

TERMS OF REFERENCE SITE C PROJECT BOARD

Purpose

- The Site C Project Board (the “Project Board”) is created by BC Hydro Board of Directors, as provided for under Tab 24 of the Board Governance Manual.
- The Project Board will function at a strategic level, offering advice and direction to BC Hydro Management during the development and execution of the Site C Clean Energy Project. In particular, the Project Board will consider all recommendations of Management in relation to the goals, scope, budget, schedule, environmental, First Nations and the procurement model, and where it considers it appropriate and necessary; will elevate those recommendations to the Board.
- The Project Board is to consider recommendations made and decisions taken relating to the Site C Clean Energy Project in the context of both short term and long terms impacts.
- The Project Board will remain in place until dissolved by the Board of Directors.

Composition and Administration

Membership

- The Project Board consists of those Directors as are appointed by the Board from time to time.
- The Corporate Secretary of BC Hydro will serve as secretary to the Project Board.
- The CEO of BC Hydro shall be invited to all meetings unless the meeting is in-camera.

Meetings

- The Project Board will meet at such frequency as is determined necessary by its Chair.
- The provisions of Tab 18 (Guidelines for Committees of the Board of Directors) will apply to the Project Board and determine its procedures.
- Agenda items may be referred by the Board of Directors or Management or proposed by the members of the Project Board.

Accountability

- Minutes of the Project Board’s meetings will be maintained by the Corporate Secretary’s office and available in the same manner as are Board Committee minutes.
- The authority of the Project Board shall be limited to providing advice and direction to Management and making recommendations to the Board.

Site C Reporting and Accountability Framework

- The attached Site C Reporting and Accountability Framework, jointly developed by staff at the Ministry of Energy and Mines, BC Hydro, and the Ministry of Finance, is incorporated by reference to form part of BC Hydro’s *Governance Manual*, and may be amended from time to time as directed by Government.

Project Charter

- The attached Project Charter is intended to describe the scope, objectives and governance of the Project. It was approved by the Board on June 1, 2016 and is incorporated by reference to form part of BC Hydro’s *Governance Manual*.



June 29, 2015

Ref.: 90954

To: Mr. Peter Milburn
Deputy Minister
Ministry of Finance

Re: Site C Reporting and Accountability Framework

Please find attached the Site C Reporting and Accountability Framework. This document was jointly developed by staff at the Ministry of Energy and Mines (MEM), BC Hydro, and the Ministry of Finance, including Mr. Doug Foster and Treasury Board Staff.

I am conveying this to you to fulfil the requirement, set out in the Decision Letter from the Chair of Treasury Board regarding Site C Final Investment Decision, that you be updated on progress regarding the following by June 30, 2015:

MEM, BC Hydro and the Ministry of Finance will jointly develop appropriate performance metrics along with a regular in-year reporting system to monitor and report on Site C progress.

I anticipate the first quarterly report will be for the period ending September 30, 2015. Should you have any questions, please do not hesitate to contact me.

A handwritten signature in black ink, appearing to read "Dave Nikolejsin".

Dave Nikolejsin
Deputy Minister

Attachment

Site C (Project) Reporting and Accountability Framework

June 30, 2015

Purpose:

To establish a structure for:

1. effective project oversight that fosters efficiency and accountability, and that empowers BC Hydro to deliver the Site C capital project on time and on budget; and
2. meeting Government reporting and approval expectations, to help facilitate corporate fiscal and operational planning, as well as to help ensure there are “no surprises” for BC Hydro or its shareholder.

BC Hydro Board of Directors (Board)

- Oversees delivery of the Project
- Approves the following (and gives further direction as needed):
 - Quarterly Project Progress Reports (Quarterly Reports, template attached)
 - Annual Project Progress Reports (Annual Reports, template TBD) that includes:
 - An overview of Quarterly Reports and overall Project progress as compared to the approved Business and Risk Management Plans (Management Plans);
 - Technical Board reporting summary for that year; and
 - Updated Management Plans which incorporate:
 - an action plan outlining how the approved operational and financial milestones and completion targets for the Project will be met moving forward; and
 - full risk analysis of major components of the Project delivery, timelines and the Project budget moving forward.
 - Delegation matrix for notional allocation of Board contingencies, with allocations to be reviewed and confirmed by the Board in quarterly reports
 - Project Communications Plan and updates
- Chair of Board advises Minister (Minister responsible for BC Hydro) with respect to key issues and developments as appropriate
- Makes recommendations to the Minister to access the Project reserve overseen by Treasury Board

Site C Project Board (Sub-Committee of Board of Directors)

- Advises the Board regarding all aspects of Project and is a “sounding board” to Management. Also helps ensure appropriate notification to Government is undertaken
- Members appointed by the Board to include:
 - 2-3 BC Hydro Directors;
 - members external to the project that bring legal and construction expertise;
 - former EVP of Site C; and
 - one individual appointed by the Minister to sit as an observer.
- Reviews and provides advice to Board and Management, including indicating the Project Board’s satisfaction and recommendations, with respect to the following:
 - Quarterly Reports, Annual Reports (including updated Management Plans), Project Communications Plan and Delegation Matrix;
 - requests for Board contingencies; and
 - requests to access the Project reserve overseen by Treasury Board.
- Reviews and provides advice to Management as needed regarding exception reporting and Monthly Project Progress Report (for internal use at BC Hydro) that includes progress on major

work packages, milestones, schedules, project budget, issue management and specific risk and mitigation actions

Stakeholder Engagement Committees

- Committees established to address regional issues with representation from MLAs, Mayors, Regional District Directors, local government staff and interested stakeholder groups, including:
 1. Regional and Local Government Liaison Committee
 2. Local Government Technical Engagement
 3. Community Liaison Committees
 4. Agriculture Compensation Fund Consultation
 5. Short Term Health Solutions Committee
- In addition to the 5 committees, BC Hydro will make regular presentations at council meetings
- There will be ongoing discussions with First Nations with respect to consultation and implementation of Impact Benefits Agreements

Technical Advisory Board (Technical Board)

- Global panel of engineering and construction experts appointed by the Board
- Provide technical review of key design milestones and ongoing external advice to supplement existing engineering and design and procurement expertise
- Reports out to the Project Board and Management at conclusion of each meeting (meetings on an as needed basis) and provides a report of key findings and recommendations
- Prepares Technical Reports as required and submits to Management and the Board

BC Hydro Management (Management)

- Accountable to the Board for day-to-day oversight and delivery of the Project
- Manages all aspects of Project execution including the following:
 - communications and stakeholder/outreach engagements;
 - internal and external project financing and reporting;
 - response to unanticipated events that may occur; and
 - other Project support activities within BC Hydro.
- Prepares the following:
 - Quarterly Reports, Annual Reports (including update to Management Plans), and Communications Plan
 - Exception reporting and briefings to the Board, the Project Board and the Minister as required for major unanticipated events that may occur between the regular reporting cycles (including any significant project-related incident)
 - Delegation matrix for notional allocation of Board contingencies and requests to access the project contingencies budget
 - Requests to access the Project reserve overseen by Treasury Board
- Monitors and reports to the Board on salary holdback measures related to individual accountabilities for Project delivery
- Approves and receives Monthly Project Progress Report
- Advises Ministry of key issues and developments as appropriate

Minister of Energy and Mines (Minister)

- Receives Annual and Quarterly Project reports
- Provides assessment of Annual Report for Chair of Treasury Board
- Makes recommendations on requests to access the Project Reserve for Treasury Board approval
- Assists BC Hydro Board in approval process of project contingencies allocations
- Notifies Treasury Board as needed regarding significant changes to Management Plans (i.e., recognition that TB had approved these)
- Quarterly meetings with BC Hydro Board Chair to discuss project progress within the context of the Taxpayer Accountability Principles
- Ministry staff receive advice on key issues and developments as appropriate from Management.

Treasury Board (TB) and Treasury Board Chair (TB Chair)

- Approves requests for Project Reserve on the recommendation of Minister
- Receives Annual and Quarterly Reports

British Columbia Utilities Commission (BCUC)

- Receives Annual and Quarterly Reports (in format required by the BCUC)
- Provides public record
- Provides for review and examination, as required under various sections pertaining to supervision of public utilities and public utility reporting as outlined in Part 3 of the *Utilities Commission Act*.

A reporting matrix is included at the end of this document that provides an overview of reports and outline of accountabilities

Site C Quarterly Progress Report Template

Audience

- This reporting is intended to inform:
 - Board
 - Project Board
 - Minister, TB Chair and government
 - BCUC reporting
 - Other users (e.g. credit rating agencies, etc.)

- Some levels of report may not include full information set due to differing levels of interest or disclosure restrictions (e.g. it should be assumed the BCUC report will be public, and that all levels of oversight reporting will not have same degree of detail)

Report Outline

1. Overview

- Overview/summary of progress for the period on the Project
- Key highlights and accomplishments
 - Project completion to date for scope, milestones, timelines and budget
 - Key issues for the period
- Outlook for Project (e.g. schedule and budget)
 - Key challenges and mitigation plans

2. FN Consultation and IBAs

- Progress on IBA signing and implementation, compared to expected number, progress and funding amounts
- Value of IBAs to BC Hydro within the Management Plans
 - Explanation of significant variances
- Outlook for short and medium term
 - Identified key challenges, mitigation plans and opportunities including FN employment and supply arrangements
 - Expected completion and cost

3. Permits

- Overview of permits required
- Summary of major permitting milestones completed (against expected)
- Number of days to issue
- Summary of major permitting to be done
 - Identified key challenges and risk mitigation plans
 - Expected completion dates and cost

4. Construction

- Overview of key activity on construction site
- Identification of any major:
 - Scope changes compared to Approved Plans
 - Schedule variances to date and revised forecast to project end
 - Performance against budget in Approved Plans for each major cost activity

- Revised budget outlook to project end
- Key issues resolved/expected to project end
- Highlight other key quantitative information (compared to expected values) such as:
 - Bed nights in worker accommodation
 - Excavation volumes
 - RCC/concrete placement volumes
 - Road construction, in km
 - Percentage of work complete
- Labour utilization (worker days/overtime/worker days lost etc)
- Progress reporting of costs to budget for each major cost activity

5. Procurement Progress and Comparison with Budget

- Provide list of all major contracts awarded and their status during current period, include measures against expected timing and costs
- More detail provided in appendix, including Project-to-date contract lists
- Discussion of major awards/value for money
- Discussion of material contract amendments
- Discussion of any claims or non-compliance with contracts
- Further explanation on any critical or unusual awards
- Overview of major contracts yet to come

6. Quality

- Provide available metrics on quality management / quality assurance
- Table showing Non-Compliance Report (NCR) breakdown by contract and major activity

7. Safety

- Provide overview of key safety metrics and highlights, aligned with BC Hydro standard safety measures and contractor safety metrics
- Mitigation measures
- Explanation of any material incidents
- Spending to date and planned to project end

8. Environment

- Provide overview of key environmental metrics and mitigation actions to date as well as planned
- Explain any material environmental incidents
- Compliance report on requirements of permits and Environmental Assessment Certificate
- Spending to date against budget and planned to project end

9. Employment Report

- Overview of hiring activity
- Payroll metrics or average costs per employee group – in order to monitor issues with salaries and skill shortages
- Demonstration of level of diversity in workforce as reported by major contractors
- Identification of number of workers, by job category
- Local / BC / First Nations hires as reported by major contractors
- Number of apprentices / trainees as reported by major contractors

- Measures of where employment actuals are compared to plan and what the forecast is to project end

10. Community Engagement & Communications

- Local Government Liaison
- Business Liaison and Outreach
- Community Relations and Consultation
- Communications
- Expenditures associated with the above.
- Key communications releases/events coming

11. Cost Reporting

- Discussions of period to date compared to budgets
- Discussion of revised forecasts and variances/mitigation plans
- Overview of spending compared to baseline forecast in Management Plans for current period including:
 - Level I - High level summary
 - Level II - Direct Costs by Major Construction contract and/or activity centres
- Identify and discuss key variances and use of notional or approved allocations to contingencies budget
- Provide explanation of any changes to baseline budget forecast and allocations to various segments from the contingencies, i.e., inflation etc.
- Provide recommended actions to maintain expenditure discipline to Management Plans
- Provide overview and status of approved allocations from Project reserve if any

12. Internal project financing versus external borrowings to date

- Period to date compared to period to date budgets
- Projected interest rates compared to plan, variances and impacts on IDC.
- Revised forecasts and variances/mitigation plans

13. Impacts on other BC Hydro operations

- Identify dependencies and impacts on other BC Hydro operations including operational risks, financial risks, legal risks (including outstanding litigation), and stakeholder/reputational risks

14. Risk Management and Reporting

- Identification of Key Risks
 - Operational risks
 - Financial risks
 - Legal risks and outstanding litigation
 - Stakeholder/reputational risks
- Outline of Mitigation Measures

Site C Reporting Matrix

	Technical Board	Management	Project Board	BC Hydro Board of Directors	Minister of Energy and Mines	Treasury Board	BCUC
Annual Report (includes updated Management Plans)		Develop	Review	Approve	Receive	Receive	Receive
Quarterly Project Progress Report		Develop	Review	Approve	Receive		Receive
Monthly Project Management Report		Develop & approve					
Communications Plan		Develop	Review	Approve			
Exception Reporting		Develop	Notified	Notify	Notify		Notify as needed
Technical Reporting¹ as required	Develop and Approve	Receive	Receive	Notify as needed	Notify as needed		
Requests for Contingency		Develop	Review	Approve	Assists Hydro Board with Approval		
Requests for Project Reserve		Develop	Review	Recommend	Recommend	Approve	Notify

¹ A summary of technical reports will be included in the Annual Report

Project Charter

Stage 5: Construction

Background

The Site C Clean Energy Project will construct a third dam and hydroelectric generating station on the Peace River in northeast B.C. to provide 1,100 megawatts of capacity, and produce about 5,100 gigawatt hours per year. In December 2014, the Project received approval from the provincial government to proceed to the construction phase. This project charter is for Stage 5, which includes construction, commissioning, site reclamation and demobilization.

Vision

Through the construction of the Site C Clean Energy Project, BC Hydro will deliver a modern project that will:

- support our clean energy objectives, of electricity self-sufficiency, job creation and greenhouse gas reduction;
- facilitate the development of clean energy projects by providing additional capacity to back up intermittent resources, such as wind, run-of-river hydro and solar.

B.C.'s Future Electricity Needs

B.C.'s electricity needs are forecast to increase by almost 40 per cent over the next 20 years, as the province's population is estimated to grow by more than one million people. As extensive as BC Hydro's hydroelectric assets are, they will not be enough to meet this future demand. With Site C, the Province and BC Hydro are planning now so that British Columbians will continue to enjoy the benefits of clean, reliable and affordable electricity in the future.

In addition, the Site C Clean Energy Project is helping B.C. prepare for a changing world. The emerging electrification of the transportation sector – including rail, ports and electric plug-in vehicles – and other technologies aimed at reducing fossil fuel dependency will eventually place new demands on our electricity system.

Mission

To design and construct a clean and renewable hydroelectric generation facility that will:

- produce and deliver electricity in an environmentally and socially responsible manner;
- recognize the impacts of electricity generation and identify and incorporate options for mitigation that minimize effects;
- be best in class for engineering and environmental design and safety;
- build relationships and encourage participation and input from the public, local governments and stakeholders;
- build relationships with Aboriginal groups, and ensure meaningful consultation occurs in all stages of project development;
- employ a best practices standard in working with private property owners to minimize disruption, to ensure property owner input is thoroughly considered in project planning and to conduct work in a

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manner that demonstrates a respectful attitude towards the property and property rights of others; and

- provide value to ratepayers by ensuring a competitive cost structure and maintaining the project as a Heritage asset.

Project Objectives

Project Objectives	Description
Provide reliable capacity	<ul style="list-style-type: none"> • Maximize capacity available from Site C while meeting owner's requirements
Deliver low cost energy	<ul style="list-style-type: none"> • Maximize energy available from Site C while meeting owner's requirements • Minimize project unit energy cost (UEC) while meeting owner's requirements
Ensure a long term source of energy and capacity	<ul style="list-style-type: none"> • Maximize project life within owner's requirements • Retain public ownership of energy supply
Support Clean Energy Objectives	<ul style="list-style-type: none"> • Maintain BC generation as >=93% clean • Low life-cycle GHG emissions from project • Aids in integration of other intermittent renewable resources • Contribute to BC's self-sufficiency goals
Public and worker safety	<ul style="list-style-type: none"> • Achieve zero fatalities and zero serious injuries • Include safety in the design of all project components • Meet or exceed BC Hydro's worker safety standards • Integrate job-safety planning into day-to-day work for all project activities
Ensure that the Crown's duty to consult Aboriginal groups is met	<ul style="list-style-type: none"> • Consult Aboriginal groups with a focus on impact assessment, mitigation, and where applicable, accommodation • Identify opportunities for Aboriginal participation in the project
Environmental Leadership	<ul style="list-style-type: none"> • Meet or exceed environmental requirements defined by legislation, regulation and government directives
Optimize existing BC Hydro assets on Peace River system	<ul style="list-style-type: none"> • Increase value of Williston Reservoir storage and regulation • Maintain operational and maintenance flexibility at existing BC Hydro generation facilities on the Peace River
Follow best practice in public process	<ul style="list-style-type: none"> • Undertake thorough, best practice consultation with the public, communities and stakeholders • Employ a best practices standard in working with private property owners to minimize disruption, to ensure input is thoroughly considered in project planning
Provide lasting economic and social benefits for northern communities, Aboriginal groups and the province	<ul style="list-style-type: none"> • Create construction-related jobs and business opportunities • Consult and work with communities about regional benefits such as upgrades to infrastructure including roads, bridges and parks • Work with Aboriginal communities to identify and create opportunities for skills training, jobs and economic development

SITE C CLEAN ENERGY PROJECT

Stage 5 Project Scope

The final stage includes construction, project commissioning, site reclamation, and demobilization per project scope described in the Statement of Objectives. High-level scope includes:

- Site preparation activities
- Construction and commissioning of an earthfill dam, reservoir, hydroelectric generating station, substation and transmission lines
- Implementation all of the authorized regulatory conditions including all the agreed mitigation and compensation requirements and benefit agreements
- Acquisition of the properties and rights necessary for construction and operation of all Site C assets
- Negotiation and conclusion of agreements with Aboriginal groups that meet goals and interests of the parties, and which fulfill Environmental Assessment process requirements
- Site reclamation, demobilization and project closure

Stage 5 Schedule & Milestones

The following table summarizes key milestones for Stage 5, based on the approved Final Investment Decision schedule:

Key Stage 5 Milestones – In Service Dates	Anticipated Date
River Diversion Start	December 2019
5L5 500kV Transmission Line	October 2020
Site C Substation	November 2020
5L6 500kV Transmission Line	July 2023
Unit 1 (First Power)	December 2023
Unit 2	February 2024
Unit 3	May 2024
Unit 4	July 2024
Unit 5	September 2024
Unit 6	November 2024

Governance

BC Hydro Board

Responsibilities:

1. Overall approval and oversight on project goals, scope, budget and schedule;
2. Approval of any significant changes to budget, scope and schedule;
3. Approval on contract awards over \$50 million;
4. Approval of any draws on Board reserve;
5. Approval of quarterly and annual project progress reports; and
6. Make recommendations to government to access the Project Reserve overseen by Treasury Board.

Site C Project Board (Sub-Committee of Board of Directors)

Responsibilities:

1. Function at a strategic level to provide guidance and oversight to Site C Project staff and to the CEO on project strategy as well as on goals, scope, budget, schedule, environmental, regulatory, First Nations, procurement model and other issues as required; and

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2. Helps to ensure appropriate notification to Government is undertaken.
3. Reviews and provides advice to the Board and Management, including indication of the Project Board's satisfaction and recommendations with respect to:
 - a. Quarterly Reports, Annual Reports (including updated Management Plans), Project Communications Plan and Delegation Matrix;
 - b. Requests for Board contingencies; and
 - c. Requests to access the Project reserve overseen by Treasury Board; and
4. Reviews and provides advice to Management as needed regarding exception reporting and Monthly Project Progress Report (for internal use at BC Hydro) that includes progress on major work packages, milestones, schedules, project budget, issue management and specific risk and mitigation actions.
5. Approve financial decisions as authority specifically delegated by the BC Hydro Board.

Composition

Chair:	BC Hydro Director
Members:	Two to four BC Hydro Directors
Ex-officio:	BC Hydro Board Chair, former Executive Vice President of Site C, one individual appointed by the Minister of Energy
Notes:	Membership on the Site C Project Board may be altered from time to time. The Corporate Secretary of BC Hydro will serve as secretary to the Project Board. The CEO of BC Hydro shall be invited to all meetings unless the meeting is in-camera.
Advisors:	As deemed appropriate by the Site C Project Board

Executive Oversight

Responsibilities:

Advise VP & Director Site C Project regarding the project and integration with other BC Hydro operations and considerations.

Composition:

Chair:	CEO
Members:	BC Hydro Deputy CEO, CFO and SVP Generation

Technical Advisory Board

Responsibilities:

1. Global panel of engineering and construction experts appointed by the Board to advise the VP and Director of the Site C Project, the Deputy CEO and the Project Board regarding the engineering and technical decisions related to project design consistent with best practices and current international guidelines.
2. Provide technical review of key design milestones and ongoing external advice to supplement existing engineering and design and procurement expertise.
3. Report out to the Project Board and Management following each meeting and provide a report of key findings and recommendations;
4. Prepare and submit Technical Reports as required Management and the Board; and
5. Conduct a periodic review of the construction budget estimate.

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Composition:

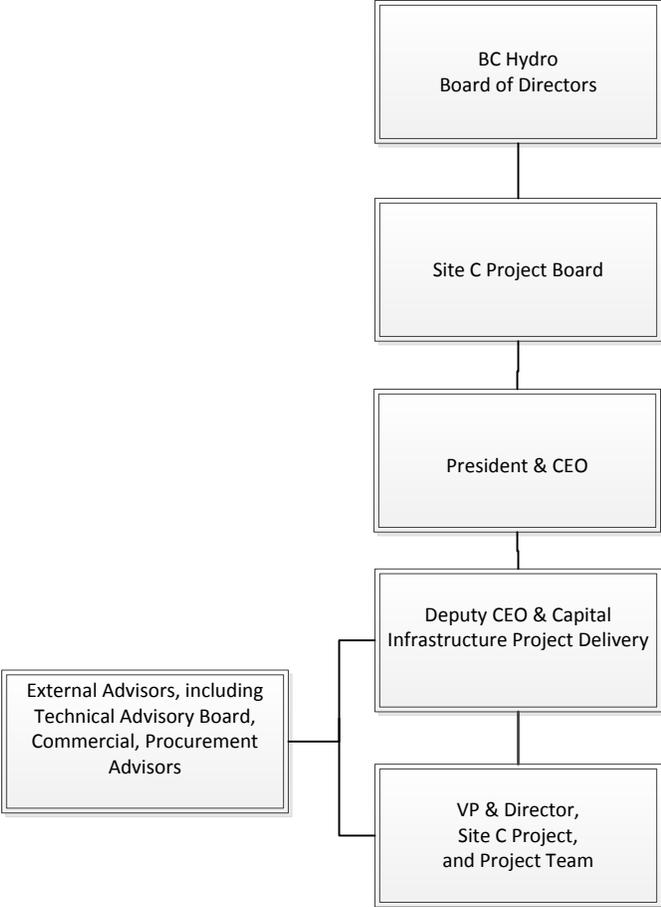
International panel of experts in the development of major hydro-electric projects (Canada, Brazil, Sweden and Germany). Members as of March 2016 include:

Chair: Dr. Norbert Morgenstern
Members: Peter Mason
Joseph Ehasz
Dr. Wynfrith Riemer

The project team has a structure similar to other major capital project organizations with BC Hydro, with some exceptions in order to support ongoing procurement processes and overall project size and scope. The project will be governed by a direct reporting relationship to the Deputy CEO, the CEO and the Site C Project Board within the approved scope, budget and schedule. Functionally, the project delivery team will be led by the Project Manager and Director of Operations and report to the VP and Director of Site C. The Site C Project is subject to BC Hydro's Policies and Practices including the Financial Approval Authority Policy.

External and internal advisors (e.g. BC Hydro principal engineers) will be made available to the project to address specific commercial and technical issues as may arise during the course of the project.

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Attachment A – Site C Reporting Matrix

	Technical Board	Management	Project Board	BC Hydro Board of Directors	Minister of Energy and Mines	Treasury Board	BCUC
Annual Report (includes updated Management Plans)		Develop	Review	Approve	Receive	Receive	Receive
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