Execution	Financial	Identified	25%	\$ -	\$ -	T	Obtain additional budget (from management reserve of \$150k) if justified. Adjust scope and budget on tasks with available budget to balance overall costs.	% spent exceeds % complete on an individual task.	M. Graham	Ongoing	Preapare monthly Earned Value Report.
3	4/4/2012	C Bromley	MWH responsible for cost to provide services described in approved contract exceeding budget	Execution	Financial	Identified	10%	\$ 50,000	\$ 5,000	A,M	1. Implement QA/QC plan to avoid rework. 2. Implement communications plan to keep team informed of project status.	% spent exceeds % complete on an individual task.	M. Graham	Ongoing	Prepare QA/QC Plan (done). Prepare Communications Plan (done). Review EVR for issues.
											1. Work with Hoffman to develop 3-month	Review times regularly at or over allowable.			Prepare submittal

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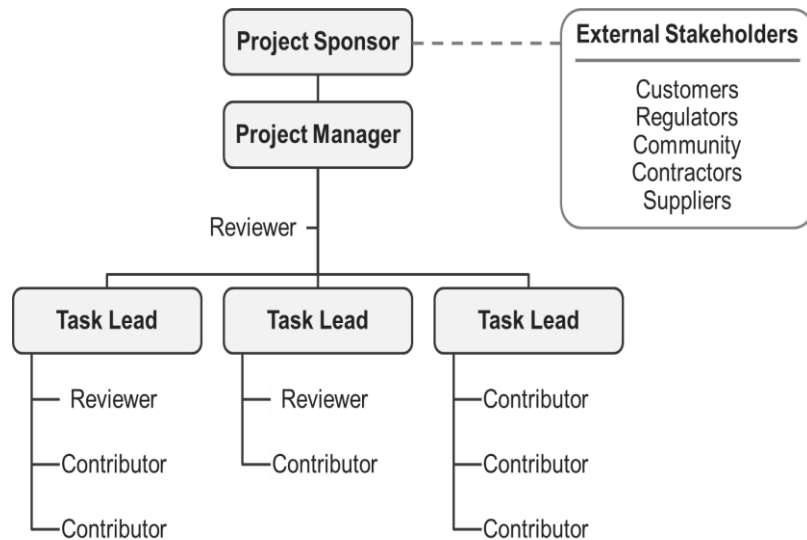
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# Do you have the right people in the right job at the right time?



Role	Discipline									
	PM	PTL	Structural	Architectural	Hydraulics & Pumps	Mechanical (Piping, Gates, Screens)	Electrical	I&C	Building Mechanical	BIM/CAD
<b>Lead</b>	Mark Graham (SEA-5)	David Sudibyo (DEN-1)	John Hamm (DEN-1)	Shana Wygonik (TAM-1)	Christopher Michalos (DEN-1)	David Sudibyo (DEN-1)	Keith Smith (IWA-1)	Brad Sauder (CLE-1)	Matthew Reagan (CLE-1)	Robert Marr (DEN-1)
<b>Support</b>	Tom Bailey (SEA-5)	N/A	Jeremy Welles (DEN-1)	Shyamli Gupta (PUN-1)	Connie Adera (DEN-1)	Connie Adera (DEN-1)	Shubhangi	Jeremy Adkins	N/A	N/A
<b>BIM/CAD</b>	N/A	N/A	Shyamli Gupta (PUN-1)	Shyamli Gupta (PUN-1)	Aniket Manjrekar (PUN-1)	Aniket Manjrekar (PUN-1)				
<b>QC</b>	Angie MacKinnon (PMCL) (LAS-1) Bob Armstrong (PIC) (DEN-1)	Gary Hoornaert (CHI-4)	John Tehaney (SAC-1)	Eugene Minick (CLE-1)	Wade Moore - Modeling Tino Senon - Pumps Gary Hoornaert - Pumps, Gates, Screens					
<b>Engineer of Record</b>			Jed Iverson (DEN-1)	Shana Wygonik (TAM-1)	Christopher Michalos (DEN-1)	Christopher Michalos (DEN-1)				

Updated 11/19/2015

- Org Chart
- Depth Chart
- RACI Matrix

Scope

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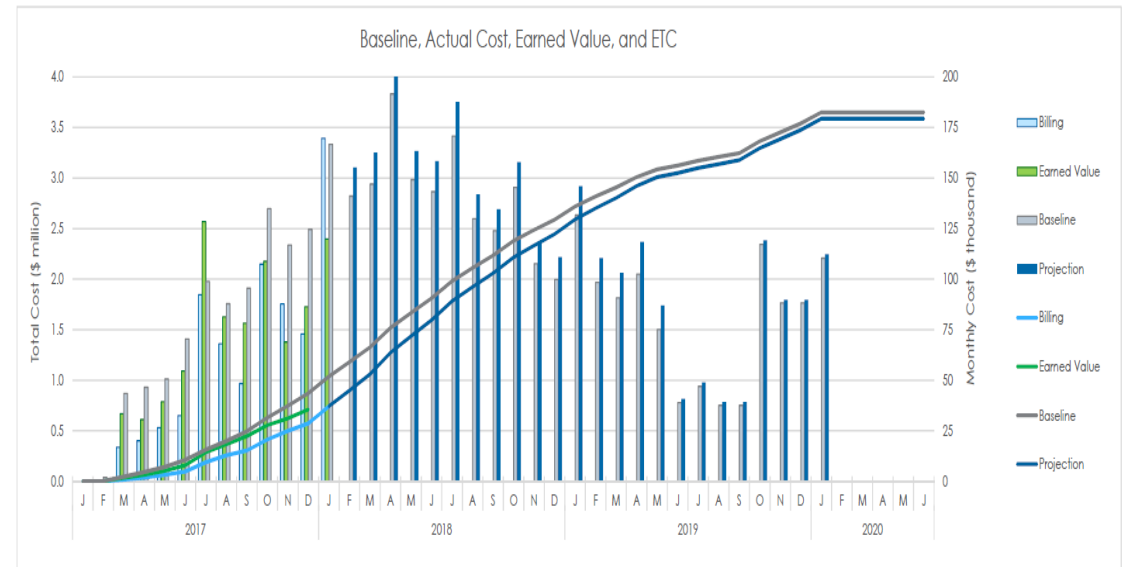
Resources

Communication

Procurement

# You're only as good as others think you are.

- Internal and external communications protocols
- Document management



Scope

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# If you don't have it, how will you get it?

- Understand internal and external procurement needs
  - Contracts
  - Purchase Orders
  - Schedule
  - Funding Restrictions
  - Outsourcing Decisions

Scope

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# Closing a Project Management Plan

Moving from PM  
Plan Preparation  
to Use

# The Treachery of Project Management Plans



# The Project Management Plan is Not the Project

- Plan to revise the plan
- If it isn't being used, do something different

