Developing an Effective Project Management Plan: Esquimalt Harbour Remediation Project

Défense nationale National Defence

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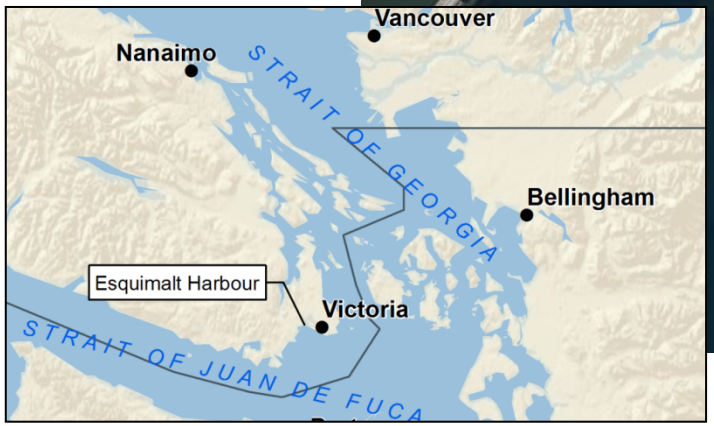
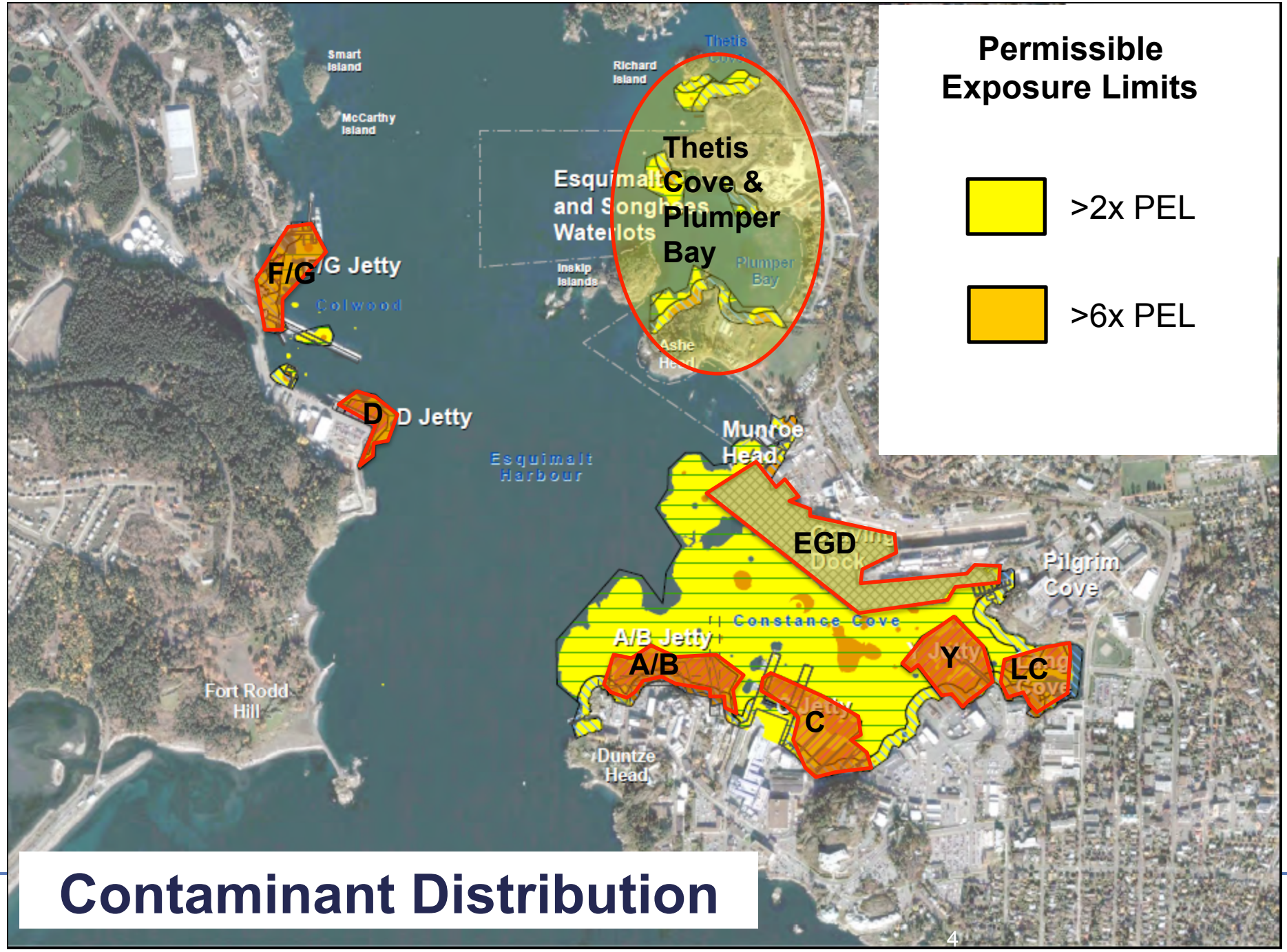
Esquimalt Harbour Remediation Project Overview

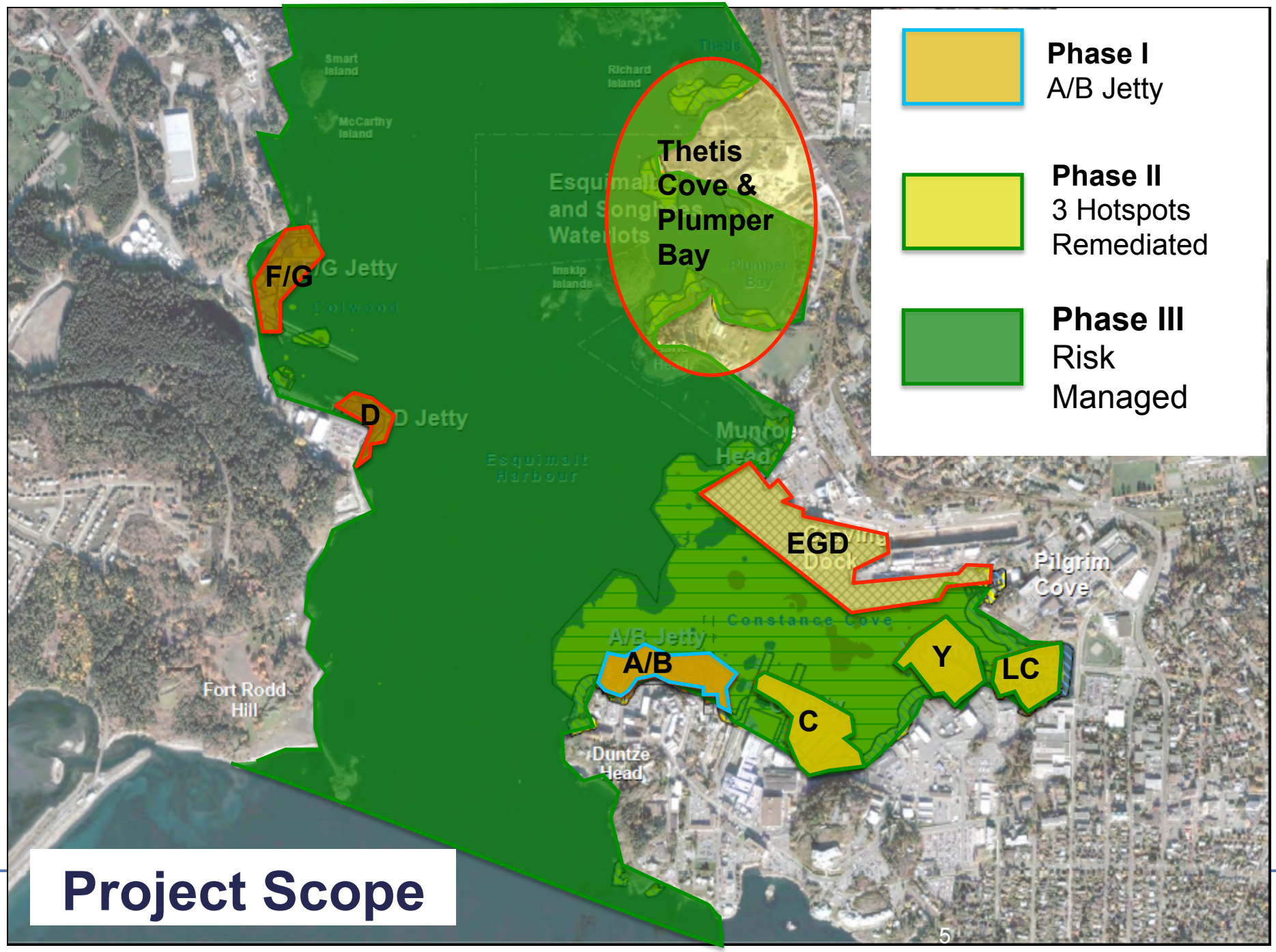


Esquimalt Harbour Remediation Project Overview

- **Project Purpose:** To develop and implement remedial / risk management actions to address risk associated with historically contaminated sediments
- **Project Funding:** Primarily Federal Contaminated Sites Action Plan (FCSAP)
- **Key Project Drivers**
  - 25 chemicals of potential concern
  - Identified contaminants translate to Human Health and Ecological Risks
  - Esquimalt Harbour is a Class 1 federal contaminated site with a booked liability in excess of $180 million



Contaminant Distribution



Project Scope

Esquimalt Harbour Remediation Project Overview

- **Project Budget and Schedule:** $150 million plus; expected completion date: 2020
- **Project Status:** Remedial design at four hotspots; dredging underway in conjunction with A/B Jetty Recapitalization Project
- **Project Management Plan (PMP):** Given project complexity and short timeframe for completion, developing a useful and robust PMP was a key step to establish sound project management and tracking

EHRP PMP Development: Goals

- **GoC Policies:** Align with Treasury Board Secretariat and National Defence policies on management of projects
- **Comprehensive:** Single repository for all EHRP project management-related material
- **Establish Practical Tools:** Implementation and technique descriptions for key PM processes
- **Documentation:** Document project procedures and provide a robust record of EHRP PM processes
- **Ensure Focus:** Ensure project goals listed in Project Charter are front and center throughout the project lifecycle
- **Communication:** Provide a common language and clear communication paths

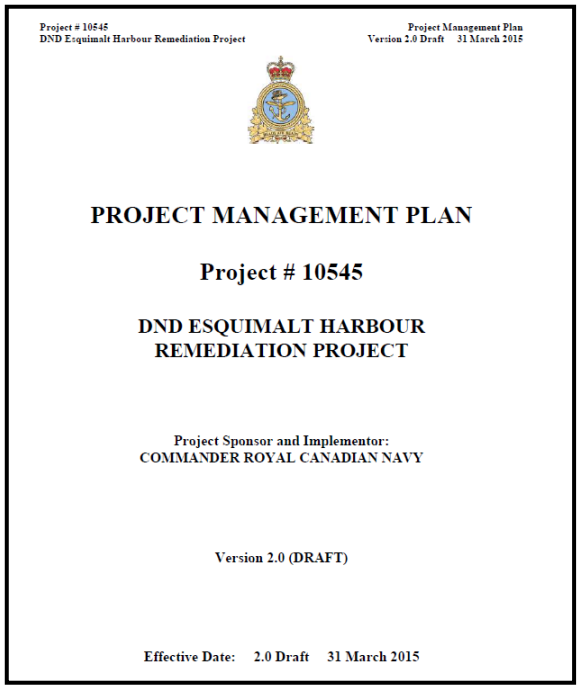
EHRP PMP Development: Frameworks

TBS
Policy on the Management of Projects

NPMS
National Project Management System

PMBOK
Project Management Body of Knowledge

PAD
National Defence Project Approval Directive



Project # 10545
DND Esquimalt Harbour Remediation Project

Project Management Plan
Version 2.0 Draft 31 March 2015

PROJECT MANAGEMENT PLAN

Project # 10545

DND ESQUIMALT HARBOUR REMEDIATION PROJECT

Project Sponsor and Implementor:
COMMANDER ROYAL CANADIAN NAVY

Version 2.0 (DRAFT)

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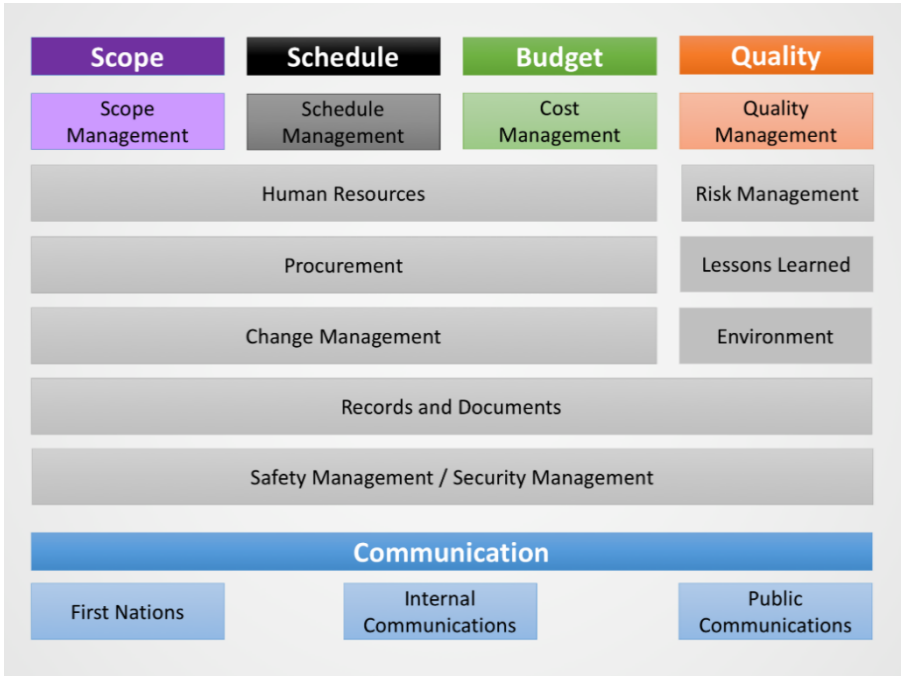
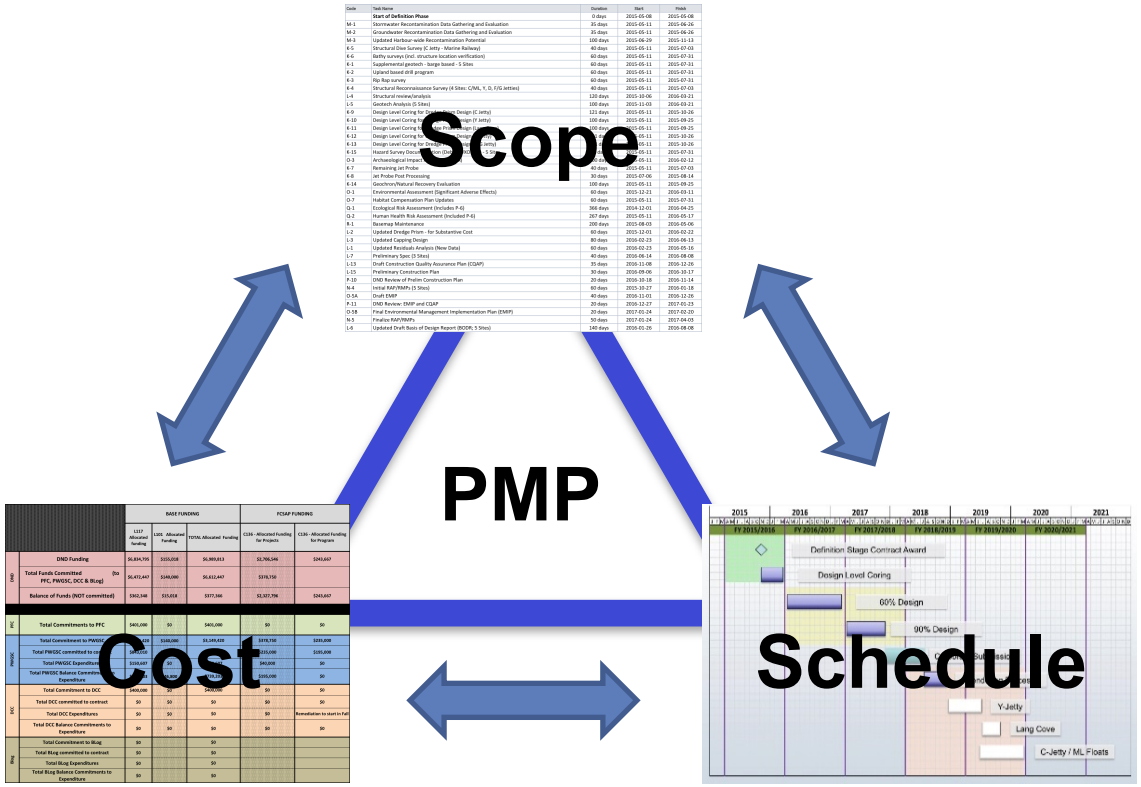


EHRP PMP: Key Project Components

The EHRP PMP defines key tools and processes linking Scope, Schedule, and Budget management



EHRP PMP: Tracking Tools

Project Area	WBS Task ID	Tracking Tool	Frequency of Submission	Frequency of Review
External Communication	J-11	External Stakeholder Activity Tracking Sheet	As needed	PCMT
HR Management	J-5	Organizational Structure	Annually	Annually
Internal Communication	J-6	PIMT Meeting Material	Weekly	Weekly
Performance - Schedule	J-3	Schedule Variance Reporting	Weekly	Weekly
Records and Documents Manangement	J-New	FTP Site Guidance	As needed	As needed
Risk Management	J-New	Risk Register	Annually	Annually
Technical	J-11	Planned Deliverable Tracking Sheet	Monthly	Monthly
Technical	J-New	Completed Deliverable Tracking Sheet	Monthly	Monthly
Technical	J-New	Task Specifications	As documents are available	As documents are available

Scope Management

Detailed Work Breakdown Structure – Definition Stage

Code	Task Name	Duration	Start	Finish
	Start of Definition Phase	0 days	2015-05-08	2015-05-08
M-1	Stormwater Recontamination Data Gathering and Evaluation	35 days	2015-05-11	2015-06-26
M-2	Groundwater Recontamination Data Gathering and Evaluation	35 days	2015-05-11	2015-06-26
M-3				
K-5				
K-6				
K-1				
K-2				
K-3				
K-4				
L-4				
L-5				
K-9				
K-10				
K-11				
K-12				
K-13				
K-15				
O-3				
K-7				
K-8				
K-14				
O-1				
O-7				
Q-1				
Q-2				
R-1				
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L-7				
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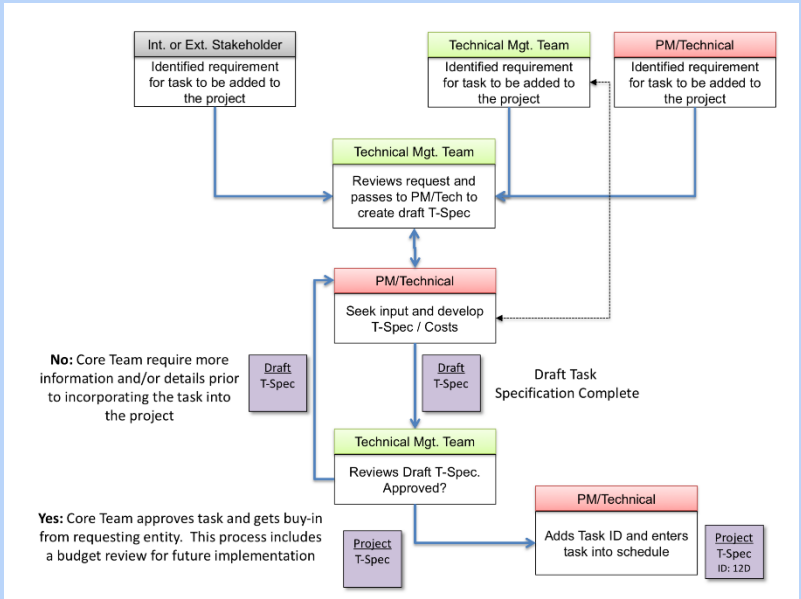
O-5A				
P-11				
O-5B				
N-5				
L-6				
O-4				
L-9				
L-8				
L-10				
P-9				
L-11				
L-12	Final Geotechnical evaluation	50 days	2016-09-06	2016-11-14
L-16	Finalize Project Construction Plan	40 days	2016-11-15	2017-01-09
L-18	Final Basis of Design Report (BODR)	25 days	2017-03-14	2017-04-17

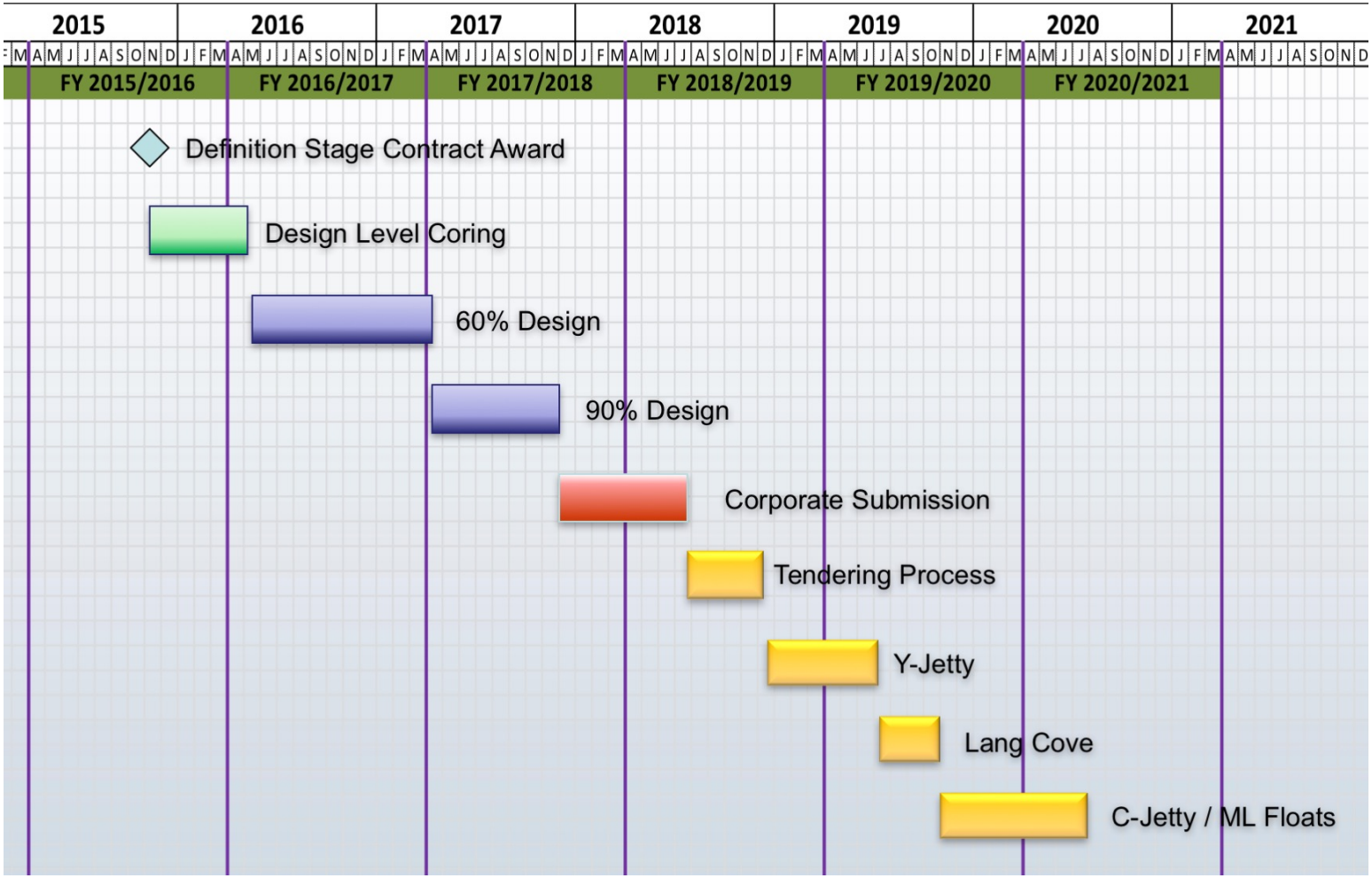
P-4	Procurement/Communication/Legal (Internal Review)	60 days	2017-04-18	2017-07-10
L-20	Drawings, Specifications, and Cost Estimate (90%): (3 Sites)	45 days	2017-01-10	2017-03-13
L-19	Substantive Remedial Design: (5 sites)	90 days	2016-11-15	2017-03-20
L-21	Removal Confidence Interval	20 days	2017-02-21	2017-03-20
	Y-Jetty	200 days	2018-05-10	2019-02-13
	Lang Cove	60 days	2019-02-14	2019-05-08
	C-Jetty and ML Floats	200 days	2019-05-09	2020-02-12

The PMP defines a **Task Management System** that helps the project team manage the evolution of project tasks and interim deliverables



Schedule Management

Detailed Master Project Schedule and



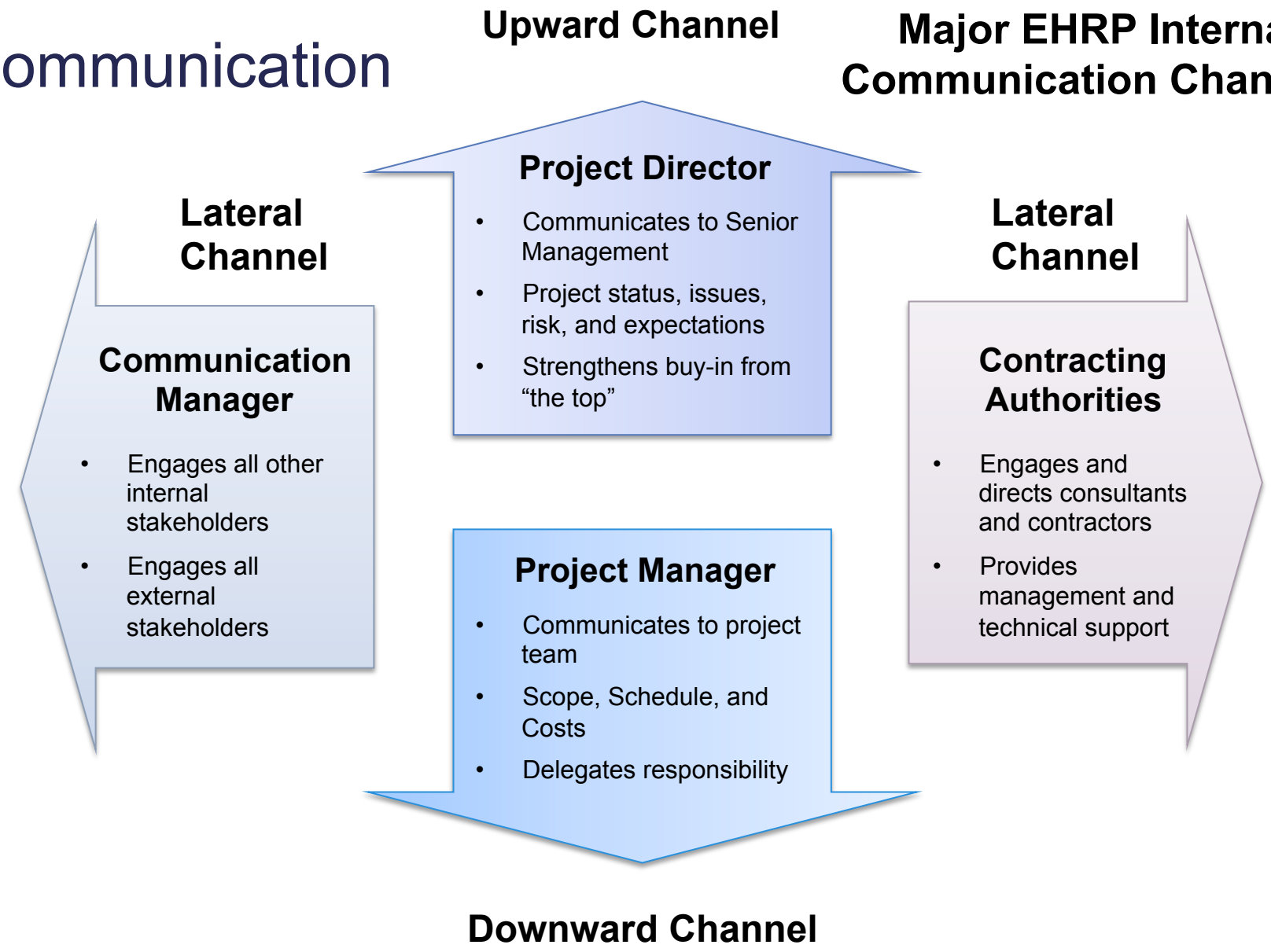
Cost Management

Detailed budget tracking tools, such as the **Cost Management Workbook**, from the PMP allow the team to track project costs—both proposed and contracted

Definition Phase Cash Flow Projection	Fiscal Year Allocations ($)			
	15/16	16/17	17/18	Totals
Project Management and Planning	$1,859,584	$1,859,584	$929,792	$4,648,961
Field Data Gaps	$1,426,067	$0	$0	$1,426,067
Engineering, Substantive Costs, and Tender Documents	$427,588	$1,650,619	$415,424	$2,493,630
Recontamination	$594,235	$0	$0	$594,235
Project Approvals	$300,612	$334,669	$231,216	$866,497
Permitting / Environmental Review	$544,870	$354,476	$78,719	$978,064
Project 3rd Party Reviews	$0	$104,122	$62,460	$166,582
Risk Assessment Activities	$4,350,062	$231,409	$0	$4,581,471
Basemap Maintenance	$27,645	$6,911	$0	$34,556
Total (Excluding contingency and taxes)	**$9,530,662**	**$4,541,790**	**$1,717,610**	**$15,790,063**
Percent of Budget (before contingency, excludes taxes)	60.4%	28.8%	10.8%	100.0%

Implementation Phase Cash Flow Projection	Fiscal Year Allocations ($)		
	18/19	19/20	Totals
Y Jetty	$26,722,400	$0	$26,722,400
Lang Cove	$4,259,027	$3,484,658	$7,743,685
C Jetty and ML Floats	$0	$26,530,911	$26,530,911
Total (Excluding contingency and taxes)	$30,981,426	$30,015,569	$60,996,996
Percent of Budget (before contingency, excludes taxes)	50.8%	49.2%	100.0%

Communication



Integration of Change in PMP Involves:

- Change Management
- Scope Management
- Schedule Management
- Cost Management
- Procurement Management

Integration of Quality in PMP Involves:

- Quality Management
- Risk Management
- Performance

PMP Impact

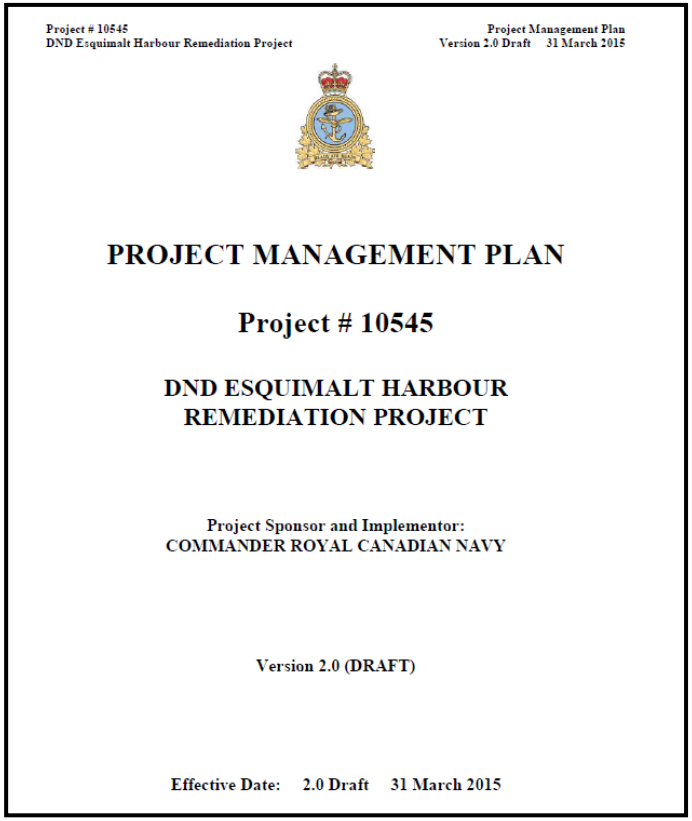
- The development and implementation of the EHRP PMP has been a **critical tool** in moving the project successfully forward
- The PMP has helped the team to efficiently and effectively plan, document, communicate, and control nearly every aspect of this project
- The project's Risk Register clearly shows the measurable impact that the PMP has had on the management of the EHRP

PMP Impact : Project Risk Register (subset)

	Pre-PMP Implementation					Post-PMP Implementation				
Risk Title/Possible Outcome	**Consequence**	**Probability**	**Manageability**	**Probable Consequence (%)**	**Risk Level**	**Consequence**	**Probability**	**Manageability**	**Probable Consequence (%)**	**Risk Level**
Blending phased approach with the desired approval process (DND Approval Process) Schedule	High	High	Medium	0.32%	HIGH	Medium	Medium	Medium	0.15%	MEDIUM
Insufficient core project team personnel resources	Very High	Medium	Medium	0.72%	VERY HIGH	High	Medium	High	0.14%	MEDIUM
Project Schedule delay due to lack of ability to contract via contracting authority (limits on contracts)	Medium	Medium	Medium	0.15%	MEDIUM	Low	Low	High	0.05%	LOW
Lack of a properly validated Critical Path Method (CPM) Schedule.	Medium	Low	High	0.05%	LOW	Retired				
Variable consistency within EHRP consultant groups	Medium	Medium	High	0.10%	MEDIUM	Low	Low	High	0.05%	LOW
Lack of clarity on required deliverables (e.g., substantive estimate)	Medium	Medium	Medium	0.15%	MEDIUM	Low	Low	High	0.05%	LOW
Lack of fiscal year cash flow projection	High	Medium	Medium	0.21%	MEDIUM	Retired				

Closure

The EHRP's PMP is a living document and will be continually improved. It is hoped that other projects, both large and small, will find the EHRP's PMP development and implementation process useful and a practical template for the development of their own PMPs.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Questions/Discussion