



Developing an Effective Project Management Plan: Esquimalt Harbour Remediation Project

Authors/Presenters:

Michael Bodman, Department of National Defence
Andrew Smith, Public Works and Government Services
Canada
Scott Irwin, Defence Construction Canada
Leroy Banack, F&M Management Ltd.
Derek Ormerod, Anchor QEA, LLC.

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Défense nationale National Defence


Esquimalt Harbour Remediation Project Overview




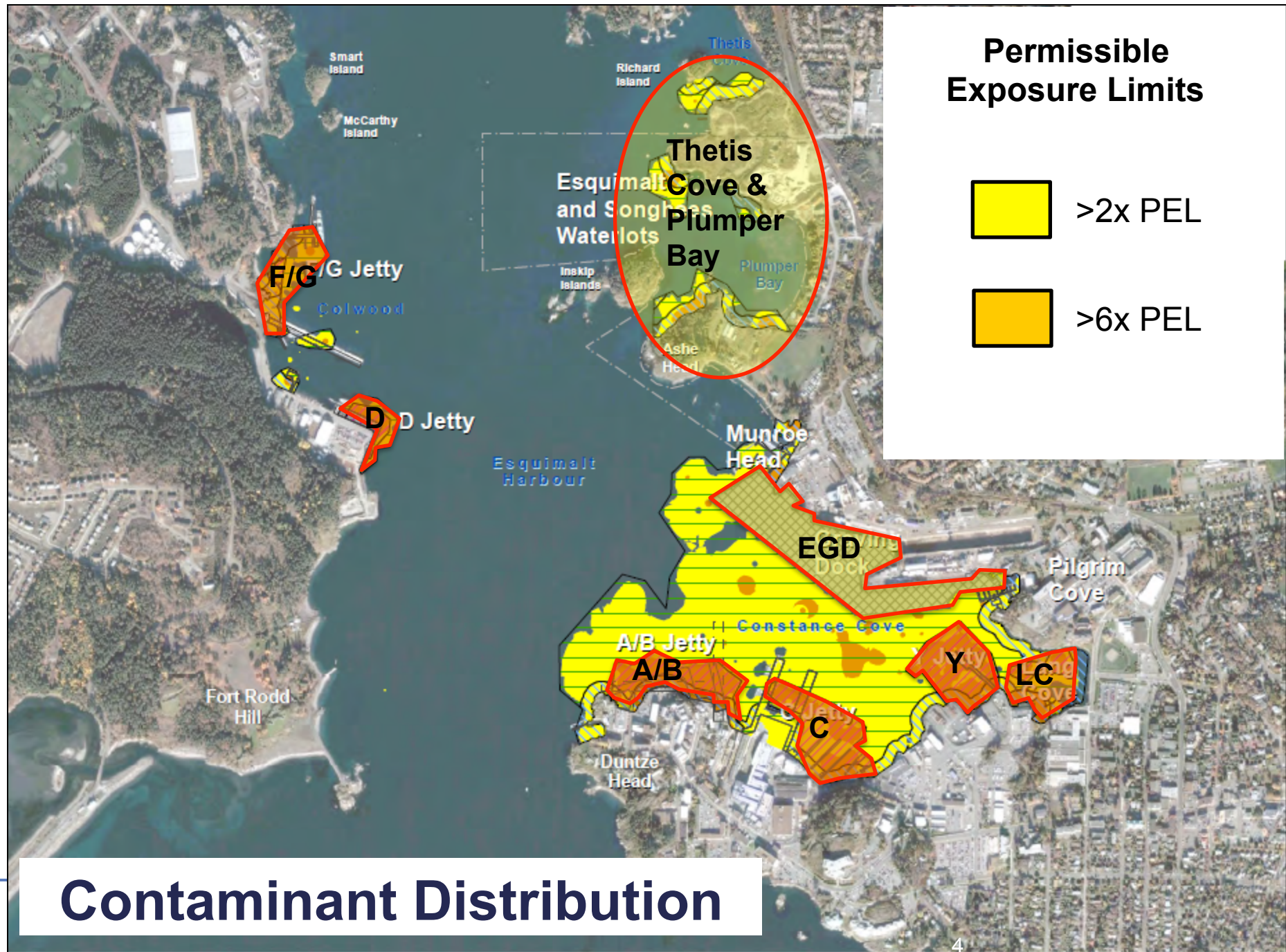
Esquimalt Harbour Remediation Project Overview

- **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

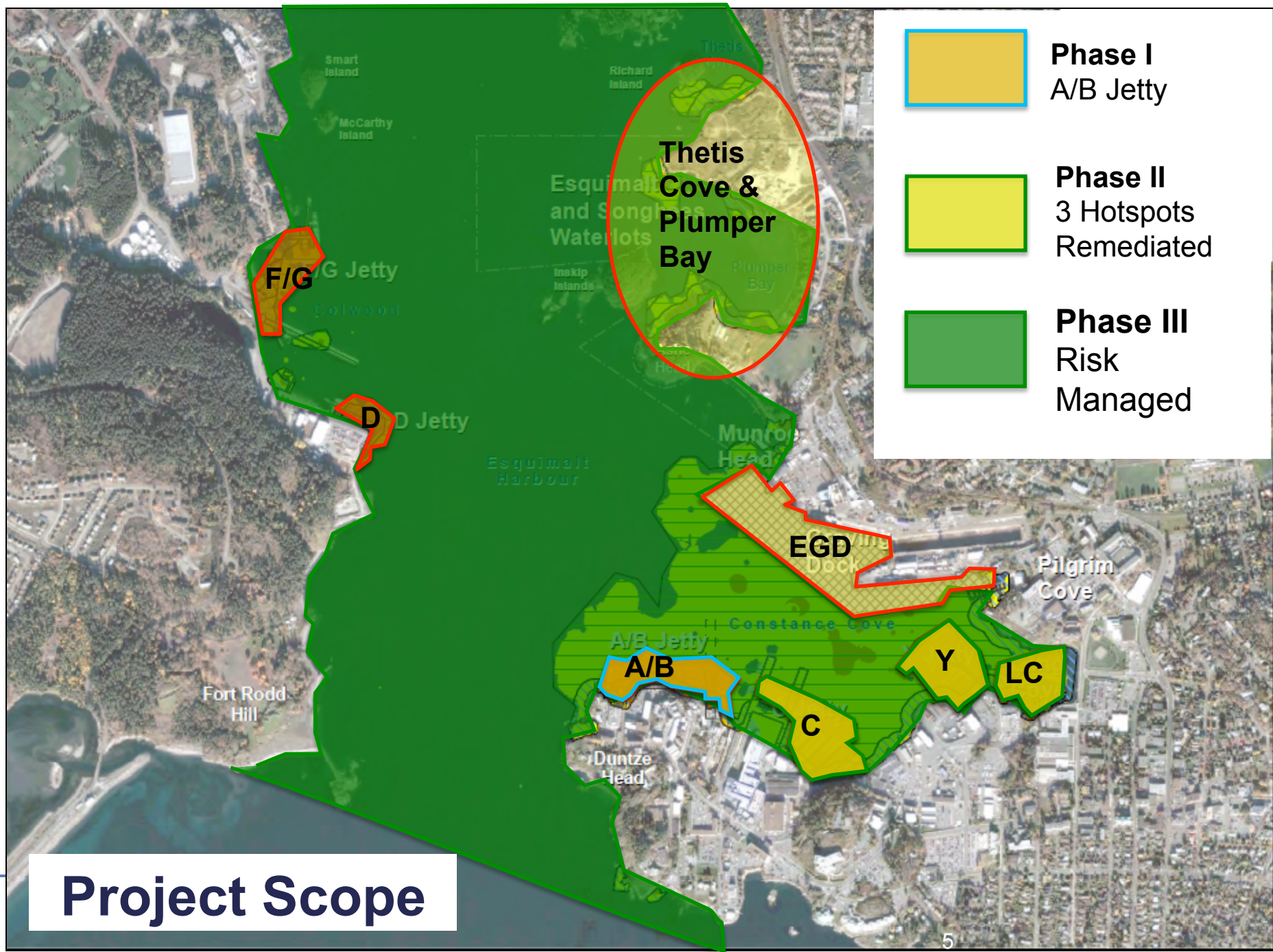
Permissible Exposure Limits

 >2x PEL

 >6x PEL



Contaminant Distribution



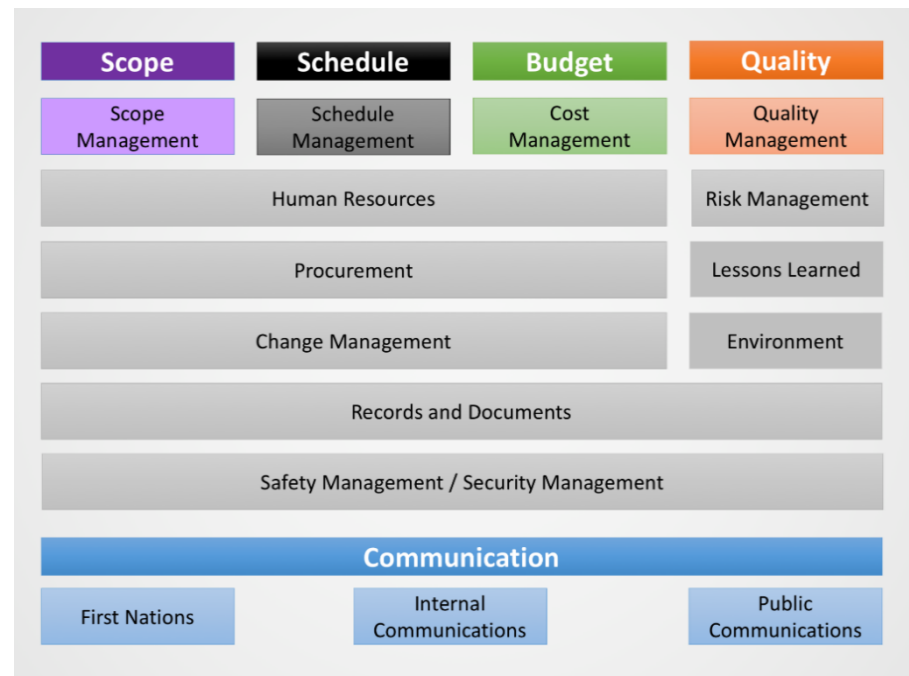
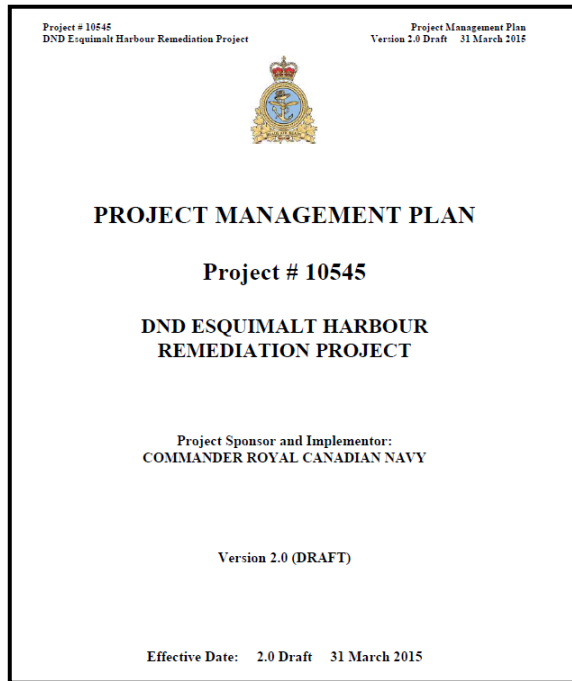
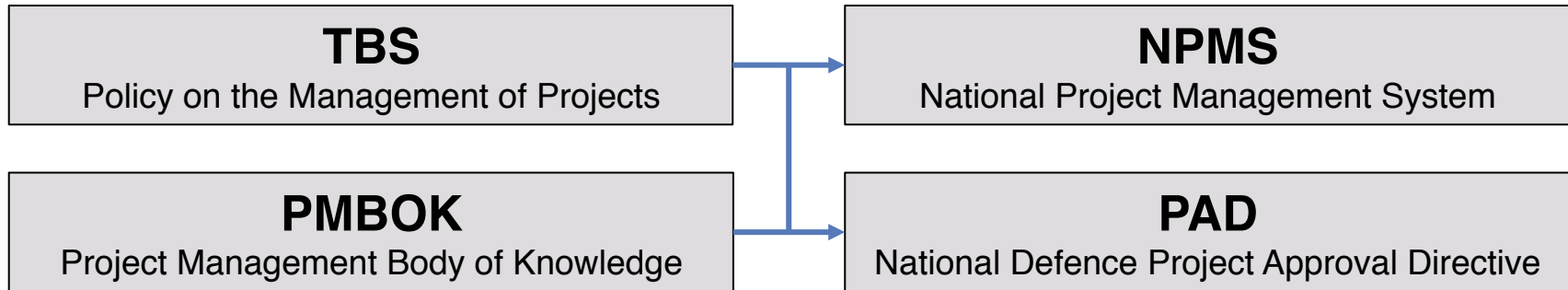
Esquimalt Harbour Remediation Project Overview

- **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

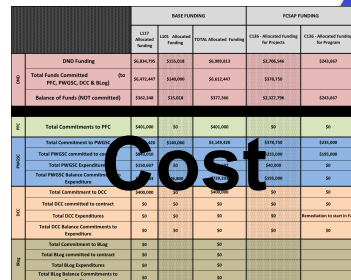
EHRP PMP Development: Goals

- **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



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

Project Area	WBS Task ID	Tracking Tool	Frequency of Submission	Frequency of Review
External Communication	J-11	External Stakeholder Activity Tracking Sheet	As needed	Project Core Management Team
HR Management	J-5	Organizational Structure	Annually	Annually
Performance - Schedule	J-3	Schedule Variance Reporting	Weekly	Weekly

Records and Documents Management	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

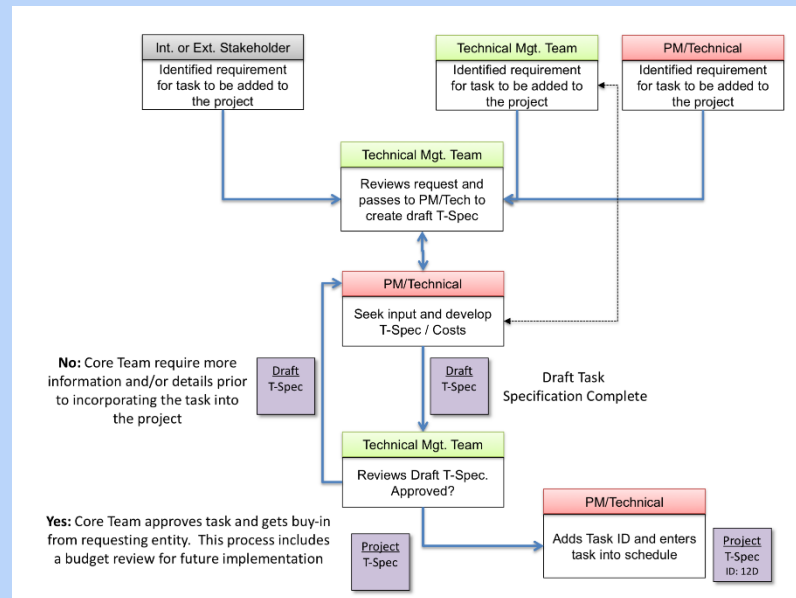
Scope Management

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

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

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

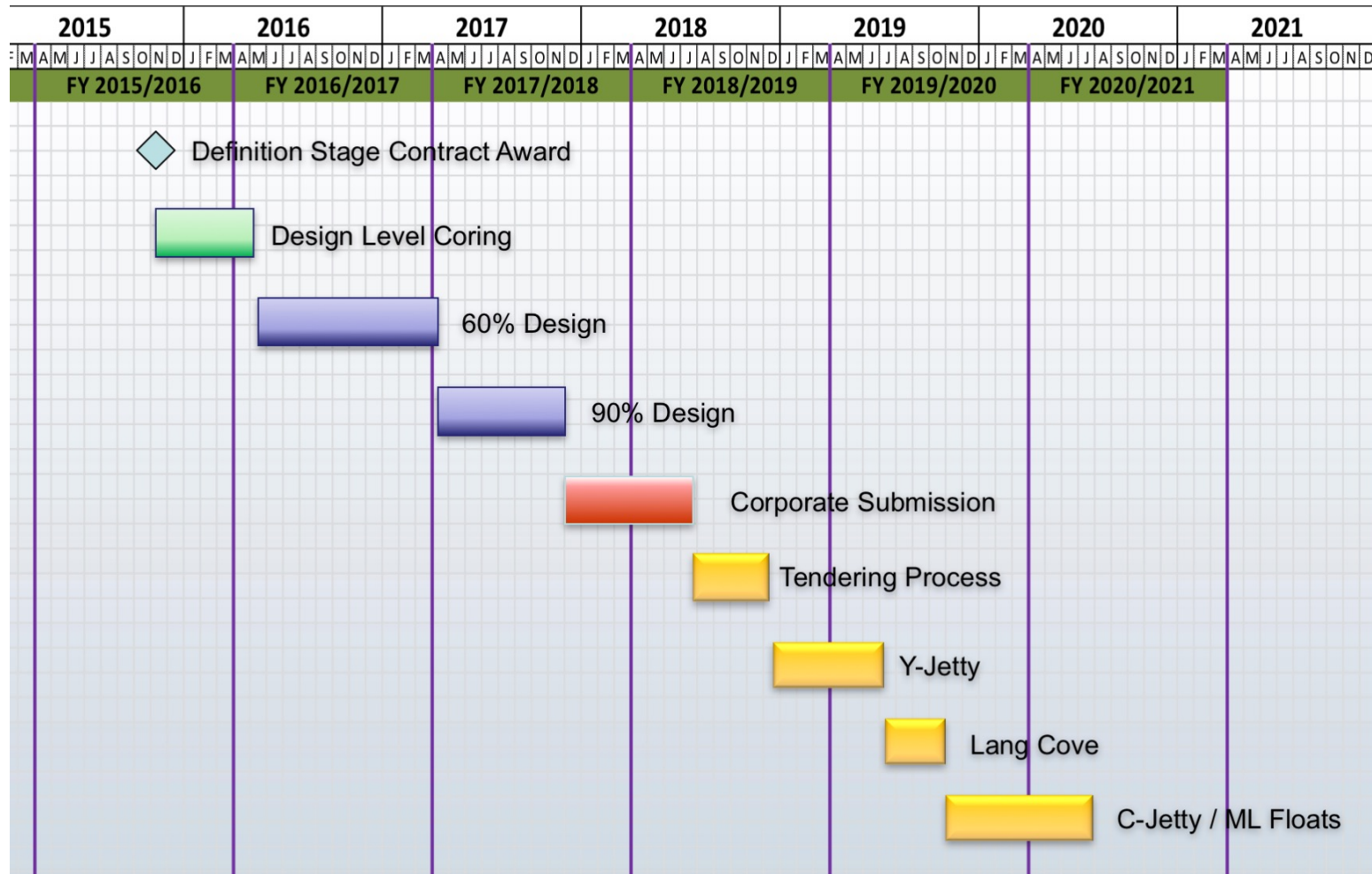


L-12	Final Geotechnical evaluation	50 days	2016-09-06	2016-11-14
L-16	Finalize Project Construction Plan	40 days	2016-11-15	2017-01-09
L-18	Final Basis of Design Report (BODR)	25 days	2017-03-14	2017-04-17

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

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

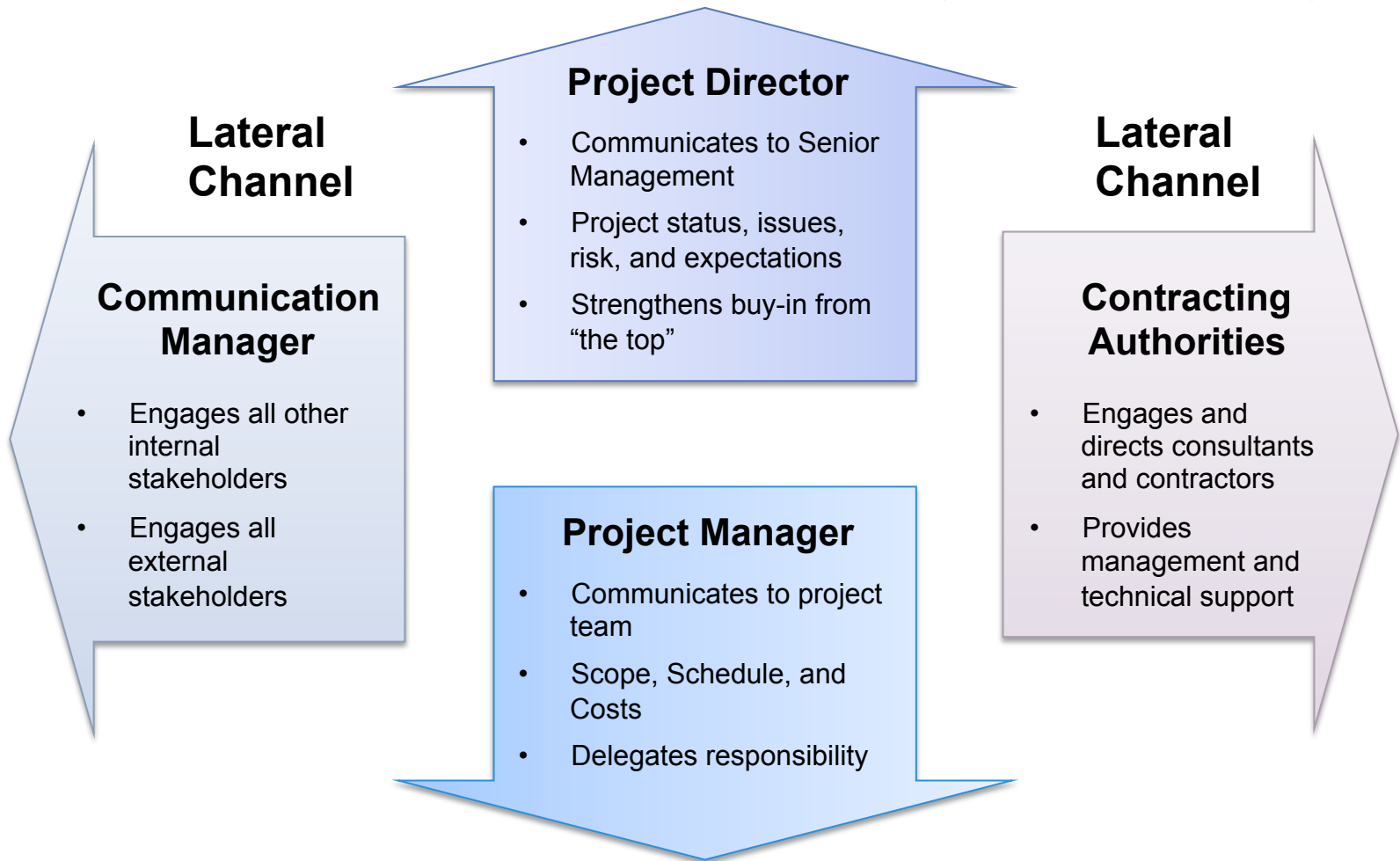
£	2016/17 (Budgeted)	2017/18 (Budgeted)	2018/19 (Budgeted)	2019/20 (Budgeted)	2020/21 (Budgeted)	2021/22 (Budgeted)	2022/23 (Budgeted)	2023/24 (Budgeted)	2024/25 (Budgeted)	2025/26 (Budgeted)	2026/27 (Budgeted)	2027/28 (Budgeted)	2028/29 (Budgeted)	2029/30 (Budgeted)	2030/31 (Budgeted)	2031/32 (Budgeted)	2032/33 (Budgeted)	2033/34 (Budgeted)	2034/35 (Budgeted)	2035/36 (Budgeted)	2036/37 (Budgeted)	2037/38 (Budgeted)	2038/39 (Budgeted)	2039/40 (Budgeted)	2040/41 (Budgeted)	2041/42 (Budgeted)	2042/43 (Budgeted)	2043/44 (Budgeted)	2044/45 (Budgeted)	2045/46 (Budgeted)	2046/47 (Budgeted)	2047/48 (Budgeted)	2048/49 (Budgeted)	2049/50 (Budgeted)	2050/51 (Budgeted)	2051/52 (Budgeted)	2052/53 (Budgeted)	2053/54 (Budgeted)	2054/55 (Budgeted)	2055/56 (Budgeted)	2056/57 (Budgeted)	2057/58 (Budgeted)	2058/59 (Budgeted)	2059/60 (Budgeted)	2060/61 (Budgeted)	2061/62 (Budgeted)	2062/63 (Budgeted)	2063/64 (Budgeted)	2064/65 (Budgeted)	2065/66 (Budgeted)	2066/67 (Budgeted)	2067/68 (Budgeted)	2068/69 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(Budgeted)	2485/86 (Budgeted)	2486/87 (Budgeted)	2487/88 (Budgeted)	2488/89 (Budgeted)	2489/90 (Budgeted)	2490/91 (Budgeted)	2491/92 (Budgeted)	2492/93 (Budgeted)	2493/94 (Budgeted)	2494/95 (Budgeted)	2495/96 (Budgeted)	2496/97 (Budgeted)	2497/98 (Budgeted)	2498/99 (Budgeted)	2499/00 (Budgeted)	2500/01 (Budgeted)	2501/02 (Budgeted)	2502/03 (Budgeted)	2503/04 (Budgeted)	2504/05 (Budgeted)	2505/06 (Budgeted)	2506/07 (Budgeted)	2507/08 (Budgeted)	2508/09 (Budgeted)	2509/10 (Budgeted)	2510/11 (Budgeted)	2511/12 (Budgeted)	2512/13 (Budgeted)	2513/14 (Budgeted)	2514/15 (Budgeted)	2515/16 (Budgeted)	2516/17 (Budgeted)	2517/18 (Budgeted)	2518/19 (Budgeted)	2519/20 (Budgeted)	2520/21 (Budgeted)	2521/22 (Budgeted)	2522/23 (Budgeted)	2523/24 (Budgeted)	2524/25 (Budgeted)	2525/26 (Budgeted)	2526/27 (Budgeted)	2527/28 (Budgeted)	2528/29 (Budgeted)	2529/30 (Budgeted)	2530/31 (Budgeted)	2531/32 (Budgeted)	2532/33 (Budgeted)	2533/34 (Budgeted)	2534/35 (Budgeted)	2535/36 (Budgeted)	2536/37 (Budgeted)	2537/38 (Budgeted)	2538/39 (Budgeted)	2539/40 (Budgeted)	2540/41 (Budgeted)	2541/42 (Budgeted)	2542/43 (Budgeted)	2543/44 (Budgeted)	2544/45 (Budgeted)	2545/46 (Budgeted)	2546/47 (Budgeted)	2547/48 (Budgeted)	2548/49 (Budgeted)	2549/50 (Budgeted)	2550/51 (Budgeted)	2551/52 (Budgeted)	2552/53 (Budgeted)	2553/54 (Budgeted)	2554/55 (Budgeted)	2555/56 (Budgeted)	2556/57 (Budgeted)	2557/58 (Budgeted)	2558/59 (Budgeted)	2559/60 (Budgeted)	2560/61 (Budgeted)	2561/62 (Budgeted)	2562/63 (Budgeted)	2563/64 (Budgeted)	2564/65 (Budgeted)	2565/66 (Budgeted)	2566/67 (Budgeted)	2567/68 (Budgeted)	2568/69 (Budgeted)	2569/70 (Budgeted)	2570/71 (Budgeted)	2571/72 (Budgeted)	2572/73 (Budgeted)	2573/74 (Budgeted)	2574/75 (Budgeted)	2575/76 (Budgeted)	2576/77 (Budgeted)	2577/78 (Budgeted)	2578/79 (Budgeted)	2579/80 (Budgeted)	2580/81 (Budgeted)	2581/82 (Budgeted)	2582/83 (Budgeted)	2583/84 (Budgeted)	2584/85 (Budgeted)	2585/86 (Budgeted)	2586/87 (Budgeted)	2587/88 (Budgeted)	2588/89 (Budgeted)	2589/90 (Budgeted)	2590/91 (Budgeted)	2591/92 (Budgeted)	2592/93 (Budgeted)	2593/94 (Budgeted)	2594/95 (Budgeted)	2595/96 (Budgeted)	2596/97 (Budgeted)	2597/98 (Budgeted)	2598/99 (Budgeted)	2599/00 (Budgeted)	2600/01 (Budgeted)	2601/02 (Budgeted)	2602/03 (Budgeted)	2603/04 (Budgeted)	2604/05 (Budgeted)	2605/06 (Budgeted)	2606/07 (Budgeted)	2607/08 (Budgeted)	2608/09 (Budgeted)	2609/10 (Budgeted)	2610/11 (Budgeted)	2611/12 (Budgeted)	2612/13 (Budgeted)	2613/14 (Budgeted)	2614/15 (Budgeted)	2615/16 (Budgeted)	2616/17 (Budgeted)	2617/18 (Budgeted)	2618/19 (Budgeted)	2619/20 (Budgeted)	2620/21 (Budgeted)	2621/22 (Budgeted)	2622/23 (Budgeted)	2623/24 (Budgeted)	2624/25 (Budgeted)	2625/26 (Budgeted)	2626/27 (Budgeted)	2627/28 (Budgeted)	2628/29 (Budgeted)	2629/30 (Budgeted)	2630/31 (Budgeted)	2631/32 (Budgeted)	2632/33 (Budgeted)	2633/34 (Budgeted)	2634/35 (Budgeted)	2635/36 (Budgeted)	2636/37 (Budgeted)	2637/38 (Budgeted)	2638/39 (Budgeted)	2639/40 (Budgeted)	2640/41 (Budgeted)	2641/42 (Budgeted)	2642/43 (Budgeted)	2643/44 (Budgeted)	2644/45 (Budgeted)	2645/46 (Budgeted)	2646/47 (Budgeted)	2647/48 (Budgeted)	2648/49 (Budgeted)	2649/50 (Budgeted)	2650/51 (Budgeted)	2651/52 (Budgeted)	2652/53 (Budgeted)	2653/54 (Budgeted)	2654/55 (Budgeted)	2655/56 (Budgeted)	2656/57 (Budgeted)	2657/58 (Budgeted)	2658/59 (Budgeted)	2659/60 (Budgeted)	2660/61 (Budgeted)	2661/62 (Budgeted)	2662/63 (Budgeted)	2663/64 (Budgeted)	2664/65 (Budgeted)	2665/66 (Budgeted)	2666/67 (Budgeted)	2667/68 (Budgeted)	2668/69 (Budgeted)	2669/70 (Budgeted)	2670/71 (Budgeted)	2671/72 (Budgeted)	2672/73 (Budgeted)	2673/74 (Budgeted)	2674/75 (Budgeted)	2675/76 (Budgeted)	2676/77 (Budgeted)	2677/78 (Budgeted)	2678/79 (Budgeted)	2679/80 (Budgeted)	2680/81 (Budgeted)	2681/82 (Budgeted)	2682/83 (Budgeted)	2683/84 (Budgeted)	2684/85 (Budgeted)	2685/86 (Budgeted)	2686/87 (Budgeted)	2687/88 (Budgeted)	2688/89 (Budgeted)	2689/90 (Budgeted)	2690/91 (Budgeted)	2691/92 (Budgeted)	2692/93 (Budgeted)	2693/94 (Budgeted)	2694/95 (Budgeted)	2695/96 (Budgeted)	2696/97 (Budgeted)	2697/98 (Budgeted)	2698/99 (Budgeted)	2699/00 (Budgeted)	2700/01 (Budgeted)	2701/02 (Budgeted)	2702/03 (Budgeted)	2703/04 (Budgeted)	2704/05 (Budgeted)	2705/06 (Budgeted)	2706/07 (Budgeted)	2707/08 (Budgeted)	2708/09 (Budgeted)	2709/10 (Budgeted)	2710/11 (Budgeted)	2711/12 (Budgeted)	2712/13 (Budgeted)	2713/14 (Budgeted)	2714/15 (Budgeted)	2715/16 (Budgeted)	2716/17 (Budgeted)	2717/18 (Budgeted)	2718/19 (Budgeted)	2719/20 (Budgeted)	2720/21 (Budgeted)	2721/22 (Budgeted)	2722/23 (Budgeted)	2723/24 (Budgeted)	2724/25 (Budgeted)	2725/26 (Budgeted)	2726/27 (Budgeted)	2727/28 (Budgeted)	2728/29 (Budgeted)	2729/30 (Budgeted)	2730/31 (Budgeted)	2731/32 (Budgeted)	2732/33 (Budgeted)	2733/34 (Budgeted)	2734/35 (Budgeted)	2735/36 (Budgeted)	2736/37 (Budgeted)	2737/38 (Budgeted)	2738/39 (Budgeted)	2739/40 (Budgeted)	2740/41 (Budgeted)	2741/42 (Budgeted)	2742/43 (Budgeted)	2743/44 (Budgeted)	2744/45 (Budgeted)	2745/46 (Budgeted)	2746/47 (Budgeted)	2747/48 (Budgeted)	2748/49 (Budgeted)	2749/50 (Budgeted)	2750/51 (Budgeted)	2751/52 (Budgeted)	2752/53 (Budgeted)	2753/54 (Budgeted)	2754/55 (Budgeted)	2755/56 (Budgeted)	2756/57 (Budgeted)	2757/58 (Budgeted)	2758/59 (Budgeted)	2759/60 (Budgeted)	2760/61 (Budgeted)	2761/62 (Budgeted)	2762/63 (Budgeted)	2763/64 (Budgeted)	2764/65 (Budgeted)	2765/66 (Budgeted)	2766/67 (Budgeted)	2767/68 (Budgeted)	2768/69 (Budgeted)	2769/70 (Budgeted)	2770/71 (Budgeted)	2771/72 (Budgeted)	2772/73 (Budgeted)	2773/74 (Budgeted)	2774/75 (Budgeted)	2775/76 (Budgeted)	2776/77 (Budgeted)	2777/78 (Budgeted)	2778/79 (Budgeted)	2779/80 (Budgeted)	2780/81 (Budgeted)	2781/82 (Budgeted)	2782/83 (Budgeted)	2783/84 (Budgeted)	2784/85 (Budgeted)	2785/86 (Budgeted)	2786/87 (Budgeted)	2787/88 (Budgeted)	2788/89 (Budgeted)
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Communication

Upward Channel

Major EHRP Internal Communication Channels



Downward Channel

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

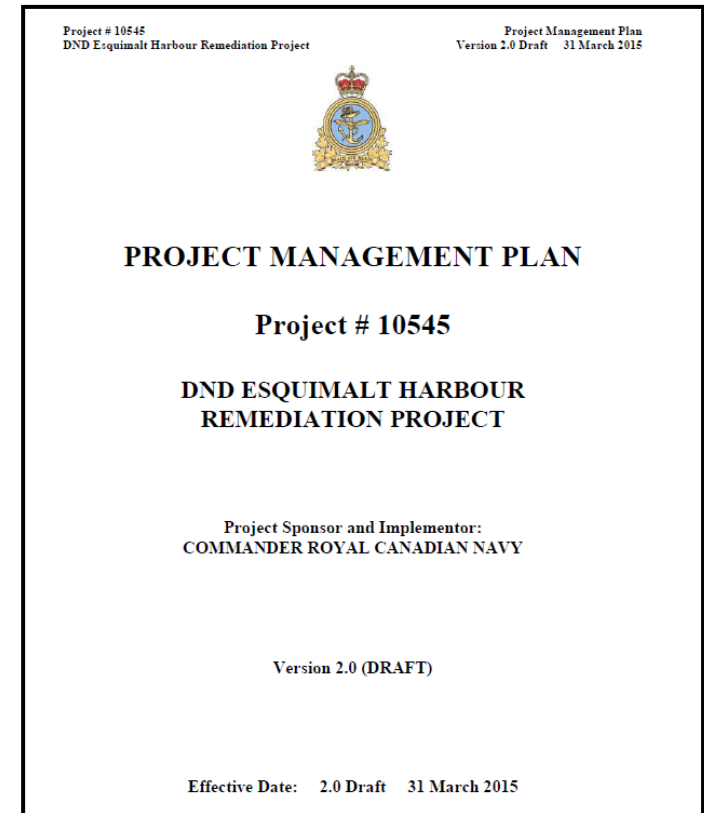
- The development and implementation of the EHRP PMP has been a **critical tool** in moving the project successfully forward
- The PMP has helped the team to efficiently and effectively plan, document, communicate, and control nearly every aspect of this project
- The project's Risk Register clearly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



Questions/Discussion

