

Appendix 2C

Indicators Applicable to the Defined Forest Area

June 2011



The Teal-Jones Group



List of Indicators

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Summary of Results and Changes to the SFMP

2010 Annual Report: DFA Indicators

The 2010 version of the SFMP includes several new and revised indicators. The Public Advisory Groups revisited all Sustainable Forest Management criteria over the last few years, amalgamating those indicators that were common for both portions of the DFA, creating core indicators and re-writing targets for existing indicators where it made sense to do so. This report is one of three reports for 2010, this report contains information on all indicators that are common to the entire DFA; see Appendix 2a for the 2010 Annual Report on the Honeymoon Bay portion of the DFA and Appendix 2b for the 2010 Annual Report on the Fraser portion of the DFA.

For 2010, Teal was in conformance with the target and permitted variance of 36 of the 37 indicators that are applicable to the DFA. The indicators that were determined to be in non-conformance were as follows:

- Indicator C2.1.1 Reforestation Success

Explanations, analysis and rationale, including measures to address the deficiencies, are found for indicator C2.1.1 within the 'Current Status & Results' within this Appendix 2c.

There are 5 indicators that are newly developed in 2011 that will have 'Current Status & Results' reported in the 2011 Annual Report.



C1.1.1: Ecosystem Area by Type

Ecosystem conservation represents a coarse-filter approach to biodiversity conservation. It assumes that by maintaining the structure and diversity of ecosystems, the habitat needs of various species will be provided. For many species, if the habitat is suitable, populations will be maintained¹.

Terrestrial Ecosystems are classified and monitored at a landscape scale using the Biogeoclimatic Ecosystem Classification system (BEC system). The BEC system is a tool for classifying and mapping ecosystems (i.e., ecosystem types) based on similarities in climate, soils and vegetation. Geographic Information Systems (GIS) can be used to report on the current ecosystem area by type. There are 11 unique ecosystems located across the DFA.

The amount of ecosystem area in the DFA can be affected by converting productive forest soil supporting a particular ecosystem is converted into biologically non productive area.

Value	Objective	Indicator	Target	Acceptable Variance
Ecosystem Biodiversity	Conserve Ecosystem diversity at the stand and landscape levels by maintaining the variety of communities and ecosystems that naturally occur in the DFA	Ecosystem Area by Type	Maintain current area by type	Forest Roads

Current Status & Results

Biogeoclimatic Zone / Subzone / Variant*	HBO	FVO
CWH dm (Coastal Western Hemlock, dry maritime)	-	10,853ha
CWH ds (Coastal Western Hemlock, dry sub-maritime)	-	7138ha
CWH ms (Coastal Western Hemlock, moist sub-maritime)	-	39,777ha
CWH vm 1 (Coastal Western Hemlock, very wet maritime, submontane)	22,702ha	16,050ha
CWH vm 2 (Coastal Western Hemlock, very wet maritime, montane)	9218ha	21,611ha

¹ Sustainable Forest Management CSA Standard Z809-09



Biogeoclimatic Zone / Subzone / Variant*	HBO	FVO
CWH mm 1 (Coastal Western Hemlock, moist maritime, submontane)	16,619 ha	-
CWH mm 2 (Coastal Western Hemlock, moist maritime, montane)	5843 ha	-
CWH xm 2 (Coastal Western Hemlock, very dry maritime, western)	1622 ha	-
ESSF dc (Engelmann Spruce-Subalpine Fir, dry cold)	-	48 ha
ESSF mw (Engelmann Spruce-Subalpine Fir, moist warm)	-	44,316ha
IDF ww (Interior Douglas-fir, wet warm)	-	22,295ha
MH mm 1 (Mountain Hemlock, moist maritime windward)	1915 ha	10,603ha

Currently there are 11 unique ecosystems located across the DFA.

Strategy

The amount of ecosystem area can be reduced through the replacement of productive ecosystem area with non-productive area (i.e., catastrophic landslides or parking lot) or changing of the water table in extreme circumstances.

For the purposes of this indicator those forest roads necessary for harvesting will not be considered to change the area of the ecosystem.

Monitoring

Teal's Forestry and Engineering Department will monitor the amount of Terrestrial Ecosystem Area by Type at the BEC zone/subzone and variant level (i.e. area of Coastal Western Hemlock very moist maritime¹ and the other 11 zones/sub zones) net of areas that are characterized as "plantations". GIS queries will be conducted to provide this information. Annually correspondence files will be reviewed to determine if forest area has been removed from the DFA.

Forecast

The amount of Ecosystem Area by Type is not anticipated to change over time apart from negligible losses due to the construction of forest roads necessary for harvesting. Teal will not establish "plantations" as defined in the CSA standard.



C1.1.3: Forest Area by Seral Stage or Age Class

Old Growth Management Areas (OGMA) are areas that contain, or are managed to replace, specific structural old-growth attributes, and that are mapped out and treated as special management areas.²

Value	Objective	Indicator	Target	Acceptable Variance
Ecosystem Biodiversity	Conserve Ecosystem diversity at the stand and landscape levels by maintaining a variety of communities and ecosystems that naturally occur in the DFA	Forest Area by seral stage or age class	Meet Old Growth Management Area representation by Landscape Unit (LU) as defined in legally established Landscape Unit Plans or the Non-Spatial Old Growth Order	Zero

Current Status & Results

This indicator was developed in 2009 by combining three existing indicators: H1-1 Old Growth Representation (originally developed by SIPAG); F1-1 Retention of Old Forest and F1-18 Old Growth Management Areas (originally developed by FPAG).

² Forest Practice Code Biodiversity Guidebook September 1995



Year	Operating Area	Landscape Unit	OGMA Area (ha)	Net Drawdown (ha)	Target Met (Y/N)	Variance Met (Y/N)
2009 & 2010	FVO	Ainslie	3,792.6	0	Y	Y
	FVO	Anderson	1,472.3	0		
	FVO	West Harrison/ Chehalis	3,344.9	0		
	FVO	Coquihalla	4,319.8	0		
	FVO	Nahatlatch	3,414.3	0		
	FVO	Hatzic*	5,417.2 (draft)	0		
	FVO	Pitt*	7,216.2 (draft)	0		
	FVO	Widgeon*	5,758.1 (draft)	0		
	HBO	Caycuse	2,319	0		
	HBO	Gordon	2,639	0		
	HBO	Nitinat	6,854	0		
	HBO	San Juan	3,709	0		
	HBO	Walbran	4,149	0		
	HBO	Cowichan *	18.2 (draft)	0		

* Landscape Units without legally established objectives, OGMA locations are draft, therefore Non-Spatial Old Growth Objectives apply.

There have been no net changes to the any of the established OGMA's. In 2010 there was a Forest Practice Board audit of old growth harvesting in Avatar Grove. Teal was audited by the Forest Practice Board, an independent government body who completes audits of forestry practices, following a complaint from an environmentalist. The result of the audit was that Teal is in compliance with legislation protecting Old Growth Management Areas and Landscape Unit Plan objectives.

This indicator has been tracked since 2005 for the Renfrew Aggregate Landscape Units (Caycuse, Gordon, Nitinat, San Juan and Walbran) and since 2007 for all other Landscape Units. Commonly, several minor amendments for boundary adjustments are completed each year, according to the OGMA Ministry of Agriculture and Lands (Integrated Land Management Bureau) Coast Region Policy. No concerns have been identified during Government inspections.

Strategy

Representation of Old Forest (defined as greater than 250 years) within individual Biogeoclimatic (BEC)³ zones (subzones and their variants) is an objective of the government of British Columbia and is completed through

³ The Biogeoclimatic Ecosystem Classification system is a tool for classifying and mapping ecosystems based on similarities in climate, soils and vegetation.



Landscape Unit Planning (LUP) processes. Coordination of LUP is the responsibility of the Ministry of Agriculture and Lands (Integrated Land Management Bureau). Teal worked in cooperation with government agencies in the development of the Landscape Unit Plans (LUPs) that overlap with the DFA.

Two LUPs incorporate the Honeymoon Bay portion of the DFA, including: the Renfrew Aggregate Landscape Unit Plan (legally established February 16, 2007) and Cowichan LUP (not yet approved).

LUP objectives have been finalized for the following Landscape Units that overlap portions of the Fraser DFA (the dates of the established objectives are shown in brackets): Ainslie (January 13, 2004); Anderson (January 13, 2004); Chehalis (March 15, 2006); Coquihalla (April 14, 2004); Nahatlatch (January 13, 2004); West Harrison (June 24, 2005). LUP objectives have not yet been finalized for Hatzic, Pitt, and Widgeon Landscape Units

The strategy used to select OGMA is detailed in each of the LUPs: selection criteria considered and prioritized those forest values considered most at risk. For example Marbled Murrelet habitat, Northern Goshawk Wildlife Habitat Areas, Archaeological/ heritage sites, Rare ecosystems (and site series), Special Management Zones, Karst features, Ungulate Winter Ranges, Forest Ecosystem Networks (originally established to provide connectivity across the landscape) and First Nation considerations (i.e., areas of very large or Monumental Western Red Cedar trees) were considered of high importance to incorporate in the Renfrew Aggregate LUP.

For Landscape Units where planning is not yet completed, interim old growth objectives have been legally established under the *Order Establishing Provincial Non-Spatial Old Growth Objectives* (effective June 30, 2004). This Order specifies percentage targets of old growth representation to be retained within a specific BEC zone, subzone and variant according to the Natural Disturbance Type (frequency of natural stand initiating events such as fire). The Old Forest objectives within the Non-Spatial Old Growth Order are:” To contribute to the conservation of biodiversity, licensees must maintain Old Forest by biogeoclimatic variant within each Landscape Unit according to the age of Old Forest and the percentage of Old Forest retention that is specified⁴.”

Monitoring

OGMA boundaries are not legally surveyed. Potential trespass across OGMA boundaries will be enforced to a reasonable standard of measurement. Wherever possible, OGMA boundaries are located in the field to reduce operational uncertainty. For example, using natural features wherever

⁴ *Order Establishing Provincial Non-Spatial Old Growth Objectives* (effective June 30, 2004), Ministry of Sustainable Resource Management (see: http://ilmbwww.gov.bc.ca/ilmb/lup/policies_guides/oldgrowth/notice.htm)



possible or using complete forest stands (forest cover polygons). Geographic Information Systems (GIS) track OGMA boundaries and provide the main tool for monitoring OGMA management. Ground-truthing during cutblock layout and Site Planning is also done.

At the Cutblock and Road Site planning stage any boundary adjustments are made according to the objectives for OGMA in each Landscape Unit and are tracked through the filing system (FSP Compliance Ledger, Block and Road files) and the GIS department.

The Environmental Department (with assistance from the Forestry & Engineering Department) provide a summary of changes to OGMA areas in each Landscape Unit. Where required, areas are confirmed by the GIS department. Government agencies also do periodic inspections.

Forecast

Landscape Unit Plans are approved for a large portion of the DFA. It is estimated that the retention targets for those portions of the DFA that are covered by Landscape Unit Plans will be met and remain stable throughout the future. Old growth retention for those portions of the DFA that are not currently covered by Landscape Unit Plans will also likely be relatively stable as many are under draft planning processes. It is not anticipated that government policies regarding retention of old forests will change in the near future. It is anticipated there will be continuous minor changes to the location of OGMA boundaries for operational reasons (where authorized), however, there will be no net area change.



C1.1.4: Degree of Within-stand Structural Retention

A Wildlife Tree Patch (WTP) is a retention area managed at the stand level and is used to maintain structural diversity within managed stands by retaining wildlife trees adjacent to, or within, cutblocks.

Value	Objective	Indicator	Target	Acceptable Variance
Ecosystem Biodiversity	Conserve Ecosystem diversity at the stand and landscape levels by maintaining the variety of communities and ecosystems that naturally occur in the DFA	Average annual percent of stand level retention in all cutblocks as a percent of total cutblock area	Meet retention targets as specified in Teal's Forest Stewardship Plans (FSP)	Zero

Current Status & Results

This indicator was developed in 2009 by combining two existing indicators: H1-2 Stand Level Retention (WTP) (originally developed by SIPAG); and F1-2 Stand Level Retention (WTP) (originally developed by FPAG).

Year	# Cutblocks where harvesting Commenced in year of report	# Cutblocks that meet or exceed retention requirements	% Average WTP Retention	Target Met (Y/N)	Variance
2010	101	101	11.27	Y	0

In 2010 the average WTP retention was 11.2% in the Honeymoon Bay portion of the DFA and 11.3% in the Fraser portion of the DFA; all WTPs met or exceeded retention requirements.

This indicator has been tracked for the Honeymoon Bay portion of the DFA since 2006 and Fraser portion of the DFA since 2007. However, it is important to note, the targets for stand level retention have changed over the years concurrent with changing government objectives. Most recently the Honeymoon Bay FSP result or strategy for stand level biodiversity was amended in November 2008 to be consistent with the most recently established government objectives for the Renfrew Aggregate Landscape Units (Caycuse, Gordon, Nitinat, San Juan and Walbran) which will require tracking percent retention levels by biogeoclimatic zones (similar to Fraser



portion of the DFA). The Fraser FSP results or strategy for stand level retention were set in February 2007.

Strategy

Wildlife Tree Patches (WTPs) are chosen during cutblock design fieldwork. WTP are selected to: retain representative stands compared to those being harvested; to maintain structural characteristics (e.g., coarse woody debris, mature stand attributes, etc.); or target wildlife trees with potential habitat (e.g., raptor nests, bear dens, etc.). Where possible, WTPs overlap otherwise constrained areas such as Riparian Management Areas, terrain and visually sensitive areas, inoperable areas, Culturally Modified Tree Buffers, etc. to minimize impacts on the timber value.

There are currently two approved FSP within the DFA, one each for the Honeymoon Bay and Fraser portions see

<http://tealjones.com/ForestManagement.htm> to view the complete FSP.

Targets for WTP retention are set either by legally established objectives in approved Landscape Unit Plans (which in turn must be incorporated into FSPs); or where Landscape Unit Planning is not completed, the FSP sets objectives for stand level retention that are consistent with the Forest and Range Practices Act. The current targets are as follows:



Landscape Unit	BEC Subzone	%WTP Retention Target (%)*	BEC Subzone	%WTP Retention Target (%)*
Caycuse	CWHvm	11	CWHxm	14
	CWHmm	14	MHmm	4
Gordon	CWHvm	10	CWHxm	13
	CWHmm	14	MHmm	5
Nitinaht	CWHmm	14	CWHxm	15
	CWHvh	2	MHmm	4
	CWHvm	12		
San Juan	CWHmm	11	CWHxm	7
	CWHvm	12	MHmm	5
Walbran	CWHvm	6	MHmm	0
Cowichan	All BEC & variants	3.5 cutblock 7 total per year		
Coquihalla	CWH ms	7		
Anderson	IDF ww	5		
West Harrison	CWH dm	14		
Hatzic	All BEC subzones and variants	7 average, 3.5 minimum		
Pitt/Widgeon	All BEC subzones and variants	7 average, 3.5 minimum		
N/A (Cutblock 321)	CWH vm 2	N/A		

*Note: Approved Wildlife Tree Retention Targets for total amount between April 29, 2009 and November 30, 2011.

All cutblocks where harvesting commences in the year of the report are reviewed to determine if the WTP retained meets or exceeds the retention targets. In addition, the average annual percent of WTPs is reported (determined by dividing the area of WTP by the total area harvested; including areas covered by permanent access structures and the net area to be reforested) for each of those blocks where harvesting has commenced in the year of the report. Cutblock information is derived from the Phoenix database, Site Plans and Supporting Information or Engineering files.

Monitoring

The Forestry Department maintains the block files which contains cut block area information. The Environmental Department reviews those cutblocks



where harvesting has commenced in each year and tallies the proportion of wildlife tree retention for each cutblock; then compares with the minimum WTP requirements. These results are cross referenced with the FSP obligation tracker. In addition, Government agencies also do periodic inspections.

Forecast

Landscape Unit Plans are approved for a large portion of the DFA. It is estimated that the stand level retention targets for those portions of the DFA that are covered by Landscape Unit Plans will be met and remain stable throughout the future. Stand level retention for those portions of the DFA that are not currently covered by Landscape Unit Plans will likely be established in the near future as planning processes are near completion. It is not anticipated that government policies regarding stand level retention will change in the near future.



C1.2.2: Degree of Suitable Habitat in the Long Term for Selected Focal Species, Including Species at Risk

Wildlife Habitat Areas (WHA) are mapped areas that are established to meet the habitat requirements of selected wildlife species and plant communities that have been identified as Species at Risk and Regionally Important Wildlife. Wildlife Habitat Areas designate critical habitats in which activities are managed to limit the impact on the Identified Wildlife for which the area was established. The purpose of Wildlife Habitat Areas is to conserve those habitats considered most limiting to a given Identified Wildlife. Wildlife Habitat Areas are established by order of the Minister Responsible for the Wildlife Act and they may have legally established objectives. For the purposes of this indicator, 'selected focal species including species at risk' is defined as Identified Wildlife, Species at Risk and Regionally Important Wildlife:

- Identified Wildlife refers to those Species at Risk and Regionally Important Wildlife that the Minister of Environment, designates as requiring special management attention under the Forest Practice Code Act and/ or Forest and Range Practices Act.
- Species at Risk includes endangered, threatened, or vulnerable species of vertebrates and invertebrates, and endangered or threatened plants and plant communities that are negatively affected by forest or range management on Crown land and are not adequately protected by other mechanisms.
- Regionally Important Wildlife includes species that are considered important to a region of British Columbia, rely on habitats that are not otherwise protected under the Forest and Range Practices Act and may be adversely impacted by forest or range practices.

Ungulate Winter Range (UWR) areas are established in areas that contain habitat that is considered to be critical to meet the winter habitat requirements for an ungulate species (including Deer, Elk and Goat).

Value	Objective	Indicator	Target	Acceptable Variance
Species at Risk	Maintain critical habitat as established by government	Degree of Suitable Habitat in the Long Term for Selected Focal Species, Including Species at Risk	Zero net area reduction of WHA and UWR	Zero



Current Status & Results

The following table indicates the area of currently established WHA and UWR.

Year	WHA or UWR#	Location	Species	Hectares within DFA	Target Met (Y/N)
2009 & 2010	WHA1-003	HBO	Goshawk	2,103.0	Y
	WHA 1-007, 1-097, 1-099, 1-100, 1-101, 1-102, 1-103	HBO	Marbled Murrelet	1636.4	
	WHA 1-197	HBO	Scouler's Corydalis	16.9	
	WHA 2-102	FVO	Mountain Beaver	78.5	
	WHA 2-101, 2-102, 2-109, 2-195, 2-201, 2-202, 2-203	FVO	Grizzly Bear	1,287.2	
	WHA 3-037, 3-038, 3-039	FVO	Spotted Owl	6,378.0	
	UWR	HBO	Roosevelt Elk & Black Tailed Deer	1215.3	
	UWR U2-006 (draft)	FVO	Deer	2,510.9	
	UWR U2-001	FVO	Mountain Goat	8,112.2	
				Total	

This indicator was developed in 2009 by combining five existing indicators: H1-3 Wildlife Habitat Area; H1-4 Integrated Wildlife Management; and H1-5 Ungulate Winter Range (originally developed by SIPAG); F1-17 Wildlife Habitat Area and F1-19 Ungulate Winter Range (originally developed by FPAG).

In 2010 there were zero net area changes to any Wildlife Habitat Areas or Ungulate Winter Ranges.

Strategy

Establishment of WHA and UWR is the responsibility of the government agencies. Teal has been working cooperatively with the government in order to produce the WHA and UWR boundaries for the protection of Identified Wildlife (Species at Risk and Regionally Important Wildlife) for those species that have not met Wildlife Habitat Area targets.

Established and draft objectives specify what activities may or may not be undertaken within the WHAs and UWR. These objectives may prohibit any activities or specify parameters around modifying the individual WHA or UWR polygons in order to facilitate timber harvesting. Where the Order provides operational flexibility to revise polygon boundaries, any drawdown of established WHAs require an equivalent area (of greater or equal habitat



value) to be added to the WHA or UWR in order to maintain the integrity and total area.

WHA and UWR are mapped by the GIS department from government data sources (Ministry of Environment). Boundaries are not legally surveyed; potential trespass across boundaries will be enforced to a reasonable standard of measurement. Wherever possible, boundaries are located to reduce operational uncertainty. For example, using natural features wherever possible or using complete forest stands (forest cover polygons).

The Forestry and Engineering Department reviews locations of WHA and UWR during development planning. In most cases, cutblocks and roads are established to avoid WHA and UWR locations. Where access cannot be avoided and no other practicable option exists, exemptions and approvals are sought from the Ministry responsible (where permitted).

Monitoring

Where permitted, boundary adjustments are made according to the individual Orders and are tracked through the filing system and Geographical Information System (GIS) department. The Environmental and GIS departments provide a summary of changes to WHA hectares within each Landscape Unit. Government agencies also do periodic inspections.

Forecast

Where amendments to WHA and UWRs are permitted, Teal is committed to ensuring zero net loss occurs to the polygons.

The process to establish UWR is generally completed for the DFA. Additional WHA may be legally designated in the future. Therefore the target may be increased in the future.



C1.2.3: Proportion of Regeneration Comprised of Native Species

Value	Objective	Indicator	Target	Acceptable Variance
Healthy forests with genetic diversity; forest productivity and wood quality	Maintain genetic diversity of native tree species, forest productivity and wood quality	Proportion of Regeneration Comprised of Native Species	100% of seed used for reforestation registered according to the Chief Forester's Standards for Seed Use	Zero

Current Status & Results

This indicator was developed in 2009 by combining two existing indicators: H1-11 Reforestation Seed Source (originally developed by SIPAG); F1-14 Registered Seed (originally developed by FPAG).

Year	% of Seed Used is Registered	Target Met (Y/N)	Variance
2010	100	Y	0
2009	100	Y	0

This indicator was developed in 2006 for the Honeymoon Bay portion of the DFA and 2007 for the Fraser portion of the DFA. Annual reporting indicates that this target has been consistently met for 100% of the DFA: all seedlots that have been planted since 2006 (HBO) and 2007 (FVO) are confirmed to be registered seed within the SPAR database.

Strategy

All seed used for reforestation of public forest lands is required to be registered according to the Chief Forester's Standards for Seed Use. The purpose of this standard is to maintain the identity, adaptability, diversity and productivity of the Province's tree gene resources by a) establishing criteria for the registration of seedlots and vegetative lots used to establish a stand and b) regulating the storage, selection, use and transfer of registered lots.⁵

The origin of seed from which tree seedlings are grown is tracked and tested to ensure seedlings are from a local source, and therefore locally adapted to

⁵ Chief Forester's Standard for Seed Use April 2009



the site. The guidelines for transferring seed are based on ecological criteria, as well as, geographic and elevation ranges.

Genetic class indicates the source of the seed or vegetative material. “A” class seed originates from a seed orchard and has a certain level of genetic gain over natural stand seed. “B” class seed or vegetative material originates from natural stands, plantations or vegetative material production facilities. Natural stands determined to have superior genetics are identified as “B+” seed class.

The Forestry Department purchases seedlings from independent tree nurseries that grow the seedlings with seed that is registered (legally required). Class B seed is used when Class A seed is not available.

Each seedling is tracked through a seedlot number that identifies the origin of the seed and proves registration according to the Chief Forester’s Standards for Seed Use. Seedlots utilized in reforestation are recorded within the cutblock history in the Phoenix database. The provincial Seed Planning and Registry System (SPAR) database tracks registered seedlot information.

Monitoring

The Forestry Department records all seedlings planted (and their respective seedlots) within the Phoenix database. Compliance with the Chief Forester’s Standards for Seed Use will be reported under “Current Status and Results” using the provincial seed registry database SPAR, and compliance reports from Government agencies.

Government agencies also do periodic inspections (cross reference the Compliance Tracker).

Forecast

Teal does not currently grow their own seedlings; rather they purchase seedlings from local tree nurseries. Tree nurseries in BC are required by law to grow their seedlings from registered seed in accordance with legislation and the Chief Foresters Standard for Seed Use. Therefore, it is anticipated that the target will be achieved in all cases.



C1.4.1: Proportion of Identified Sites with Implemented Management Strategies

The term “Identified” is defined within the CSA Standard as meaning sites that are known to government from prior inventories and processes.

Value	Objective	Indicator	Target	Acceptable Variance
Identified Sites	Manage rare or unique sites of ecological, geological, historical or cultural importance in a manner that recognizes their special qualities	Proportion of Identified Sites with Implemented Management Strategies	100% of identified sites within the DFA have implemented management strategies as per the approved Forest Stewardship Plan (FSP)	Zero

Current Status & Results

This is a new indicator developed in 2009 by both the SIPAG and FPAG.

Year	% of Identified Sites within the DFA that have implemented management strategies as per the approved Forest Stewardship Plan (FSP)	Target Met (Y/N)	Variance
2010	100	Y	0

In 2010 all identified sites within the DFA have implemented management strategies as per approved Forest Stewardship Plans.

Strategy

Forest Stewardship is the management of Crown (public) forest land on behalf of the people of British Columbia. This requires balancing the many resources and values of public forests. These resources include, but are not limited to; timber, water, wildlife, fisheries, recreation, botanical forest products, forage and biodiversity. The Forest Stewardship section of the South Island Forest District (SIFD) works in co-operation with forest companies and other



government agencies to ensure that provincial government's objectives for the management, protection and conservation of forest resources are met.⁶

Objectives are set by Government for managing and protecting forest values. Teal must have a Forest Stewardship Plan approved by Government agencies that specifies their commitments as Results or Strategies that will ensure they implement the management objectives see <http://tealjones.com/ForestManagement.htm> to view the complete FSP.

Monitoring

Third party auditors and Government agencies do periodic inspections, which would indicate any non-compliances issued. The Environmental Department will review audits and inspections and report under "Current Status and Results"

Forecast

Since developing results and strategies within the FSP to implement the management strategies for identified sites is a legal requirement, it is anticipated that Teal will consistently meet the target.

⁶ <http://www.for.gov.bc.ca/dsi/Stewardship.htm>



C1.4.2: Protection of Identified Sacred and Culturally Important Sites

There is no definition of 'Sites of Special Significance', however Teal will evaluate all potential sites and may include for example: sites of biological significance (for example unique biological features that are not protected through current legislation e.g., salt licks or unclassified swamps); special geographical features (e.g., caves, karst features); historically significant sites (e.g., a cultural heritage feature); or cultural significance (e.g., a recreation trail). The intent is to provide some manner of protection for those features which are locally important, rare or unique, but do not have protection under the current legislated management regimes.

Value	Objective	Indicator	Target	Acceptable Variance
Special sites	Manage rare or unique sites of ecological, geological, historical or cultural importance in a manner that recognizes and maintains their special qualities	Protection of Identified Sacred and Culturally Important Sites	Spatially track all special sites identified (outside of OGMA, WHA, etc.) and implement management strategies appropriate to their long term maintenance	Zero

Current Status & Results

This indicator was developed in 2010 by combining three existing indicators: H1-12 and H5-5 Sites of Special Significance (originally developed by SIPAG); and F1-20 Special Biological Sites (originally developed by FPAG).

Year	# of Special Biological Sites Identified	# of Special Biological Sites Spatially Tracked	Target Met (Y/N)	Variance Met (Y/N)
2010	9	9	Y	Y
2009	20	20	Y	Y

In 2010, in the Honeymoon Bay portion of the DFA there were seven site identified (2 karst features, 1 recreation site, 2 research plots and 2 bear dens). In the Fraser portion of the DFA there were two sites identified (1 raptor nest and 1 research plot).



In 2009, in the Fraser portion of the DFA, several special sites of biological significance were identified: a spiritual site and face paint collection site (Norrish Creek); a cultural trail and Licensed Water Intakes (cutblock 332); two post 1846 Culturally Modified Tree (cutblock C6C, WH17A); Growth and Yield plot (cutblock C6B); recreation sites (HC1B, HC1D, WC1B, WC2A, WH16C, WH7B); and a spiritual site (West Harrison). In 2009 in the Honeymoon Bay portion of the DFA, several karst features were identified and protected in block 8446.

Strategy

During cutblock and road planning activities, special sites that are encountered are identified on site level mapping and appropriate management actions are developed in conjunction with the site level plan (e.g., Logging Plan, Road Construction Map, and Site Plan).

Sites of special biological significance are currently managed on a site by site basis as they are encountered. General protection measures in the past have included: placing no harvest zones or reserves around features; inventory and mapping. *Some sensitivity exists around culturally important sites, and these areas may be tracked for mapping by the First Nation rather than Teal.

Over the past years, special sites have included karst features, cultural features (such as bark stripping opportunities, an old miner's cabin, etc. Starting in 2010 special site may also include sites such as the following examples (generally less than 1ha):

- low volume very open type on steep rock that has a mix of deciduous shrubs, scattered vets, possibly some white pine survivors, ferns and flowers (significant sized canopy openings in forests are rare)
- small swamp or fen below the size to manage -conserve a shallow buffer (i.e., take out the wind prone trees?) but maintain the small wet area with an intact vegetated perimeter.
- multi age or canopy stand (i.e., small old blowdown area with low volume mature but great snags and vets with various heights of regeneration, conserve a small area adjacent to the block for one rotation)
- very wet problematic stand associated with perched water table areas that have a unique forest type (usually borderline or non-merch, with widely scattered limby vets/ Cottonwood, cedar, deciduous and understory of cascarras or elderberry all covered with lichens)
- extremely deformed stand due to environmental factors (e.g. residual Hw old growth with extreme mistletoe that actually renders stand unmerchantable (even in good markets) Wind swept faces that have open grown fat stubby very limby trees. A small patch of very large snags (lightning strike?)).



Monitoring

The Forestry & Engineering Departments will spatially track all identified sites of special significance that are located outside of OGMAs, WHAs, or other reserves, within the site level mapping (Logging Plans, Road Construction Maps and Site Plans).

The Environmental Department will report the number of special sites that are identified within cutblocks under the Current Status and Results.

Forecast

It is anticipated that sites may be identified through the general public in the future, as communication is generally improving. Field crew's identification of sites will fluctuate depending on the areas of operation. It is anticipated that field crews will maintain their excellent reporting procedures.



C2.1.1: Reforestation Success

Reforestation or successful regeneration is defined within the approved stocking standards. The standards vary for each biogeoclimatic subzone and variant, but in general the standards require a minimum number of well spaced stems per hectare of a commercially viable and ecologically suitable species, of good form and vigour. Stocking Standards are found in the approved Forest Stewardship Plan (FSP) or Forest Development Plan (FDP), as applicable (approved by Government agencies) see <http://tealjones.com/ForestManagement.htm> to view the complete FSP.

Value	Objective	Indicator	Target	Acceptable Variance
Regeneration of harvested areas	Successful regeneration of harvested areas	Reforestation Success	Full compliance with regeneration delay requirements in approved stocking standards	Zero

Current Status & Results

This indicator was developed in 2010 by combining two existing indicators: H2-1 Successful Regeneration (originally developed by SIPAG); and F2-3 Successful Regeneration (originally developed by FPAG).

Year	# of Cutblocks with Regen Expiring	# of Cutblocks that Met Regen	% Compliance	Target Met (Y/N)	Variance
2010	74	73	99%	N	-1%
2009	46	45	98%	N	-2%

In 2010 in the Honeymoon Bay portion of the DFA there were 27 cutblocks with regeneration expiry dates within the year that were determined to have achieved the required stocking levels of well-spaced stems per hectare. In the Fraser portion of the DFA 46 cutblocks with regeneration expiry dates within the year were determined to have achieved the required stocking levels of well-spaced stems per hectare; one block has not been planted or surveyed so the current status is not known (JL-2 is a small heli-block and access is difficult; it is planned for survey and planting in 2011 as soon as the snow melts).

This indicator has been tracked for the Honeymoon Bay portion of the DFA since 2006 and Fraser portion of the DFA since 2007. With the exception of 2009 Honeymoon Bay portion of the DFA has been 100% in compliance with the regeneration standards. In 2009, in the Fraser portion of the DFA all



cutblocks with regeneration expiry dates within the year were determined to have achieved the required stocking levels of well-spaced stems per hectare. The Ministry of Forests and Range completed 29 inspections and did not identify any issues related to regeneration delay.

Strategy

Regeneration strategies are developed at the planning stages of the cutblock (prior to harvesting). After harvesting, the site is re-inspected to determine if any changes to the plan are required.

Regeneration is assessed by field surveys conducted under the supervision of the Forestry and Engineering Department. This assessment may be completed directly after planting and must be completed within the period prescribed in approved stocking standards. Approved stocking standards provide a maximum of 3 to 7 years (dependent on ecosystem) after harvest commencement before regeneration requirements must be met.

Regeneration status may be assessed from immediately after planting completion up to the late regeneration date (i.e. the end of the regeneration delay window)

Where there has been selection type harvesting or where low numbers of trees are harvested and significant amounts of timber and/ or advanced natural regeneration is retained, regeneration may be assessed right after harvest completion to evaluate the number, species and health of trees retained. In most cases, this low level of harvest removal does not require re-stocking by planting.

Monitoring

Cutblocks are surveyed as per the Forest Practices Branch Stocking and Free Growing Surveys Procedures Manual (May 2002) to determine if they meet stocking standards. Cutblock regeneration status will be derived from the Phoenix database and/or the “RESULTS” electronic reporting database system by the Forestry Department.

The Environmental Department will examine the number of cutblocks successfully regenerated versus the total number of cutblocks with regeneration period expiring in that year, calculate and report under “Current Status and Results”.

Government agencies also do periodic inspections (cross reference the Compliance Tracker or FS107 spreadsheet).

Forecast

100% compliance with regeneration delay is the forecast. Teal implements a rigorous planting and survey program in order to ensure compliance.



D2-1: Accidental Industrial Caused Fires

Accidental industrial caused fires are those fires which are initiated by management activities (e.g., caused by equipment operating or controlled burns that escape and cause significant damage to timber or regenerated sites). The intent is that this indicator measures preventable impacts resulting from Teal's forest activities, and does not include 'acts of nature' or unforeseeable circumstances (i.e., vandalism).

Value	Objective	Indicator	Target	Acceptable Variance
Healthy Forests	Minimize stress associated with harvesting	Number of Accidental Industrial Caused Fires > ½ ha in size	Zero incidents	Average one incident per year over a five year rolling average

Current Status & Results

This indicator was developed in 2011, based on existing indicators: H2-3 Industrial Caused Fire (originally developed by SIPAG); and F2-5 Industrial Caused Fires (originally developed by FPAG).

The following is a summary of the events within the DFA:

Year	HBO	FVO	Target Met (Y/N)	Variance
2010	2	0	Y	-1
2009	1	0	N	-1
2008	0	1	N	-1
2007	0	0	Y	0
2006	0	N/A	Y	0

In 2010 there were two fires reported in the Fraser portion of the DFA, however they were both confirmed by Government to be resulting from vandalism (and therefore are not tallied). The two fires in the Honeymoon Bay portion of the DFA were caused by minor escapes from roadside pile burning activities (resulting in a 1h and 2ha fire which is not considered an escape under the Resource Management Permit); Standard Operating Procedures



(with respect to firewatch) and training have been reviewed and revised as necessary in order to improve management.

It should be noted that this indicator has been tracked since 2006 for HBO (zero fires in HBO in 2006-2008) and since 2007 for FVO (one fire in FVO in 2008).

Strategy

On an on-going basis, Teal updates their Emergency Preparedness and Response Plan. The plan is implemented throughout the year and includes many strategies to prevent and prepare for injury, fires, heavy rainfall events, spills, landslides, etc. The Plan includes roles and responsibilities during an event, training requirements, response equipment requirements, emergency action plans, etc.

All fires are assessed and details of the event recorded using the Teal's Emergency Report Forms (i.e., Fire Report Form) to determine contributing factors and any action items required to mitigate the impact.

Monitoring

The Environmental Department tallies the number of incidents from the Emergency Report Forms or Incident Investigations; and confirms with operational representatives.

Government agencies also do periodic inspections (cross reference the Compliance Tracker).

Forecast

Teal continues to do regular training, maintenance and inspections, follow Standard Operating Procedures and Emergency Preparedness and Response Procedures in order to prevent and respond appropriately to fires. Therefore it is anticipated that while Teal will aim for zero incidents, there will continue to be some accidental caused fires within the DFA, the number generally within the allowable variance.



D2-2 Reportable Spills

The Province of BC's Spill Reporting Regulation⁷ under the BC Environmental Management Act specifies the definitions and responsibilities of individuals and companies, etc. with respect to reporting spills of hazardous materials. It also specifies the quantities of individual classes of hazardous materials that must be reported to the Provincial Emergency Program (PEP). Spilled hazardous materials are a human safety concern, as well as, a concern for wildlife, water quality and soil productivity. A list of the materials typically used in forestry and their respective reportable quantities is summarized below. These amounts are reportable if spilled to land (any amount of hazardous material accidentally spilled into water must be reported). Thresholds for common hazardous materials products used in forestry operations:

- Petroleum Products >100L
- Pesticides (including herbicides) >5L
- Fertilizer >100kg
- Antifreeze >5L
- Explosives (any amount)

Value	Objective	Indicator	Target	Acceptable Variance
Healthy Forests	Minimize stress associated with harvesting	Number of Reportable Spills	Zero incidents	Average two incidents per year over a five year rolling average

Current Status & Results

This indicator was developed in 2011, based on existing indicators: H3-5 Reportable Spills to Land; H3-7 Reportable Spills to Water (originally developed by SIPAG); and F3-5 Reportable Spills to Land; and F3-9 Reportable Spills to Water (originally developed by FPAG).

⁷ See: http://www.qp.gov.bc.ca/statreg/reg/E/EnvMgmt/263_90.htm



The following is a summary of the events within the DFA:

Year	HBO	FVO	Target Met (Y/N)	Variance
2010	1	0	Y	-1
2009	0	0	Y	0
2008	1	0	N	-1
2007	3	0	N	-3
2006	1	N/A	Y	0

In 2010 in the Fraser portion of the DFA there were no reportable spills. In the Honeymoon Bay portion of the DFA there were two spills, both were hydraulic oil spilled from broken lines on the equipment, however one was a reportable amount (block 2250 was 100L within the block) and one was under the reportable threshold (block 2100 was 40L on the road). There were no spills to water.

It should be noted that these indicators have been tracked since 2006 for HBO and since 2007 for FVO. All spills listed in the above table were to land, to date there have been no spills to water.

Strategy

On an on-going basis, Teal updates their Emergency Preparedness and Response Plan. The plan is implemented throughout the year and includes many strategies to prevent and prepare for injury, fires, heavy rainfall events, spills, landslides, etc. The Plan includes roles and responsibilities during an event, training requirements, response equipment requirements, emergency action plans, etc.

The Corporate Management System requires crews to report all spills to their supervisors. Supervisors are required to access all incidents, and where appropriate, record details of the event using the Teal's Emergency Report Forms (i.e., Spill Report Form) to determine contributing factors and any action items required to mitigate the impact. Those spills where the material spilled exceeds the reporting thresholds are reported to PEP (a record of reporting to PEP is kept on file).

Monitoring

The Environmental Department tallies the number of incidents from the Emergency Report Forms or Incident Investigations; and confirms with operational representatives.

Government agencies also do periodic inspections (cross reference the Compliance Tracker).



Forecast

Teal continues to do regular training, maintenance and inspections, follow Standard Operating Procedures and Emergency Preparedness and Response Procedures in order to prevent and respond appropriately to events.

Therefore it is anticipated that while Teal will aim for zero incidents, there will continue to be spills within the DFA as part of normal operating conditions, the number generally within the allowable variance.



D2-3 Landslides

There is no legal definition of a landslide with respect to forest management. Geographically, a landslide is defined as the movement of a mass of rock, debris, or earth down a slope.⁸ Landslides can be initiated by rainfall, earthquakes, volcanic activity, changes in groundwater, disturbance or change of a slope by man-made construction activities, or any combination of these factors. Landslides are undesirable for a number of reasons including the potential for impacting human safety, water quality, fish habitat and the visual quality of the forested landscape. Landslides can result in removing productive forest soils and exposing un-productive or lower productivity soils. Minimizing landslides initiated as a result of forest management activities is an important part of maintaining the productive capacity and function of forest soils. The following thresholds are used by the Forest Practices Board of British Columbia to define a landslide that causes a materially adverse effect on the environment:

- A landslide of 200 cubic meters of sediment or more that directly entered a community watershed stream, a fish-bearing reach of a stream, or a direct tributary of a fish stream within 500 meters of fish habitat.
- A landslide of any size that caused a debris flow that scoured a portion of a fish stream.
- A landslide that delivered in excess of 500 cubic meters of sediment to a stream directly tributary to a fish stream.
- A landslide that destroyed more than 0.25 hectares of forest or plantation

The intent of this indicator is to measure damage to the land base caused by management and implementation of harvesting or road activities (e.g., construction, maintenance or deactivation) and does not include 'acts of nature', however, in some cases it is very difficult to determine the cause of a landslide, therefore the reporting will include all landslides (natural and those caused by management activities). Landslides occur in both standing timber and developed areas and are difficult to predict. For the purposes of this indicator, roads constructed or cutblocks harvested after 1994, that are under Teal's obligation are considered 'recent'.

Value	Objective	Indicator	Target	Acceptable Variance
Healthy Forests	Minimize stress associated with harvesting	Number of Landslides within Recently Built Roads or Harvested Areas	Less than an average of four incidents per year over a five year rolling average	+1

⁸ Cruden, D.M., 1991. A Simple Definition of a Landslide. Bulletin of the International Association of Engineering Geology, No. 43, pp. 27-29.



Current Status & Results

This indicator was developed in 2011, based on existing indicators: H3-2 Landslides in Recently Built Roads; H3-3 Landslides in Recent Harvesting (originally developed by SIPAG); and F3-3 Landslides Resulting from Roads & Cutblocks (originally developed by FPAG).

The following is a summary of the events within the DFA:

Year	HBO Roads	HBO Cutblocks	FVO Roads	FVO Cutblocks	Target Met (Y/N)	Variance
2010	1	1	0	0	Y	-0.6
2009	0	3	1	0	N	N/A
2008	0	0	2	0	N	N/A
2007	1	2	2	1	N	N/A
2006	2	1	N/A	N/A	N	N/A

In 2010 there were no landslides within the Fraser portion of the DFA. In the Honeymoon Bay portion of the DFA there were two landslides in 2010. One landslide was initiated at the top boundary of a recently harvested cutblock (8360) and deposited debris in a fishbearing stream (Kim Creek) just below the cutblock. The other landslide was in 20-30 year old forested area and did not impact any riparian features.

It should be noted that these indicators have been tracked since 2006 for HBO and since 2007 for FVO.

Strategy

On an on-going basis, Teal updates their Emergency Preparedness and Response Plan. The plan is implemented throughout the year and includes many strategies to prevent and prepare for injury, fires, heavy rainfall events, spills, landslides, etc. The Plan includes roles and responsibilities during an event, training requirements, response equipment requirements, emergency action plans, etc.

Proposed roads and blocks located on or adjacent to potentially unstable areas are assessed by a qualified professional during the planning stages of layout. Where proposed activities may increase the risk of landslides or other instability events beyond an acceptable level, the assessment will recommend an alternate road location, deleting an area from a cutblock or other measures to reduce the risk.

In addition, Teal tracks all roads under permit for scheduled and completed maintenance and inspections. For example a road that is rated as a higher risk (due to construction materials, downstream resources such as fish or high



landslide hazard ratings, etc.) will require more frequent inspections than a moderate risk ranking. Inspections determine the level of maintenance required and these planned activities are formally tracked.

Incidents within cutblocks and roads are assessed and may be recorded using the Teal's Emergency Report Forms (i.e., Landslide Report Form) to determine contributing factors and any action items required to mitigate the impact.

Monitoring

The Environmental Department tallies the number of incidents from the Emergency Report Forms or Incident Investigations and confirms with operational representatives.

Government agencies also do periodic inspections (cross reference the Compliance Tracker).

Forecast

Local knowledge indicates that generally landslides relating to recently built roads occur during the fall and winter when rainfall is the highest and soils are saturated, however timing and location of landslides is difficult to predict. Teal continues to do regular inspections, Terrain Stability assessments and follow Standard Operating Procedures and Emergency Preparedness and Response Procedures in order to prevent potential for contributing to events. Therefore it is anticipated that while Teal will aim for zero landslides, there will continue to be landslides within the DFA, the number generally within the allowable variance.



D2-4 Stand Establishment

Free Growing requirements are defined within the approved stocking standards within the FSP or Forest Development Plan, as applicable. The standards vary for each biogeoclimatic subzone, variant and Site Series, but in general the standards require a minimum number of well spaced stems per hectare of a commercially viable and ecologically suitable species, of good form and vigour and free of brush competition.

Value	Objective	Indicator	Target	Acceptable Variance
Ecosystem recovery from disturbance & stress	Forest management activities do not compromise the ability of the ecosystem to recover from disturbance and stress	Successful establishment of stands (cutblocks meet free growing criteria)	Full compliance with Free Growing requirements in approved stocking standards	Zero

Current Status & Results

This indicator was developed in 2011 by combining two existing indicators: H2-2 Stand Establishment (originally developed by SIPAG); and F2-4 Free Growing (originally developed by FPAG).

Year	# of Cutblocks with Late FG Expiring	# of Cutblocks in Compliance with FG Requirements	% Compliance	Target Met (Y/N)	Variance Met (Y/N)
2010	36	36	100	Y	Y
2009	46	46	100	Y	Y

In 2010 in the Honeymoon Bay portion of the DFA all 6 blocks that were due for Free Growing were in compliance with Free Growing requirements. In the Fraser portion of the DFA all 30 blocks that were due for Free Growing were in compliance with Free Growing requirements.

This indicator has been tracked for the Honeymoon Bay portion of the DFA since 2006 and Fraser portion of the DFA since 2007. The DFA has been 100% in compliance with Free Growing requirements in approved stocking standards.

Strategy

A combination of activities are implemented in order to establish and maintain a new forest following harvesting and/ or other disturbances and aid the site in



reaching the Free Growing standards. These activities are referred to as basic silviculture, and may include planting, brushing or site preparation.

The main factor with the potential to limit Free Growing status of regenerating stands is brush competition. Brush competition is periodically assessed over the first years of the regenerating stand. If brush competition is deemed to be compromising the freely growing status it is treated prior to the completion of the Free Growing assessment period stated within the stocking standards. The free growing 'window' is the period in which regenerated stands may be surveyed and assessed for adequate stocking of ecologically suited species, forest health and brush competition. The 'window' varies by ecosystem and is stated within stocking standards. The window typically starts after 8 years following harvest commencement and ends between 12 and 20 years following harvest. The window provides opportunity for the brush complex to express itself so that brush competition may be assessed. Stands that do not meet the standards for Free Growing before the end of the assessment window are non-compliant and may be subject to government penalty.

Regeneration strategies are developed at the planning stages of the cutblock (prior to harvesting). After harvesting, the site is re-inspected to determine if any changes to the plan are required. Stocking surveys carried out before the regeneration delay expires allow the Forestry and Engineering Department to assess stocking levels and brush competition. Brush treatment may be planned at this point.

Monitoring

Cutblocks are surveyed as per the Forest Practices Branch Stocking and Free Growing Surveys Procedures Manual (May 2002) to determine if they meeting Free Growing standards. Cutblock and Free Growing information is maintained by the Forestry & Engineering Department in the Phoenix database.

The Environmental Department will examine the number of cutblocks that successfully meet Free Growing standards and the total number of cutblocks where the late Free Growing Date expires in that year to calculate and report under "Current Status and Results".

Government agencies also do periodic inspections.

Forecast

Teal implements a rigorous planting and survey program in order to ensure compliance. Treatments are prescribed as required (e.g., fertilization, brushing and weeding). Therefore, 100% compliance with free growing requirements is the forecast.



C2.2.1: Additions and Deletions to the Forest Area

Conversion of forest lands to other uses may include proposals for agriculture, urbanization, mining, industrial development, utility corridors, etc. which turn productive forest land into non-forest use. This indicator does not include forest land conversion to forest access roads for forestry.

Additions to forest lands could include afforestation (i.e., planting seeds or trees to create a forest on an area which was not previously forested or has not been a forest for a significant time period (note this is a different process from reforestation which is the reestablishment of a forest after removal or disturbance, for example from timber harvesting).

Value	Objective	Indicator	Target	Acceptable Variance
Minimize loss productive area	Minimize conversion of forests to non-forest uses	Additions and deletions to the forest area	Evaluate and respond to 100% of all formal proposals for conversion of forested lands to non-forest uses	Zero

Current Status & Results

This indicator was developed in 2010 by combining two existing indicators: H4-3 Conversion of Forest Lands (originally developed by SIPAG); and F4-7 Conversion of Forest Lands (originally developed by FPAG).

Year	#of Proposals for Conversion of Forested Lands	# of Responses	% of Responses	Target Met (Y/N)	Variance
2010	1	2	100	Y	0
2009	3	3	N/A	Y	0

In 2010 there was one proposed change to the status of the forest lands in the DFA, which Teal responded (Hemlock Valley Resort).

In 2009 there were three proposed changes to the status of the forest lands in the DFA referred to Teal.



Strategy

Proposals referred to Teal will be reviewed by the Manager, Forestry and Engineering and responses will be sent within the time periods specified in the individual referrals. All proposal correspondence and their respective responses from Teal are filed in the external communications file.

Monitoring

The Environmental Department reviews the external communications file and any proposals for conversion of forest lands are summarized under “Current Status and Results”.

Forecast

The DFA is a relatively stable area, however it is anticipated that Teal will continue to receive requests for minor area removals from the DFA over the long term future (i.e., rights of way). There are no afforestation projects proposed so addition to the forest land area are not expected. As it is in the best interest of Teal to minimize forest land loss, it is anticipated that the target is the forecast.



C2.2.2: Proportion of the Calculated Long-term Sustainable Harvest Level that is Actually Harvested

The sustainable harvest level (referred to as Allowable Annual Cut) is determined by the Chief Forester and reviewed every 5 years after the date of the last determination in the Timber Supply Review. Under the Forest Act, section 7, the Chief Forester must consider ecological, social, economic and cultural factors in his/ her determination, for example:

- the rate of timber production that may be sustained on the area, taking into account the current state, prescribed management regime and expected future conditions
- the short and long term implications to the Province of alternative rates of timber harvesting from the area
- the nature, production capabilities and timber requirements of established and proposed timber processing facilities
- the economic and social objectives of the Crown, as expressed by the minister for the area, the general region and the Province.

Cut control rules under the Forest Act are continuously being updated, however in general there is flexibility built in so that within a five year term licences can cut over or under their annual allowable cut level as long as the five year average is equivalent to the total cut for five years. Licencees may have an undercut at the five year point without penalty; and an overcut of up to 10% without penalty. If the overcut is greater than 10% after the 5 year term then the subsequent 5 year cut is reduced by that amount and licencees pay additional stumpage according to cut control regulations.

Value	Objective	Indicator	Target	Acceptable Variance
Timber	Sustainable harvest levels	Proportion of the calculated long-term sustainable harvest level that is actually harvested	100% compliance with Allowable Annual Cut over Cut Control Period	As allowed under the Forest Act cut control rules

Current Status & Results

This indicator was developed by rewording an existing indicator: H5-1 Annual Harvest Levels (originally developed by SIPAG in 2006) and adopted by FPAG in 2010.



Year	HBO 5 year cut control (m3)	HBO AAC (m3)	HBO Harvested (m3)	% Compliance with Cut Control	Target Met (Y/N)	Variance
2010	1,836,815	367,363	477,438	Y	Y	+30%
2009		367,363	266,318	Y	Y	-39%
2008		367,363	330,325	Y	Y	-12%
2003-2007	2,080,755*	-	2,083,286	Y	Y	-0.01%

*In 2004 Teal harvested an additional 100,00m3 from an undercut (from the previous licensee).

In the Honeymoon Bay portion of the DFA the current cut control period is 2008-2012 (January 1-December 31); results for the five year cut control period will be available in 2011.

Year	FVO 5 year cut control (m3)	FVO AAC (m3)	FVO Harvested (m3)	% Compliance with Cut Control	Target Met (Y/N)	Variance
2010	1,571,900	314,380	143,727	Y	Y	-46%
2009		314,380	289,092	Y	Y	-8%

In the Fraser portion of the DFA the current cut control period is 2008-2013 (January 1-December 31); results for the five year cut control period will be available in 2013.

Strategy

Scaled volumes from the Dryland Sort and the Salvage Supervisor (as well as waste and residue volume) is reported electronically to Ministry of Lands and Natural Resource Operations. Annually, a cut control letter is also issued by the Ministry of Lands and Natural Resource Operations that includes calculations of volume harvested versus AAC and percentage compliance with cut control.

Monitoring

This Operations Manager determines compliance with the Allowable Annual Cut by comparing the actual annual harvest volume, over a five year period with the Allowable Annual Cut for that time period. Results will be summarized under "Current Status and Results".



Forecast

It is anticipated that the Allowable Annual Cut will not have any further significant changes in the next Timber Supply Review for the Honeymoon Bay portion of the DFA. The Timber Supply Review for the Fraser portion of the DFA has had a postponement order, therefore it is anticipated the Allowable Annual Cut will not have any significant changes.



C3.1.1: Level of Soil Disturbance

With respect to forestry operations, soil conservation legislation (in the Forest Practices Code Act and Forest and Range Practices Act) aims to:

- limit the extent of soil disturbance, caused by harvesting and silviculture activities that negatively affect the physical, chemical, and biological properties of the soil
- conduct forest practices in a manner that addresses the inherent sensitivity of a site to soil-degrading processes to minimize detrimental soil disturbance, landslides, soil erosion, and sediment delivery to streams
- limit the area of productive forest land that is occupied by permanent roads, landings, pits, quarries, and trails to the minimum necessary to safely conduct forest practices⁹
- There are legislated limitations for soil conservation with respect to areas occupied by permanent access structures and areas occupied by soil disturbance within cutblocks. These limitations are found in the Forest Stewardship Plan for each of the operations found in the DFA. See <http://tealjones.com/ForestManagement.htm> to view the complete FSP.

Permanent access structures include on-block roads, landings, gravel pits, bridges, borrow pits, quarries and permanent logging trails that are reasonably required for timber harvesting and other forest management activities. At the time of writing, the permanent access structure limitations were as follows:

- 7% of the cutblock unless an acceptable rationale is provided (e.g., there is no other practicable option on that cutblock, having regard to the size, topography and engineering constraints of the cutblock; safety of road users, they are required in selection harvesting systems for excavated or bladed trails or other logging trails, or they are necessary to provide access beyond the cutblock). Where this limit is exceeded, rehabilitation may be required.

Soil disturbance within the Net Area to be Reforested is categorized as the area occupied by trails, compacted areas, areas of dispersed disturbance (ruts and gouges), and un-rehabilitated temporary access structures. At the time of writing, the soil disturbance limitations were as follows:

- 5% of the Net Area to be Reforested for sensitive soils
- 10% of the Net Area to be Reforested for non-sensitive soils
- 25% for roadside work areas (i.e., the area adjacent to a road where the following are carried out: decking, processing or loading timber; piling or disposing of logging debris
- These limits may be temporarily exceeded (and may be required to be rehabilitated) for the purposes of forest health (e.g., removing infected stumps, or windthrow salvage) or temporary access

⁹ Forest Practice Code Soil Conservation Guidebook May 2001



Value	Objective	Indicator	Target	Acceptable Variance
Soil productivity: the natural elemental properties of forest soil function, nutrients and content	Conserve productivity of forests soils by minimizing disturbance due to harvesting activities	Level of Soil Disturbance	100% compliance with soil conservation limitations (permanent access structures and soil disturbance limits)	Zero

Current Status & Results

This indicator was developed in 2010 by combining two existing indicators: H3-1 Soil Conservation (originally developed by SIPAG); and F3-2 Soil Disturbance and F4-6 Permanent Access Structures (originally developed by FPAG).

Year	# of Inspections	# of Non-Compliance Assessed Regarding Soil Disturbance	% Compliance	Target Met (Y/N)	Variance Met (Y/N)
2010	160	0	100	Y	Y
2009	63	0	100	Y	Y

In 2010 all active blocks were inspected throughout the DFA. In the Honeymoon Bay portion of the DFA 45 Harvest and Road inspections were completed along with ongoing monitoring. In the Fraser portion of the DFA 115 Harvest and Road inspections were completed along with ongoing monitoring. Soil disturbance was within allowable limits for all blocks and permanent access structures were within allowable limits (range of 0 to 13.8% in Honeymoon Bay portion of the DFA, average 4.9% and a range of 0 to 20.2%, average 6.2% in the Fraser portion of the DFA). Those blocks with greater than 7% permanent access structures had rationales in the block file. There were no compliance issues related to soil conservation identified by government inspections.

In 2009 there were 34 internal inspections completed in the Honeymoon Bay portion of the DFA (internal) and 29 inspections completed in Fraser portion of the DFA. Soil disturbance was within allowable limits for all blocks and permanent access structures were within allowable limits (range of 0 to 9.8%, average 5.3%). Those blocks with greater than 7% permanent access



structures had rationales in the block file. There were no compliance issues related to soil conservation identified.

This indicator has been tracked for the Honeymoon Bay portion of the DFA since 2006 and Fraser portion of the DFA since 2007. The DFA has been 100% in compliance with soil conservation limitations.

Strategy

Soil hazard ratings and soil characteristics are assessed during field work to determine the sensitivity of the soil and if there are any restrictions on harvesting activities, for example ground based harvesting.

For each cutblock, limits are set on the amount of site disturbance that is attributed to permanent access structures. The maximum proportion of an area that can be occupied by permanent access structures must either: follow the limits set in legislation; or if the planned area exceeds the legislated limitations, the limits must be stated in either the FSP or the Site Plan and a rationale provided that meets one of the acceptable criteria (e.g., engineering constraints, safety of road users, the road is required for access beyond the cutblock, etc.)

In addition, for each cutblock, limits are set on the amount of soil disturbance that is acceptable as a result of harvesting activities. For example, where sensitive soils are identified, a maximum of 5% of the cutblock area may be disturbed. Units without sensitive soils have a maximum of 10% of the cutblock area that may be disturbed. Soil disturbance limits must be listed within the Site Plan.

Soil disturbance levels specified above may be exceeded on a temporary basis through the construction and use of temporary access structures. Soil disturbance levels will be reduced to within the above standards through the rehabilitation of these structures when they are no longer required.¹⁰ Teal's Standard Operating Procedures specify that harvesting and road building activities are conducted in a manner that minimizes soil disturbance and protects slope stability.

Teal conducts a final harvest inspection procedure for all harvested areas as part of its Corporate Management System. This procedure includes an ocular assessment of the amount of soil disturbance within the Net Area to be Reforested and compares that to the amount specified in the operational plan. Each cutblock is inspected internally during harvest progress inspections and at post harvest to ensure the plan is followed. External inspections may also be performed by government agencies. If soil disturbance limitations are exceeded, the cutblock is investigated in more detail, which may be recorded using the Teal Incident Investigation Form to determine contributing factors and any action items required to mitigate the impact and prevent the re-occurrence.

¹⁰ Forest Practice Code Soil Conservation Guidebook May 2001



Monitoring

The Environmental Department tallies the number of cutblocks that exceeded the soil conservation limitations using Internal Inspections and Incident Investigation Forms, and reports under “Current Status and Results”.

Government agencies also do periodic inspections (cross reference the Compliance Tracker or FS107 spreadsheet).

Periodically, Teal may complete some post harvest measurements of site degradation caused by permanent access structure to examine results in comparison with planned site degradation limits. Measurements were completed in 2005/2006 and the formulas used to calculate the planned site degradation were modified to reflect the results of the measurements (e.g., the actual road surface widths were consistently lower than was planned, so the distance used in the planning calculations was reduced).

Forecast

Teal has an excellent record for road building activities and Standard Operating Procedures are in place to ensure continued compliance, therefore it is anticipated that 100% compliance with soil conservation limitations (permanent access structures and soil disturbance limits) will continue.



C3.1.2: Level of Downed Woody Debris

'Downed Woody Debris', or as it is referred to in coastal BC; 'Coarse Woody Debris' is defined as sound and rotting logs and stumps that provide habitat for plants, animals, and insects and a source of nutrients and structure for soil development. Woody material is generally greater than 8–10 cm in diameter¹¹.

Teal must maintain the Coarse Woody Debris left on site within the legal limits, including the burning of roadside piles to abate fire hazard. However, internal discussions within Teal and with the Public Advisory Groups indicate a preference to disperse Coarse Woody Debris throughout the block or reduce roadside pile burning. This would minimize carbon emissions (from burning, see Indicator 4.1 Net Forest Carbon), maintain biodiversity/ habitat, reduce fire hazard, and be more cost effective.

Teal has developed a Coarse Woody Debris Program in order to evaluate a new strategic management of debris left on site. Teal will continue to work with Government agencies with this goal in mind as new guidance and legislation becomes available. The intent of this indicator is to document the progress of this program.

Value	Objective	Indicator	Target	Acceptable Variance
Natural Ecological Cycles	Minimize negative impacts of harvesting on natural global ecological cycles	Level of Downed Woody Debris	Report on status of Coarse Woody Debris Program a minimum of once per year	Zero

Current Status & Results

This indicator was developed in 2011 by combining two existing indicators: H4-5 Coarse Woody Debris (originally developed by SIPAG); and F1-12 Coarse Woody Debris (originally developed by FPAG).

Year	Report on status of CWD program (Y/N)	Target Met (Y/N)	Variance
2010	Y (HBO) Y (FVO)	Y	0
2009	N (HBO) Y (FVO)	N	0

¹¹ Forest Practice Code Biodiversity Guidebook September 1995



In 2010 the status of the Coarse Woody Debris Program was reviewed with both PAGs. Teal is still awaiting legislative updates (they are expected to be enacted in the fall of 2012).

In the fall of 2008, a Coarse Woody Debris Program was developed and signed off by Teal Management. The program establishes a series of action items to be completed within specified timeframes. The first action item involves a review of legal requirements and liabilities involved with management of Coarse Woody Debris (i.e., meeting legal thresholds to address fire hazard while maintaining biodiversity). In 2008, the Ministry of Forests and Range and industry representatives formed a working group (through Coast Forest Products) to review and develop guidelines for management of Coarse Woody Debris, but these have not yet been released (proposed legislative changes have been delayed until the fall of 2012).

Strategy

The Forest Stewardship Plan was approved in March 2007, therefore new cutblocks will be managed under this plan. Some older cutblocks were approved under the Forest Practices Code Act and associated regulations. Under both sets of legislation and their related Operational Plans, there are strict utilization standards which limit the amount of Coarse Woody Debris (CWD) that may be left on site.

CWD values raised by PAG members include: loss of carbon storage through burning, build up of slash at roadsides and landings; impacts to the environment and wildlife as a result of burning to remove the slash; and reduced fire hazards.

In November 2008, a Teal Corporate Management System Program was developed and approved by Teal Management to address Coarse Woody Debris (CWD) values. Programs establish objectives and targets relating to a specific topic, set timelines and assign responsibility for completion of specific actions in order to achieve the objective and targets. Programs are approved by the Teal Management Environmental Review Committee (MERC) and are reviewed on an annual basis.

The CWD program and status report will be reviewed with PAG members on an annual basis.

Monitoring

The Environmental Department will review the PAG meeting minutes to ensure reporting has been completed within the calendar year.

Forecast

The CWD Program was developed and approved in 2008. It is anticipated that progress reports will be provided to the PAGs on an annual basis.

Slash abatement and reduction of fire hazard is currently a legal requirement for licensees under the Wildfire Act. Teal may be somewhat limited in the



options they can implement for reduction of burning levels, pending approved exemptions from Government agencies. However, Teal has committed to exploring options within the Program.



D3-1 Riparian Management

Riparian habitat occurs next to the banks of streams, lakes, and wetlands; it includes both the area dominated by continuous high moisture content and the adjacent upland vegetation that exerts an influence on it. The Riparian Management Area consists of a legislated Riparian Management Zone and, where required, a Riparian Reserve Zone (see figure below). In most cases, no harvesting is permitted within the Riparian Reserve Zone. The width of these zones are set in regulation (for older cutblocks) or within the Forest Stewardship Plan and are determined by characteristics of streams, wetlands or lakes, and adjacent terrestrial ecosystems.

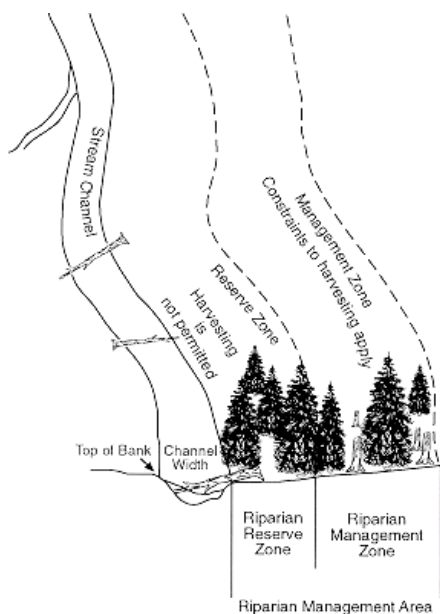


Figure 1: Riparian Management Area showing the application of a Riparian Management Zone and a Riparian Reserve Zone along the stream channel.¹²

Value	Objective	Indicator	Target	Acceptable Variance
Natural aquatic habitat	Maintain natural habitat and stream morphology for aquatic species	Compliance with requirements for riparian management specified in Teal's Forest Stewardship Plan (FSP)	Zero non-compliances	Zero

¹² Forest Practices Code Riparian Management Area Guidebook, December 1995



Current Status & Results

This indicator was developed in 2011 by combining three existing indicators: H3-8 Riparian Reserve Zones and H3-9 Riparian Management Areas (originally developed by SIPAG); and F3-11 Riparian Management (originally developed by FPAG).

Year	# of Non-compliances related to riparian management	Target Met (Y/N)	Variance Met (Y/N)
2010	0	Y	Y
2009	0	Y	Y

This indicator has been tracked for the Honeymoon Bay portion of the DFA since 2006 and Fraser portion of the DFA since 2007. The DFA has been 100% in compliance with the legal requirements for retention in the Riparian Management Areas.

Strategy

During the planning stages of cutblock development, streams are mapped, classified and their characteristics are assessed. Prescriptions are developed based on these classifications, assessments and legislated requirements. Where Riparian Reserve Zones are required, they are marked in the field according to the Teal Field Marking Procedures. These reserves are also mapped and maps are used to guide harvesting and other activities.

Each cutblock is inspected internally post harvest to ensure the plan was followed. External inspections may also be performed by government agencies. If any portion of a Riparian Reserve Zone for a fish bearing stream was harvested (not including road right of ways) an Incident Investigation Form is completed.

Monitoring

The Environmental Department reviews the results of inspections completed by Government agencies, and reports any non-compliance related to riparian management. The Environmental Department also reviews the results of internal inspections and investigations (where applicable).

Forecast

It is anticipated that Teal will always retain the full Riparian Reserve Zone, where required and meet Riparian management Zone retention requirements, therefore the target is the forecast.



C3.2.1: Proportion of Watershed or Water Management Areas with Recent Stand-replacing Disturbance

A Coastal Watershed Assessment is used in areas such as Community Watersheds, or in watersheds that have licensed domestic water users. They are also used for watersheds which have significant sensitivity, significant downstream fisheries values or in a designated Fisheries Sensitive Watershed (i.e., the minister responsible for the Wildlife Act may designate a watershed, that requires special management to protect fish, that is not otherwise provided for under other legislation.

The Coastal Watershed Assessment is an analytical procedure to help Forest Managers understand the type and extent of current water-related problems that may exist in a specific watershed, and to recognize the possible hydrological implications of proposed forestry or restoration activities in that watershed. The Coastal Watershed Assessment considers the cumulative effects of forest practices on the aquatic environment. The assessment of hydrological impacts focuses on:

- 1) potential for changes to peak stream flows
- 2) potential for accelerated landslide activity
- 3) potential for accelerated surface erosion
- 4) channel bank erosion and changes to channel morphology as a result of harvesting riparian vegetation
- 5) potential for change to the stream channel
- 6) interaction of all of these processes, an evaluation of which indicates the sensitivity of the watershed to further forest development

The Assessment also draws attention to natural processes occurring in the watershed. Using the results of a Watershed Assessment, Forest Managers can make recommendations to prevent or mitigate the impacts of forestry-related activities in the watershed. Results can also be used to guide watershed restoration activities.¹³

In the Honeymoon Bay portion of the DFA, there are three watersheds where Teal utilizes Coastal Watershed Assessments to guide management decisions: Gordon River; Harris/ Hemmingsen and Hatton Creek. In the Fraser portion of the DFA there are three Watersheds where Teal utilizes Coastal Watershed Assessments: Norrish Creek, Gurney Creek and Jamieson Creek. When proposed harvesting activities are planned to be located within these watersheds, the Coastal Watershed Assessments are reviewed to guide layout of the roads and cutblocks. For example, timing

¹³ Forest Practice Code Coastal Watershed Assessment Procedure Guidebook, April 1999



restrictions, size of the cutblock, location of roads and cutblocks, and management of surrounding streams may be reviewed. In addition, there are limitations on the area of disturbance or “Equivalent Clearcut Area” that may occur within the watersheds.

Equivalent Clearcut Area is the proportion of the watershed with recent stand-replacing disturbance.

Value	Objective	Indicator	Target	Acceptable Variance
Water	Protection of Water resource	Proportion of Watershed or Water Management Areas with Recent Stand-replacing Disturbance	Maintain an Equivalent Clearcut Area within the allowable limits of low peak flow hazard in designated Watersheds, including Gordon River, Harris/Hemmingsen, Hatton Creek, Norrish Creek, Gurney Creek, and Jamieson Creek Watersheds	10%



Current Status & Results

This is a new indicator in 2011, based on an existing indicator: H3-6 Coastal Watershed Assessments (originally developed by SIPAG).

Year	Watershed	Maximum Equivalent Clearcut Area (to maintain low peak flow hazard)	Equivalent Clearcut Area	Target Met (Y/N)	Variance
2010	Gordon	30%	12.5%	Y	0
	Harris/Hemmingsen	<20%	16.1%		
	Hatton Creek	N/A*	N/A		
	Norrish Creek	20-22%	20.2%**		
	Gurney Creek	N/A	N/A		
	Jamieson Creek	N/A	N/A		
2009	Gordon	30%	20%	Y	0
	Harris/Hemmingsen	<20%	16.1%		
	Hatton Creek	N/A*	N/A		
	Norrish Creek	20-22%	20.2%**		
	Gurney Creek	N/A	N/A		
	Jamieson Creek	N/A	N/A		

*No rate of cut to manage peak flows has been recommended in the most recent CWAP update (December 2009)

**The 2009 Equivalent Clearcut Area is based on an estimate from a Geoscientist/ Hydrologist that includes proposed developments up to 2012.

In 2010 there were no updates to the Equivalent Clearcut Areas in the watersheds of the Fraser portion of the DFA. In the Honeymoon Bay portion of the DFA there were changes in the Gordon watershed; Honeymoon Bay Operation is in the process of updating the CWAPs for the Gordon and Hemmingsen now with completion expected by September. Numbers for



Equivalent Clearcut Area levels and other information may be updated when this process is complete.

This indicator was developed in 2006 by SIPAG, however the annual reporting was broader than Equivalent Clearcut Area; it incorporated other criteria specified in the Coastal Watershed Assessments. There have been zero non-compliances or issues raised as a result of development in the Watersheds.

Teal is not currently operating within the Gurney Creek or Jamieson Creek Watersheds, therefore the Equivalent Clearcut Area has not been calculated.

Strategy

When proposed harvesting activities are planned to be located within these watersheds, the Coastal Watershed Assessments are consulted to determine the allowable Equivalent Clearcut Area. Equivalent Clearcut Area is re-calculated with proposed harvesting and road building activities incorporated.

For the Fraser portion of the DFA, all proposed development must be incorporated in the calculations, including other forest companies operating within the watershed.

Monitoring

The Forestry & Engineering Department determine conformance with Coastal Watershed Assessment prior to any new developments in those watersheds named above. The Environmental Department consults the Equivalent Clearcut Area calculations annually to determine compliance with Coastal Watershed Assessments. Information pertaining to updates or revisions to the plan is also reviewed with the Engineers. The results are reported under "Current Status and Results".

Government agencies also do periodic inspections (cross reference the Compliance Tracker).

Forecast

Coastal Watershed Assessments are not a legislated requirement under the Forest and Range Practices Act, however Teal continues to utilize these assessments as valuable tools to protect water resources. It is therefore anticipated that the target is the forecast.



C4.1.1: Net Carbon Uptake

Forests are a source of carbon storage as well as carbon emissions. During younger regenerative stage, vigorous tree growth results in a net storage of carbon on site. As the forest ages, storage decreases over time through: stand thinning, decomposition, and small disturbance events, but continues to be a critical carbon storage sink. Both small and large forest disturbances result in carbon emissions. These include disease, insect infestations, timber harvesting and wildfire. In addition, forest operation can contribute carbon emissions through the use of fossil fuels. Emissions can be reduced a number of ways, including: prompt regeneration after disturbance, minimizing conversion to non-forests on roads and landings, switching vehicles to more fuel efficient makes/models, or fuel sources, and, if possible, reforesting areas that previously did not contain trees.

The intent of this indicator is to report on the net balance of carbon stocks within the DFA. That is, to measure both the inputs and outputs of carbon caused by forestry practices as well as natural disturbance.

Value	Objective	Indicator	Target	Acceptable Variance
Global ecological cycles	Minimize carbon emissions and maximize carbon storage	Net carbon uptake	Maintain net positive carbon storage over the DFA from forestry operations (excluding carbon emissions from natural, uncontrollable events such as wildfire)	Zero

Current Status & Results

This is a new indicator in 2010. Current status is not available at this time, as it will require a substantial amount of preparation to begin the monitoring process.

Strategy

The Canadian Forest Service has developed a Carbon Budget Model, CFS-CBM3, which links to timber supply analysis inputs and outputs. Guidance from the CSA indicates that a carbon budget model for the DFA can be developed successfully for monitoring this indicator once the model is integrated with timber supply planning and staff are trained to use the model. As such, reporting on this indicator should be at the same interval as the



timber supply reviews. The next timber supply review in the Fraser TSA is scheduled for 2014, and in TFL 46 is currently being completed. At the time of the next TSR (5-6 years time) Teal will be able to train staff appropriately and determine data requirements from the timber supply analyses as input for the CFS-CBM3 model. In addition, Teal will be able to work with Government Agencies (carbon budget modeller) to integrate this indicator's requirements with the timber supply review process.

Monitoring

In HBO the planning forester will calculate and forecast carbon uptake over time as part of the timber supply review. This can be reported at the same schedule as timber supply, every 5-6 years. The timber supply review is currently being updated.

In FVO, Government agencies are responsible for timber supply review, however there is currently has no clearly determined carbon modelling strategy, the planning forester may have to work with Government to complete the net forest carbon uptake calculations required by this indicator.

Forecast

It is anticipated that carbon storage in regenerating trees, existing forest stands, soils, and forest products will continue to outpace the carbon emissions from harvesting, vegetative decay, and soil disturbance. In addition, natural disturbances from windthrow, insect or pathogen outbreaks, or wildfire will continue to be monitored closely, and prevented in order to reduce carbon emissions from such events.



D5-1 Visual Quality Management

Visual quality management involves meeting Visual Quality Objectives (VQO) for known scenic areas. A Visual Quality objective is a resource management objective established by Government agencies or contained in Higher-Level Plans; these objectives reflect the desired level of visual quality based on the physical characteristics and social concern for the area.¹⁴ The Visual Quality Objectives provide parameters around the alteration of the visual landscape by forest harvesting and roads. These objectives strive to limit the negative appearance of human activities on the landscape. VQOs are established in Higher Level Plans or by government agencies and reflect public concern for viewscapes.

Value	Objective	Indicator	Target	Acceptable Variance
Recreation and Tourism	Maintain visual quality	Cutblocks designed to meet the Visual Quality Objectives	100 % of cutblocks within visually sensitive areas meet or exceed the requirements for Visual Quality management specified in Teal's Forest Stewardship Plans (FSP)	Zero

Current Status & Results

Year	# of Cutblocks located in Scenic Areas	# of Cutblocks Meeting VQO	% of Cutblocks that meet or exceed VQO	Target Met (Y/N)	Variance Met (Y/N)
2010	10 HBO 12 FVO	22	100	Y	Y
2009	30	30	100	Y	Y

This is a new indicator, based on existing indicators: H5-4 Visual Quality Objectives (originally developed by SIPAG); and F5-1 Visual Quality Management (originally developed by FPAG).

¹⁴ Forest Practice Code Guidebook Visual Impact Assessment January 2001



In 2009, in the Fraser portion of the DFA, Visual Assessments were completed for 27 cutblocks and all met the VQOs for the area. Zero non-compliances were issued by Ministry of Forests and Range related to visual quality (29 inspections and no issues related to visual quality identified).

In the Honeymoon Bay portion of the DFA, there were three harvested cutblocks located within scenic areas. Zero non-compliances were issued in relation to visual quality objectives.

Strategy

Within Visually Sensitive Areas, visual design concepts and principles are incorporated into cutblock and road design. Each proposed cutblock is assessed using modeling tools to predict the impact of proposed cutblock design on the landscape and determine if the visual impact is within the objective limits. Where proposed cutblock size and shapes do not meet Visual Quality Objectives, cutblock design is modified.

In some cases, Teal also carries out final harvest inspections of visual impact following harvesting to determine whether the objective was achieved. When completed, these are filed within the cutblock files.

Monitoring

The Forestry & Engineering Department reviews the cutblock and area files (operational planning documents, assessments, and internal inspection reports) for compliance with Visual Quality Objectives, and will report the results annually.

Government agencies also do periodic inspections.

Forecast

Teal assess all blocks located within Visually Sensitive Areas, therefore it is anticipated that the target is the forecast.



C5.1.1: Quantity and Quality of Timber and Non-timber Benefits, Products, and Services Produced in the DFA

Quality and quantity of timber benefits, products and services produced in the DFA are addressed through several other indicators, primarily Core Indicator 2.2.2 Proportion of the Calculated Long-term Sustainable Harvest Level that is Actually Harvested.

The goal of this indicator is thus to monitor non-timber benefits, including: outdoor activities; maintenance of viable hunting, fishing, and trapping activities; firewood cutting; opportunities for ecotourism; protection, management, and sustainable use of cultural and heritage resources; and opportunities for development of ecological goods and services and other non-timber forest products. For the most part, these products and services are unregulated or are not regulated by Teal at the level of the DFA (e.g., hunting and fishing are regulated at the District level by government). Products such as mushroom and salal picking do occur on the DFA but Teal allows full unregulated access to these resources. Over picking of the resources or an impact on the quality of the resource from forest harvesting and road building has not been an issue of concern on the DFA in the past. If staff or forest users notice a change in the resource in the future, Teal can work towards an alternate solution, which may include regulation and permitting.

While most of these activities depend upon participation of other parties, Teal's main role in providing opportunities is to provide access to the DFA. Teal regularly receives requests for access (e.g., keys distributed, maps, directions, etc.). Special access may be requested by First Nations, for example for bark stripping opportunities; or other special interest groups, for example Wilderness Watch for firewood permits.

Firewood cutting is the sole non-timber forest product administered by Teal on the DFA. Wilderness Watch issues firewood cutting permits on behalf of Teal in the Honeymoon Bay portion of the DFA. The Fraser portion of the DFA does not currently issue permits.



Value	Objective	Indicator	Target	Acceptable Variance
Non-timber benefits	Maintain or enhance opportunities for non-timber benefits derived from the DFA	Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA	Report annually on number of: requests for access, firewood permits issued, and beekeepers within the DFA	Public access is restricted where safety, vandalism or sensitive ecological sites are concerns; special access may be required by First Nations and special interest groups

Current Status & Results

This is a new indicator in 2010 based in part on previous indicators: H5-6 Public Access (originally developed by SIPAG) and F6-6 First Nations Access to Forests (originally developed by FPAG).

Year	# of Requests for access	# beekeepers	#firewood permits issued	Target Met (Y/N)	Variance Met (Y/N)
2010	3 HBO 3 FVO	2 (HBO)	0	Y	Y

In 2010 in the Honeymoon Bay portion of the DFA there were: two beekeepers, no firewood permits issued through Wilderness Watch (due to administrative delays), two requests for bark stripping by Pacheedaht First Nation (opportunities were provided as requested prior to logging in blocks 9403 and 9722), and access was also requested by Victoria Whitewater Society. In the Fraser portion of the DFA access was requested by hunters, mineral exploration and one of the private residences at the bottom of Norrish Creek asked me for access for collecting moss for hanging baskets. All requests for access were accommodated.

In the Honeymoon Bay Operation portion of the DFA access has been tracked since 2006; Teal has maintained an open gate policy, providing keys, maps and information to Wilderness Watch upon request. In the Fraser Operation portion of the DFA First Nations access has been tracked since 2007; Teal has adequately addressed all requests by First Nations for access (i.e., providing opportunities for bark stripping activities, canoe logs, firewood, etc.).

Strategy

Wilderness Watch issues all firewood cutting permits for Teal in the Honeymoon Bay portion of the DFA. There is a record of these permits each year. Whenever possible, Teal will allow firewood cutting by permit on the DFA, however in some years firewood permits may not be issued.



Teal currently maintains an open gate policy with the following exceptions: gates may be closed for safety, to protect sensitive ecological sites (e.g., at the request of Government agencies to aid in protecting Elk populations) or in active areas to prevent vandalism (where logging equipment is parked).

Teal is committed to working cooperatively with volunteer organizations (e.g., Wilderness Watch), communities (e.g., the city of Abbotsford controls the gate into the Norrish Creek community watershed) and First Nations to ensure that keys, maps, etc. are provided as requested, through on-going communication.

Through formal and informal processes, Teal receives public and First Nation input with regards to forest management in the DFA. Teal is committed to responding to all reasonable requests for access to the forest that are brought forward by the public and local First Nations.

Written correspondence is filed in the external communications file. Where possible, verbal communications are summarized in note form and filed within the same file.

Monitoring

The Environment Department will request information regarding the number of firewood permits issued each year from appropriate organizations. They will also review external communications in the corporate and operational files annually to determine if there has been any correspondence with respect to access in the DFA.

In addition, the Environmental Department will contact volunteer groups operating within the DFA to confirm the groups are provided with resources they are required. Comments will be reported under “Current Status and Results”.

Forecast

Teal anticipates that firewood permits will be issued each year whenever possible in the Honeymoon Bay portion of the DFA. It is not likely that Teal will issue firewood permits in the Fraser portion of the DFA due to safety concerns. Teal maintains a full public access policy in the DFA. However, public access may be restricted where safety, vandalism or sensitive ecological sites are concerns (through the use of locked gates). Conservation or other special interest groups may be given keys to closed gates as requested, on a case by case basis. Through formal and informal processes, Teal receives public and First Nation input with regards to forest management in the DFA. Teal is committed to responding to all reasonable requests for access to the forest that are brought forward, therefore the target is the forecast.



C5.2.1: Level of Investment in Initiatives that Contribute to Community Sustainability

The intent of this indicator is to measure and report on financial benefits going into the community. The target is a combination of revenues paid to the crown (stumpage and taxes), contributions to local resource projects and purchasing of supplies and services from local businesses.

Further benefits are explored under other indicators (for example indicator C5.2.3 measures wages paid to Teal personnel and contractors, as well as, indirect employment; indicator C5.1.1 measures non-timber benefits, and; indicator 6.3.1 measures employment and contracting).

Value	Objective	Indicator	Target	Acceptable Variance
Contributions to society (including local community)	Assess the level of investment in initiatives that contribute to community sustainability	Level of investment in initiatives that contribute to community sustainability	Report on total dollars contributed to initiatives that contribute to the local economy and community sustainability	The intent of this indicator is to provide a general idea of the dollars contributed to the local economy by harvesting activities within the DFA, results will fluctuate over time

Current Status & Results

This is a new indicator in 2011 based in part on a previous indicator: H5-13 Community Benefits (originally developed by SIPAG).

Year	Description	Contributions	Target Met (Y/N)
2010	Community Groups ¹	\$12,363.83	Y
	Research ²	\$125,227.23	
	Silviculture Projects ³	\$338,308.00	
	First Nations Communities & Projects ⁴	\$9,106.51	
	Funding of Public Advisory Groups	\$28,811.68	
	Taxes & other fees	\$6,205,610.15	
	TOTAL	\$6,719,427.40	

¹ Donations to Community Groups include Lake Cowichan Lake Days Logger Sports (timber and logs), BC Forest Discover Centre (roofing shingles), The



Royal Canadian Legion (wreath for Remembrance Day), Port Coquitlam Minor Hockey League, and Evans Lake, a non-profit kids summer camp (logs).

² Funding of research projects include UBC -Research close to Port McNeill (tree seedlings) and Vegetation Resources Inventory (VRI) program - Net Volume Adjustment Factor (funded through Forest Investment Account)

³ Silviculture Projects include fertilization in the Fraser Valley through the Forest Investment Account (funding was directly allocated to Fraser TSA Cooperative Association)

⁴ Donations to First Nations Groups include financial support of the Nanaimo Aboriginal Friendship Center, assistance in the delivery of wood to Pacheedaht First Nation (obtained through a Free Use Permit) and donation of logs to the In-SHUCK-ch Nation.

This indicator has not been reported prior to 2010 for Fraser portion of the DFA. Contributions to the community in the Honeymoon Bay portion of the DFA have been reported since 2007, however the strategy was slightly different than current strategy (wages and local supplies and services were included) see SFMP March 2010 version for more details.

Strategy

Contributions to local resources projects are filed by the Corporate office and Operational staff. Local resource projects are any project that goes above and beyond harvesting practices that contribute in perpetuity to community sustainability. Examples include in kind or financial support of:

- the Public Advisory Groups,
- maintenance to public facilities or structures such as docks and roads,
- initiatives such as fish habitat restoration, inventory projects, fertilization projects,
- donations to First Nations, and
- support of community groups such as Wilderness Watch

Taxes and other fees paid to the government include contributions to the Canadian Pension Plan (Employer & Employee Contributions), Employment Insurance (Employer & Employee Contributions), Income Tax (Employee Contributions), Workers Compensation Benefits, Stumpage Fees, Goods & Services Tax, Property Tax, Annual Rent, Metro Vancouver Port and Nanaimo Port Authority.

Monitoring

The Accounting Department provides an annual summary of taxes (pre-adjustment) and other fees paid to the government.

Corporate staff and the Forest Investment Account coordinator provide an annual summary of contributions to resource projects.



The Environmental Department summarizes results and reports under “Current Status and Results”.

Forecast

Teal has always been committed to making contributions to local communities and will continue to do so. PAG members expressed interest in reviewing the total contributions to the economy, but are not concerned about developing a specific target or variance at this time.



C5.2.2: Level of Investment in Training and Skills Development

Internal training requirements are those requirements that are additional to the legally required training, including, but not limited to, the following courses:

- Job Safety Breakdowns (all staff, employees and contractors)
- Sustainable Forest Management Awareness Training (all staff, employees and contractors)
- Standard Operating Procedures (all staff, employees and contractors)
- Corporate Management System Summary (Supervisors and Managers only)

Value	Objective	Indicator	Target	Acceptable Variance
Investment in DFA Workers	Opportunities for workforce training and skill development	Level of investment in training and skills development	100% conformance with internal mandatory training requirements	20%

Current Status & Results

This is a new indicator in 2011, based on a previous indicator: H5-12 Training Requirements (originally developed by SIPAG). It should be noted the method for monitoring this indicator has been changed significantly from the original indicator, to better reflect how training is tracked.

Year	# Key Environmental Personnel	# Key Environmental Personnel with outstanding training	% Key Environmental Personnel who completed internal training requirements	Target Met (Y/N)	Variance Met (Y/N)
2010	25	25	100	Y	Y

Strategy

Key Environmental Personnel includes Teal staff and Contractor Managers/ Supervisors (i.e., those who have roles in the Corporate Management System or supporting documents, Emergency Preparedness and Response Plan, etc.). Training for these personnel is recorded in the InTrac database.



Internal training requirements are those requirements that are additional to the legally required training, including, but not limited to, the following courses:

- Sustainable Forest Management Awareness Training (all staff, employees and contractors)
- Standard Operating Procedures (all staff, employees and contractors)
- Corporate Management System Workshop (Key Environmental Personnel only)

Contractors are responsible for maintaining their own training records, but also must complete the first two training courses above.

Monitoring

The Environmental Department will review the InTrac Database annually to determine if key personnel have any outstanding training requirements for internal training. Contractor training records are also reviewed during audits to determine compliance with internal training requirements. Comments will be reported under “Current Status and Results”.

Forecast

The target has been monitored for the Honeymoon Bay portion of the DFA since 2006, and periodically reviewed in audits. Generally the target does not appear to have been met, however this appears to be largely due to a shortfall in the tracking of training records for contractors. Teal has reviewed and planned improvements for the tracking of training records which will aid in continual improvement. It is anticipated as enhancements are made to the training database and new methods of tracking training are employed the results will improve.



C5.2.3: Level of Direct and Indirect Employment

Indirect employment is defined as: Jobs in other businesses or industries supplying goods and services to a selected industry that provides direct employment. Jobs providing goods and services to the direct employees and indirect employees, known as induced employment, are not included. For example, a sawmill providing direct employment in the forest industry also provides indirect employment to retailers, accountants and various trades for special jobs which the sawmill employees are not trained to handle, to produce the direct outputs of the sawmill. The directly and indirectly employed workers buy goods and services for their own use, creating induced employment. Induced employment is not included in indirect employment, to avoid double-counting.¹⁵

Collecting data for and calculating indirect employment can be onerous, especially if complex models are required. However, Teal monitors its spending to local business and suppliers provides employment to those businesses in the community.

Value	Objective	Indicator	Target	Acceptable Variance
Contributions to society (including local community)	Assess the monetary benefits to the local community as a result of harvesting	Level of direct and indirect employment	Report on total dollars contributed to direct and indirect employment	The intent of this indicator is to provide a general idea of the dollars contributed to indirect and direct employment in the DFA, and results will fluctuate over time

¹⁵ The State of British Columbia's Forests (2006)



Current Status & Results

This is a new indicator in 2010, based on previous indicators: H5-13 Community Benefits and H5-7 Full Time Jobs (originally developed by SIPAG). Results for previous years for this indicator are available for the HBO portion of the DFA only (tracked since 2007, see previous versions of the SFMP for more detail).

Year	Description	Total Contributions to the Local Economy	Target Met (Y/N)
2010	Wages paid	\$2,670,479	Y
	Local Supplies and Services	\$23,944,887	

In 2010 the Honeymoon Bay portion of the DFA wages for staff and crewing totalled \$2,147,959, primary contractors totalled \$18,526,969, and the operation also spent \$402,436 on local supplies and services. In addition \$510,184 was spent on supplies and services from Vancouver Island (outside of the 'local' area) and \$68,356 on supplies and services from elsewhere. The majority of supplies and services are from the local area, and a small portion of supplies and services are from elsewhere.

In 2010 the Fraser portion of the DFA wages for staff and crewing totalled \$522,520, primary contractors totalled \$4,741,696. Data on local supplies and services for the Fraser portion of the DFA is not available in 2010 as it is a new indicator for this operation, therefore numbers were estimated based on Honeymoon Bay Operation's data and the annual cut (i.e., Fraser has approximately 30% of the cut that Honeymoon Bay cut in 2010).

Strategy

Total wages paid are supplied by the Corporate Administration and Accounting departments.

Generally, Teal currently does hire local suppliers and services. However, opportunities are limited as the local communities are relatively small and frequently they are unable to meet Teal's needs. Where possible, supplies and services are hired from local businesses, however; experience, competitive pricing and capacity are also considered when choosing suppliers and services.

Monitoring

The Administrative Department provides information on total wages paid.

The Accounting and Administrative Departments provide an annual summary of local suppliers and services utilized.

Forecast

Teal has always been committed to making contributions to local communities and will continue to do so, therefore the target is the forecast.



C5.2.4: Level of Aboriginal participation in the Forest Economy

From time to time, Teal has opportunities for First Nations to participate in the forest economy through employment or contract work. This arrangement may have been established in part through protocol agreements, as well as, through discussions and meetings with First Nations.

Value	Objective	Indicator	Target	Acceptable Variance
Aboriginal Community Involvement in the DFA	Provide economic opportunities for Aboriginal participation in forestry activities	Level of Aboriginal participation in the forest economy	Report annually on direct involvement through employment or contract opportunities.	N/A

Current Status & Results

This is a new indicator in 2011, with no comparable indicator from previous SFMPs.

Year	# Employment or Contract opportunities provided (HBO)	# Employment or Contract opportunities provided (FVO)	# Employment or Contract opportunities provided (total)	Target Met (Y/N)	Variance Met (Y/N)
2010	5	1	5	Y	Y

In 2010 employment or contract opportunities included:

- Khowutzun Forest Services (Cowichan Tribes) completed a brushing project (Honeymoon Bay portion of the DFA)
- Cowichan Tribes completed surveys for Culturally Modified Trees (Honeymoon Bay portion of the DFA)
- Ditidaht First Nation were hired to complete Traditional Use Studies (Honeymoon Bay portion of the DFA)
- Pacheedaht First Nation was hired to complete Traditional Use Studies (Honeymoon Bay portion of the DFA)
- Pacheedaht Forestry Inc. completed planting in the fall (Honeymoon Bay portion of the DFA)
- Teal assisted Pacheedaht First Nation by delivering the wood obtained through their Free Use Permit to the community



- Katzie Development Corporation completed Archaeological work

Strategy

The First Nations associated with the Fraser and the Honeymoon Bay portions of the DFA can change over time as Forest Licence chart areas are amended and as First Nations re-define the boundaries of their respective asserted traditional territories. As these changes are made, the SFMP will be updated to reflect the changes.

Teal currently has good working relationships local First Nations. Communication and information sharing has been achieved through many formal and informal processes.

Teal works in cooperation with each local First Nation and responds to requests for specific forest resources. Teal will also provide, whenever possible, opportunities for employment or awarding of contracts to interested First Nations.

Monitoring

The Environment Department will review First Nations correspondence files and communicate with the Forestry and Engineering Departments to determine how many opportunities were provided. Protocol agreements will be reviewed for monitoring Indicator 6.1.1 and information on economic opportunities and employment will be extracted.

Forecast

Opportunities for direct employment or contracting will continue to arise for different First Nations within the DFA.



C6.1.1: Evidence of a Good Understanding of the Nature of Aboriginal Title and Rights

Aboriginal title and rights is stated in Section 35 of the Constitution Act as follows: “The existing aboriginal and treaty rights of Aboriginal Peoples of Canada are hereby recognized and affirmed.” Teal recognizes that this SFMP in no way affects ongoing or future negotiations of these legal rights.

This indicator is intended to demonstrate Teal’s recognition, understanding, and respect for Aboriginal title and rights. Teal strives to ensure the protection of Aboriginal title and rights through:

- Meeting all legislative requirements (see applicable Forest Stewardship Plans)
- Providing opportunities for involvement in the forest economy (e.g., Indicator 5.2.4)
- Entering into Protocol Agreements with interested First Nations (e.g., Indicator 6.1.1)
- Addressing all informal requests and issues of concern brought forward by First Nations (e.g., Indicator 6.1.1)
- Protecting cultural resources (e.g., Indicator 6.1.3)
- Requesting input on management plans and proposed activities (e.g., Indicator 6.1.2)
- Incorporating First Nations knowledge into the planning process (e.g., Indicator 6.2.1)

Teal has effective working relationships with Aboriginal communities within the DFA and strives to continually improve and build upon these relationships in both formal and informal ways.

Teal has a process in place to develop protocol agreements, where an interest has been expressed by a particular First Nation within the traditional territories of the DFA. Protocol agreements between First Nations and Teal are often targeted towards the current set of relevant issues concerning these two parties and may not be a comprehensive agreement addressing all potential issues. These agreements are an important tool for recognizing and respecting Aboriginal and Treaty rights of First Nations associated within the DFA. It is recognized that there are two parties involved in the development of protocol agreements and that Teal cannot be held accountable for the participation level of the second party.

Teal also receives and responds to informal requests from First Nations. These are often similar issues as discussed in protocol agreements, but no formal process has yet been put in place. Although not a formal process, Teal responds to all such requests with equal consideration.



Value	Objective	Indicator	Target	Acceptable Variance
Aboriginal Title & Rights	Understand and respect Aboriginal title and rights	Evidence of a good understanding of the nature of Aboriginal title and rights	Report annually on the status and results of 1) individual protocol agreements with First Nations who have an expressed interest, and 2) other requests from First Nations	Zero

Current Status & Results

This is a new indicator, which is similar to a previous indicator F6-5 Progress towards individual signed protocol agreements with First nations that have expressed interest (originally developed by FPAG). However, the indicator has additional tracking requirements of Informal Requests made by First Nations that were not included in previous indicators. In the Fraser portion of the DFA from 2007-2009 there were annually 7 Protocol Agreements (3 signed), 3 requests for employment and 2 requests for access to timber; all requests were addressed.

Year	# of Protocol Agreements	# of Protocol Agreements addressed	# of Informal Agreements	# of Informal Agreements addressed	Target Met (Y/N)	Variance Met (Y/N)
2010	5 HBO	5 HBO	0 HBO	0 HBO	Y	Y
	3 FVO	3 FVO	3 FVO	3 FVO	Y	Y

In the Honeymoon Bay portion of the DFA the following agreements were agreed to in the past and continue as long standing practice:

- Referral procedures Pacheedaht First Nation
- Referral procedures Ditidaht First Nation
- Referral procedures Cowichan Tribes
- Cedar Conservation Strategy Pacheedaht First Nation
- Delivery of wood (through Free Use Permit) Pacheedaht First Nation

In 2010, none of these agreements are signed, however, Teal respects the process and abides by all conditions and requirements.



In the Fraser portion of the DFA the following agreements were agreed to in the past and continue as long standing practice:

- Road Use Agreement Chehalis First Nation (signed in Sept 2010)
- Boston Bar First Nation two agreements contain provisions for Cedar Bark Stripping and access to firewood. These agreements were signed in June 2006
- Referral procedures Katzie First Nation
- Referral procedures In-SHUCK-ch First Nation
- Boothroyd Band has an informal agreement for access to their Traditional Territory

Discussions are underway to establish a mutually agreed upon information sharing protocol with Sto:lo Tribal Council and Sto:lo Nation.

Strategy

Teal will work in cooperation with each local First Nation to develop Protocol agreements that are acceptable to both parties, as requested by interested First Nations. Teal has an open invitation to meet with First Nations that have expressed an interest in Protocol agreements.

Teal will ensure that efforts are made to communicate with those First Nations that have expressed an interest in development of Protocol Agreements and where possible, will work with the First Nations to complete agreements.

Teal will continue to respond to request from First Nations outside the Protocol Agreement process.

Monitoring and Forecast

The Environmental Department will communicate with the Engineering Department, and review First Nation correspondence files to:

- 1) tally the number of Protocols with local First Nations that are either under development, or have been completed (signed), and
- 2) tally the number of informal requests and responses from First Nations

including those that address economic development, employment and access to timber for cultural use.

Forecast

Teal will develop protocol agreements for 100% of requests and will respond to 100% of requests from First Nations.



C6.1.2: Evidence of Best Efforts to Obtain Acceptance of Management Plans Based on Aboriginal Communities having a Clear Understanding of the Plans

The Honeymoon Bay portion of the DFA is located within the traditional territories of the Pacheedaht First Nation, Ditidaht Band First Nation, Cowichan Tribes First Nation and Lake Cowichan First Nation. A small portion of the TFL overlaps the traditional territories of the Penelakut and Chemainus First Nations.

The Fraser portion of the DFA is located within the asserted traditional territories of 30 First Nations and 5 First Nations groups/ associations. For a complete list refer to the text of the SFM Plan.

Management plans include: Landscape Level Plans (i.e., TFL Management Plan, Forest Stewardship Plans, and Sustainable Forest Management Plan); and Site Level Plans (i.e., Logging Plans which show where harvesting is planned; reserves; terrain and water bodies; roads and any other site specific features).

Value	Objective	Indicator	Target	Acceptable Variance
Aboriginal values	Provide opportunities for input into planning	Evidence of best efforts to obtain acceptance of management plans based on Aboriginal communities having a clear understanding of the plans	100% of landscape level plans are accessible for review by local First Nations, 100% site level plans are provided as mutually agreed upon in information sharing	Zero



Current Status & Results

This is a new indicator based on an existing indicator: H6-2 First Nations Plan Reviews (originally developed by SIPAG). This indicator has been approved by SIPAG. It should be noted that it was not 'approved' by FPAG, there were no issues noted, however members present at the second meeting abstained from voting as they felt there was not adequate First Nations representation present at the meeting to approve the indicator (it was discussed at length with FPAG over two meetings, at the first meeting those First Nations representatives that were present indicated that in general they agree with this referral process, one First Nation felt it was adequate and the other First Nation wished to explore a potential protocol agreement to develop a referral process that would be more meaningful for them. In general First Nations throughout the DFA have indicated that this referral process works well, and where issues exist they are addressed through other indicators.

Year	% Landscape level plan referrals	% Site Level plan referrals	Target Met (Y/N)	Variance Met (Y/N)
2010	HBO 100	HBO 100	Y	Y
	FVO 100	FVO 100		

In 2010 all First Nations were invited to participate in Public Advisory Groups and access was provided to the Sustainable Forest Management Plan.

In 2010, the Honeymoon Bay Operation sent letters to all First Nations providing a link to the Forest Stewardship Plan and Sustainable Forest Management Plan, as well as site level plans that were proposed within the traditional territory. All blocks where harvesting commenced in 2010 (50 blocks) were referred to the appropriate First Nation. Some blocks received comments, some required field reviews, and some required field modifications. Teal received a 'green letter' (i.e., the block was reviewed for cultural resources and modified to protect resources as requested) for all blocks prior to commencing harvesting. In addition Teal assisted in the presentation and approval of a Forest Stewardship Plan prepared on behalf of Ditidaht First Nation and Pacheedaht First Nation (for their Forest Licences and Timber Supply Licences). This document has provided a basis for these First Nations to act on harvest opportunities made available to them by Government. This involvement has contributed to an understanding of Forest Stewardship Plans and processes on the part of these First Nations.

In 2010, The Fraser Operation all blocks where harvesting commenced in 2010 (51 blocks) were referred to the appropriate First Nations. All blocks received comments from at least one First Nation; some required field reviews or Archaeological Impact Assessments and some required field



modifications. In all cases Teal addressed comments and concerns prior to commencing harvesting.

This indicator was developed in 2006, for the Honeymoon Bay portion of the DFA; and the target has been met each year since monitoring began (2006).

Strategy

First Nations are given the opportunity to review all Landscape Level Plans (e.g., Forest Stewardship Plans, TFL Management Plans, Sustainable Forest Management Plans, etc.) when they are new or when there are significant amendments.

Opportunities are also provided for First Nations to review Operational Plans whenever there is a proposed development (e.g., roads or blocks) within the asserted traditional territory.

Information sharing protocols differ for each First Nation, however, the general approach is consistent with the following: draft plans (where relevant including maps and descriptions) are mailed or hand delivered to those First Nations' whose traditional territory have proposed developments or those First Nations who may be impacted by the plan, along with a letter inviting comment and requesting a meeting to review the plan together. Depending on the follow up requested, an Archaeological Impact Assessment may be completed, more meetings may be scheduled or correspondence exchanged until all concerns are addressed.

Monitoring

Teal personnel contact individual First Nations generally by letter, email and meetings. Referrals, responses and other correspondence are filed in the Corporate filing system.

The Environmental Department provides an annual summary of formal invitations for Management Plan reviews and reports under "Current Status and Results".

Forecast

Teal will continue to provide opportunities for input into planning to all First Nations with traditional territory in the DFA, therefore the target is the forecast.



C6.1.3: Level of Management and/or Protection of Areas where Culturally Important Practices and Activities (hunting, fishing, gathering) Occur

Protection of cultural values during Forest Management activities within BC is covered either by the Heritage Conservation Act or through Forest Management Legislation (i.e., Forest Act, Forest Practices Code Act and the Forest and Range Practices Act).

The Heritage Conservation Act clearly establishes definitions for heritage sites that require conservation or protection (e.g., Culturally Modified Trees modified prior to 1846). Government agencies are responsible for tracking and maintaining the Provincial registry of sites that are protected under the Heritage Conservation Act (including archaeological, culturally modified tree and traditional use sites).

Forest Management Legislation provides for the conservation of cultural heritage resources and does not include sites that are already protected under the Heritage Conservation Act. Resources may include values that are currently present, desired future conditions or historical areas that are not protected under the Heritage Conservation Act.

A Cultural Heritage Resource (CHR) is defined in legislation as ‘an object, a site, or the location of a traditional societal practice that is of historical, cultural or archaeological significance to British Columbia, a community or an aboriginal people.’¹⁶

¹⁶ Forest Act



Value	Objective	Indicator	Target	Acceptable Variance
Cultural Heritage Resources	Manage Cultural Heritage Resources in a manner that adequately reflects the associated First Nation's goals	Level of management and/or protection of areas where culturally important practices and activities (hunting, fishing, gathering) occur	100% Compliance with Teal's Forest Stewardship Plans (FSP) results and strategies for Conservation and Protection of Cultural Heritage Resources, and the Heritage Conservation Act	Zero

The Forest Stewardship Plan strategies for both Operations, in relation to Cultural Heritage Resources, can be summarized into the following components: 1) protect and conserve Cultural Heritage Resources and 2) maintain information sharing see <http://tealjones.com/ForestManagement.htm> to view the complete FSP. In addition, for the Fraser Operations portion of the DFA: 3) develop Protocol agreements for the protection of CHR where an interest is made by a First Nation (see indicator F6-5 Protocol Agreements). For the Honeymoon Bay Operation portion of the DFA: 3) establish a protocol for identifying a current and/or future supply of western red cedar and cypress trees suitable for traditional use (see indicators H6-5 Cultural Cedar and H6-9 Pacheedaht Cultural Cedar).

Current Status & Results

This is a new indicator based on existing indicators: H6-4 Cultural Heritage Resources (originally developed by SIPAG) and F6-4 Cultural Heritage Resources (originally developed by FPAG). The value, objective, target and variance were not changed from the original indicators (only the indicator was changed). The revised indicator has been approved by SIPAG. It should be noted that it was not 're-approved' by FPAG, there were no issues noted, however members present at the meeting abstained from voting as they felt there was not adequate First Nations representation present at the meeting to approve the indicator. This indicator is consistent with legislation and the approved Forest Stewardship Plan (which was referred to all First Nations within the DFA and no issues were noted), therefore in general First Nations throughout the DFA have not indicated any issues with this indicator.

Year	# of Non-compliances related to Cultural Resources	Target Met (Y/N)	Variance Met (Y/N)
2010	0	Y	Y



This indicator has been tracked since 2006 in the Honeymoon Bay Operation portion of the DFA; and since 2007 in the Fraser Operations portion of the DFA. To date, Teal has been 100% in conformance with the target.

Strategy

Several strategies will provide input into the identification of cultural heritage resources, including but not limited to:

- Management Plan reviews (e.g., TFL Management Plans, Forest Stewardship Plans, Landscape Unit Plans, Vancouver Island Land Use Plan, etc.);
- Site Level Plan reviews (e.g., Logging Plan referrals);
- Archaeological Inventories (Archaeological Overview Assessments are generally done on a landscape or watershed level. They categorize areas based upon the potential for archaeological sites and evaluate existing archaeological resources);
- Archaeological Assessments (Archaeological Impact Assessments are completed, as required, on the stand level where the potential for archaeological sites is rated at moderate or high or at the request of First Nations. The Archaeological Impact Assessment identifies and assesses all impacts on archaeological resources that may result from proposed developments);
- Traditional Use Studies;
- Information Sharing Protocols;
- Public Advisory Group meetings; and
- Informal discussions

Monitoring

The Environmental Department tallies the number of identified non-compliances with the FSP strategy for Cultural Heritage Resources that are issued by Government agencies (inspections are tracked and recorded by the Manager, Forestry & Engineering).

Internal records relating to information sharing, inspections and investigations (where applicable) also will be reviewed.

Forecast

Teal currently has good working relationships with each of the majority of the First Nations with Traditional Territory overlapping with the DFA. Communication and information sharing has been achieved through many formal and informal processes. Cultural Heritage Resources have been identified on an on-going basis and it is anticipated that these types of communications will continue to improve over time.



C6.2.1: Evidence of Understanding and Use of Aboriginal Knowledge through the Engagement of Willing Aboriginal Communities, using a Process that Identifies and Manages Culturally Important Resources and Values

Special effort is required to encourage meaningful relationships with Aboriginal communities and to incorporate Aboriginal participation into the DFA. Teal has a number of processes in place to develop strong working relationships with First Nations, including: encouraging participation of First Nations in Public Advisory Group meetings and field tours, soliciting input and feedback into management plans, identification and protection of cultural resources, responding to all requests and meetings from First Nations, and development of Protocol Agreements which may include information sharing. The information sharing process is therefore already well developed between Teal and the many First Nations within the DFA, especially as related to cultural heritage resources (e.g., Indicator 6.1.3). Other examples of information sharing leading to short and long-term management planning of resources important to First Nations are listed below.

Teal also continues to be open to alternate information sharing options other than those listed above. This may include formal information agreements or memorandums of understanding, as well as the use of Traditional Ecological Knowledge for conservation of specific resources at the site and landscape-level. If a First Nation expresses interest for such an agreement, Teal will agree to such a request whenever possible.

Teal recognizes that the information sharing process is not one sided; either Teal or the First Nation may make the request for information sharing, especially in areas known to have cultural heritage resources or other important cultural, historical, or ecological features.



Value	Objective	Indicator	Target	Acceptable Variance
Respect for Aboriginal forest values, knowledge and uses	To incorporate Aboriginal knowledge into the planning process through information sharing arrangements	Evidence of understanding and use of Aboriginal knowledge through the engagement of willing Aboriginal communities, using a process that identifies and manages culturally important resources and values	All requests for information sharing are addressed in a manner mutually acceptable to Teal and the First Nation	Zero

Current Status & Results

This is a new indicator in 2011, which has not been monitored previously. However, there are several examples of information sharing in the DFA such as:

- Communications were strengthened with Sto:lo Tribal Council in 2009 through the FPAG regarding consultation, referrals and participation in archaeological assessments
- Communications are ongoing with the Pacheedaht concerning identification and use of old-growth cedar and cypress trees
- Pacheedaht First Nation provide comments on all harvest proposals within their Traditional Territory. Comments from PFN staff regarding Riparian Management have governed the location of cutting boundaries adjacent to Riparian Management Areas in some cases. Concerns raised by Pacheedaht First Nation regarding the visual impact of harvesting within the Port Renfrew viewscape have had the effect of altering cutblock boundary location and harvest timing of some cutblocks.
- In Norrish Creek, during a recent information sharing process, the Leq'a:mel expressed concern about their lack of access to Cedar trees in their Traditional Territory. Teal responded with a letter and photos identifying where Cedar trees were being retained. Subsequently, the Leq'a:mel indicated that they were not as interested in canoe logs (as the helicopter could not lift logs big enough for the canoes they want to carve), but they would rather have lumber to help build their long house. Teal provided lumber for their long house in September 2010.



- In Norrish Creek, during the information sharing process for a referral dated January 12, 2009, the Leq'a:mel identified some sites where regalia have been laid to rest. During the Archaeological Impact Assessment for the cutblock in the area, the spiritual use sites were confirmed. The cutblock and road did not impact the sites.

Strategy

The strategy for this indicator is similar to that of Indicator 6.1.3 and can be completed at the same time. Evidence of information sharing for management of culturally important resources will be gathered from, but not limited to, the following:

- Management Plan reviews (e.g., TFL Management Plans, Forest Stewardship Plans, Landscape Unit Plans, Vancouver Island Land Use Plan, etc.);
- Site Level Plan reviews (e.g., Logging Plan referrals);
- Archaeological Inventories (Archaeological Overview Assessments are generally done on a landscape or watershed level. They categorize areas based upon the potential for archaeological sites and evaluate existing archaeological resources);
- Archaeological Assessments (Archaeological Impact Assessments are completed, as required, on the stand level where the potential for archaeological sites is rated at moderate or high or at the request of First Nations. The Archaeological Impact Assessment identifies and assesses all impacts on archaeological resources that may result from proposed developments);
- Traditional Use Studies;
- Information Sharing Protocols;
- Public Advisory Group meetings; and
- Informal discussions

Monitoring

The Environmental Department tallies the number of identified information sharing requests and arrangements from internal records as outlined above.

Forecast

It is anticipated that all requests for information sharing will be addressed.



C6.3.1: Evidence that the Organization has Co-operated with other Forest-dependent Businesses, Forest Users, and the Local Community to Strengthen and Diversify the Local Economy

This indicator is directed towards how Teal creates economic benefits within local communities by developing relationships with forest-dependent businesses and contractors, co-operates with other forest users, and provides employment opportunities to the local community. Economic benefits include direct and indirect employment under Teal Jones Group and its sub-contractors and suppliers as well as purchases of supplies and services from local businesses.

Because relationships with non-timber forest product users and Aboriginal communities in the DFA are covered by other indicators in this SFMP, the focus of this indicator is on other forest users (such as local guides, recreation groups, hunters etc.), local forest contractors, local employment, and local business suppliers.

For the purposes of the SFM, local communities are defined as follows:

- 1) All First Nations communities associated with the DFA;
- 2) For the Honeymoon Bay portion of the DFA, “local” is broadly defined as Southern Vancouver Island, and more specifically the communities of Lake Cowichan, Port Renfrew, Honeymoon Bay, Lake Mesachie, Youbou; and
- 3) For the Fraser portion of the DFA, “local” is broadly defined as the Fraser Valley, and more specifically the communities of Chilliwack, Abbotsford, Agassiz, Mission, Maple Ridge and Hope.



Value	Objective	Indicator	Target	Acceptable Variance
Forest community well-being and resilience	To continue to foster good working relationships with community, local businesses and develop the local economy	Evidence that the organization has co-operated with other forest-dependent businesses, forest users and the local community to strengthen and diversify the local economy	Prioritize co-operation with forest users, local businesses, and the local community	The intent of this indicator is to provide a general idea of the co-operation with Forest-dependent Businesses, Forest Users, and the Local Community, and results will fluctuate over time

Current Status & Results

This is a new indicator in 2011, which builds upon Indicator H5-10: Hiring from Local Communities and H5-13: Community Benefits.

Year	Operation	Supplies and Services Hired Locally	Local Personnel Hired	Cooperation with Local Forest Dependent Business	Target Met (Y/N)	Variance Met (Y/N)
2010	HBO	41%	0 (no new employees)	2	Y	Y
	FVO	100%	100% (1 new employee)	1		

In 2010 the Honeymoon Bay portion of the DFA hired 41% of their supplies and services from the local area, 52% from Vancouver Island (outside of the area considered local) and 7% from elsewhere; the Fraser portion of the DFA hired 100% of their supplies and services are from the local area (these numbers do not include payments to primary contractors as it is difficult to determine where contractor crews live). There was one new hires to Teal staff in 2010. Requests from local forest dependent business users for information or access include: two beekeepers (HBO), and 1 moss collector for hanging baskets (FVO).

Strategy

Teal will respond to all new requests from local forest users for information and access whenever possible. For example, a forest user may want to know the status of certain road conditions in order to access areas within the DFA for recreational purposes.

Where possible, supplies and services will be hired from local suppliers or contractors. Experience, competitive pricing and capacity are also considered when choosing suppliers and services.



Where new employees are required, Teal will prioritize hiring from local communities. Each year the number of new employees hired and their primary residence will be tallied.

As Teal does not have any control over the hiring criteria of contractors, this indicator will not apply specifically to contractor staff, only the location in which they have their business based.

Monitoring

Records from The Engineering Department and the Administrative Department will be accessed to tally:

- # of new requests from local forest dependent business users
- # of new employees hired
- # local suppliers and services utilized

The Administrative Department keeps records for: 1) employees and their primary residence within employment records, and 2) suppliers and services used and location of business. The Engineering Department keeps records of requests from local forest users in the External Communications file.

Forecast

Teal is committed to continuing to accommodate local forest users and purchase business supplies and services from local communities. It is anticipated that all requests from forest users will be addressed in the future and that business supplies and services will be from the local community whenever possible. New hiring from the community is not anticipated in the near future as the timber supply remains fairly static over the short-term.



C6.3.2: Evidence of Co-operation with DFA-related Workers and their Unions to Improve and Enhance Safety Standards, Procedures, and Outcomes in all DFA-Related Workplaces and Affected Communities

The Teal Jones Group recognizes health and safety as our number one priority. As per the Teal Jones Occupational Health & Safety Policy, Teal is committed to providing a healthy and safe workplace for all personnel by establishing and maintaining safe work practices through adequate procedures and direction.

Value	Objective	Indicator	Target	Acceptable Variance
A healthy and Safe Work Place for all personnel	Establish and maintain safe work practices and environment through adequate procedures and direction	Evidence of co-operation with DFA-related workers and their unions to improve and enhance safety standards, procedures, and outcomes in all DFA-related workplaces and affected communities	Teal Manager/ Supervisor to attend Primary Contractor Safety Meetings a minimum of 3 times per year, and review Safety meeting minutes for meetings not attended	Zero

Current Status & Results

This is a new indicator in 2011. Current status is not available as there have not been monitored in the past, however this is an ongoing practice that has been employed for several years.

Strategy

Teal personnel have consistently attended primary contractor safety meetings in order to provide co-operation required to improve and enhance safety standards, procedures, and outcomes in all DFA-related workplaces.

In addition, an Emergency Preparedness and Response Plan has been prepared and is continually updated by Teal. The plan is implemented throughout the year and includes many strategies to prevent and prepare for



injury, fires, heavy rainfall events, spills, landslides, etc. The Plan includes roles and responsibilities during an event, training requirements, response equipment requirements, emergency action plans, etc. Teal and contractors work in co-operation to ensure the plan is followed and is adequate to address potential and actual emergency situations.

Monitoring

Attendance at Safety meetings is recorded in the meeting minutes. Once per year, the Environmental Department will request the attendance records from primary contractors to determine the presence of Teal Managers/ Supervisors at the meetings, and report under “Current Status and Results”.

Forecast

It is anticipated that Teal Management and Supervisors will continue to attend Safety meetings as this has been a common practice in the past, therefore the target is the forecast.



C6.3.3: Evidence that a Worker Safety Program has been Implemented and is Periodically Reviewed and Improved

As part of all contractual agreements with contractors, Teal requires contractors to have a Worker Safety Program in place that is consistent with Federal and Provincial legislated requirements. In addition, Teal has requested all primary contractors achieve SAFE certification by the BC Forest Safety Council as soon as possible.

The SAFE Companies program is a certification program that distinguishes BC forestry employers who meet industry safety standards and demonstrate leadership and commitment to building a culture where the health and safety of all workers is an overriding priority. Developed by the BC Forest Safety Council, in collaboration with industry, the SAFE Companies program provides forest companies with clear, practical and achievable standards so they can establish and maintain successful health and safety programs¹⁷. For more information on SAFE certification see <http://www.bcforestsafe.org/index.html>.

Primary contractors in the Honeymoon Bay portion of the DFA include Island Pacific Logging Ltd. (safe certified), and Northview Forest Products. In the Fraser portion of the DFA, primary contractors are Interwest Timber Ltd. and Southview Forest Services Ltd. (safe certified).

Value	Objective	Indicator	Target	Acceptable Variance
A healthy and Safe Work Place for all personnel	Establish and maintain safe work practices and environment through adequate procedures and direction	Evidence that a worker safety program has been implemented and is periodically reviewed and improved	All primary contractors working in the DFA are eligible for Safe Certification or have an equivalent safety system in place by December 2012	Zero

Current Status & Results

This is a new indicator in 2011. Current status is not available as this is a new requirement for contractors.

¹⁷ BC Forest Safety Council Backgrounder (September 2008)



Strategy

The majority of primary contractors are currently SAFE certified or in the process of certification.

Monitoring

The Environmental Department will review the BC Forest Safety website annually to determine if primary contractors have obtained SAFE certification and report under “Current Status & Results”.

Forecast

It is anticipated that all primary contractors will achieve SAFE certification earlier than the December 2012 deadline.



C6.4.1: Level of Participant Satisfaction with the Public Participation Process

The purpose of the Member Satisfaction questionnaire is to help Teal improve the Public Advisory Group process and identify priorities/focus for future PAG meetings. The questionnaire provides opportunities to rate meeting facilities, facilitator and speakers, information provided, and the general public advisory process.

Value	Objective	Indicator	Target	Acceptable Variance
Public participation	Improve the public participation process	Level of participant satisfaction with the public participation process	Each item on the annual PAG Evaluation form scores Satisfactory or better	Steps are taken to discuss and remedy, where possible, 'Poor' or 'Unsatisfactory' scores during a PAG meeting

Current Status & Results

This indicator is based on a previously developed indicator: F6-9 FPAG Member Satisfaction (originally developed by FPAG) and surveys completed by SIPAG outside of the SFMP.

Year	# items poor or unsatisfactory	# poor or unsatisfactory items addressed	Target Met (Y/N)	Variance Met (Y/N)
2010	2	2	Y	Y

In 2010, evaluation forms were distributed to all members attending the meetings, as well as through email distributions; 8 responses were received from SIPAG, and 4 from FPAG. There were two items that scored poor on evaluations. The first was from SIPAG; the background noise can be disruptive (Teal representatives requested the restaurant replace the door between the meeting room and the kitchen). The second item was from FPAG; the presentations were poor. Teal representatives have made efforts to improve presentations by making slides easier to read (enlarging print) and further plans to improve presentations at future meetings include a revision of slide format.

This indicator has been tracked in the Fraser Operation portion of the DFA since 2007; evaluations were completed each year with the exception of 2009.

This indicator has not been tracked in the Honeymoon Bay Operation portion of the DFA, however evaluations were completed each year since 2006 with the exception of 2009.



It may be important to note that while there were no evaluations completed in 2009, the Terms of Reference was reviewed and revised during multiple meetings, therefore members were given opportunities to provide input into the public consultation process.

Strategy

A PAG questionnaire will be distributed to each PAG member at a minimum of once per year (completed on a voluntary basis); in order to assess member satisfaction with the process. The PAG questionnaire asks members to rate facilities, facilitator/ speakers, information provided and the general process by indicating a score of Excellent/ Good/ Satisfactory/ Unsatisfactory or Poor.

Comments and feedback will be reviewed by the Environmental Department and reviewed with members at the following meeting. Measures to address any deficiencies (where unsatisfactory or poor results are indicated) will be developed as appropriate.

Monitoring

The Environmental Department reviews the meeting minutes and tallies the number of meetings throughout the year where distribution and completion of a PAG questionnaire occurred; reviews the results of the questionnaire and provides a summary of results.

Forecast

It is anticipated that meeting evaluations will be distributed to the PAG members on an annual basis. Evaluations that include 'unsatisfactory' or 'poor' results will be discussed with PAGs and addressed as appropriate in a timely manner.



C6.4.2: Evidence of Efforts to Promote Capacity Development and Meaningful Participation in General

Members of the public are widely considered to have the right to be involved in the management of publicly owned forests. Through their participation in the process, citizens can enhance their knowledge of SFM in general and of other interests and values related to local forests. They also gain a valuable opportunity to be involved in the decision-making process for local forests¹⁸.

Value	Objective	Indicator	Target	Acceptable Variance
Ongoing and meaningful public advisory group participation	Provide adequate background information and resources to Public Advisory Groups	Evidence of efforts to promote capacity development and meaningful participation in general	The public participation process shall include discussions of 100% of the 'Discussion Items' for each criterion in the CSA Z809 SFM standard	Zero

Current Status & Results

This is a new indicator in 2011; however it is based upon a practice that has been in existence from the inception of the PAGs (2006 for SIPAG and 2007 for FPAG).

Year	Criterion Discussed	Discussion Items Covered	Target Met (Y/N)
2010	3	100%	Y
2009	1	100%	Y

¹⁸ CSA Z809-08 Sustainable Forest Management Standard (December 2008)



Strategy

For each PAG meeting a homework package (containing background information on the relevant Criterion and each 'Discussion Item') is prepared and distributed prior to the meeting. At the meetings a slide show, presentation and/ or guest speakers addresses the 'Discussion Items' and addresses any further questions or concerns the PAG may raise.

Monitoring

The Environmental Department reviews the meeting minutes to determine what discussion topics were covered and compares them with the CSA Z809 SFM standard.

Forecast

It is anticipated that all discussion topics will be reviewed, therefore the target is the forecast.



C6.4.3: Evidence of Efforts to Promote Capacity Development and Meaningful Participation for Aboriginal Communities

The TFL is located within the traditional territories of the Pacheedaht First Nation, Ditidaht Band First Nation, Cowichan Tribes First Nation and Lake Cowichan First Nation. A small portion of the TFL overlaps the traditional territory of the Penelakut First Nation. Lake Cowichan, Chemainus and Penelakut First Nations are represented by the Hul'qumi'num Treaty Group.

The Fraser Operation portion of the DFA is located within the traditional territories of 30. For a complete list refer to the text of the SFM Plan. The First Nations associated with the Fraser portion of the DFA can change over time as Forest Licence chart areas are amended and as First Nations re-define the boundaries of their respective traditional territories.

Value	Objective	Indicator	Target	Acceptable Variance
Aboriginal and Treaty Rights	Provide effective opportunities for First Nations to communicate Aboriginal issues	Evidence of efforts to promote capacity development and meaningful participation for Aboriginal communities	Report on efforts to enhance Aboriginal participation in Sustainable Forest Management	Zero

Current Status & Results

This is a new indicator in 2011, based on previous indicators: H6-1 First Nations Participation (originally developed by SIPAG); F6-1 First Nations Participation in FPAG and H6-2 First Nation Attendance at FPAG (originally developed by FPAG).

In 2010, all First Nations with traditional territory overlapping the DFA were invited to join the PAG meetings. This is one element of this indicator; the following is a summary of First Nations' attendance at the PAG meetings:



Year	# of Invitations to PAG FN Members to Attend PAG Meetings	First Nation Attendance	Number of PAG Meetings	Target Met (Y/N)	Variance Met (Y/N)
2010	2/ Meeting	1/35 (Feb) 3/35 (Aug/Sept) 2/35 (Nov)	6 (3 SIPAG; 3 FPAG)	Y	Y
2009	2/ Meeting	5/35 (Sept) 2/35 (Nov)	4 (2 SIPAG; 2 FPAG)	Y	Y

Attendance at PAG meetings, has been tracked in the Honeymoon Bay Operation portion of the DFA since 2006; in the Fraser Operation portion of the DFA since 2007.

Teal assisted in the presentation and approval of a Forest Stewardship Plan prepared on behalf of Ditidaht First Nation and Pacheedaht First Nation (for their Forest Licences and Timber Supply Licences). This document has provided a basis for these First Nations to act on harvest opportunities made available to them by Government. This involvement has contributed to an understanding of Forest Stewardship Plans and processes on the part of these First Nations.

Strategy

At a minimum of once per year, all First Nations with traditional territory overlapping the DFA are invited to join the PAG meetings. In addition, there is on-going communication with First Nations through regular meetings with the PAGs, and the communication in relation to the meetings (e.g., reminder calls, emails, meeting minutes, etc.). Where First Nations are unable to participate in the Public Advisory Group meetings, they are provided with alternate methods of reviewing Teal's Sustainable Forest Management Plan or any general sustainable forest management issues.

Where First Nation attendance is lacking, the Environmental Department will explore options and ideas for improving attendance. One solution used in the past has included holding a meeting at a First Nation location with focus directed towards First Nations issues.

Monitoring

The Environmental Department records correspondence and invitations extended (through call logs and emails), reviews meeting minutes for attendance and provides an annual summary and reports under "Current Status and Results".



Forecast

Teal will continue to extend invitations to First Nations who have traditional territory within the DFA to participate in the sustainable management of the forests within the DFA. Participation will depend upon the individual First Nations, however from the interests that have been expressed, it is anticipated that participation may increase.



C6.5.1: Number of people reached through educational outreach

Educational outreach, community meetings, and public consultation/participation opportunities are integral to the sustainable management of forests for local communities in and around the DFA. These opportunities provide a venue for further learning about the DFA as well as public input and involvement into the forest planning process.

Examples of outreach opportunities include:

- Community Meetings
- Field Tours
- Participation in Forestry Week at local schools
- Teaching local university and college students on field tours
- Field tours with First Nations
- Articles on the Teal website or in the local paper
- Emails to community leaders updating them on Teal's progress
- Trade show or conference displays highlighting Teal's recent activities

The intent of this indicator is to track public outreach in addition to participation of people in the Public Advisory Group.

Value	Objective	Indicator	Target	Acceptable Variance
Information and decision making	To inform and educate the PAG and other public through field trips, school tours and public presentations	Number of people reached through educational outreach	A minimum of one educational outreach activity each year	Zero

Current Status & Results

This is a new indicator in 2011, which has not been reported upon previously. However, Teal undertakes educational outreach whenever possible, including:

- Community meetings with the Hatzic Ratepayers Association regarding proposed road and harvesting activities
- Community meetings and field tour in Norrish Creek
- Participation in Forestry Week in Lake Cowichan
- Participation in the Lake Cowichan Forestry Co-op



- Giving a presentation annually to Camosun College students on a summer field tour
- Field tour with the Pacheedaht to look at fisheries management
- Previous participant and member in the Council of Forest Industries

Strategy

In addition to regularly scheduled PAG field trips and tours, incorporate one additional public outreach opportunity in HBO or FVO to allow the public to view operations or particular issues of concern.

Monitoring

The Environment Department will tally the number of educational outreach opportunities held each year.

Forecast

It is anticipated that generally Teal will have multiple opportunities to reach the General Public or special interest groups through public outreach activities.



C6.5.2: Availability of Summary Information on Issues of Concern to the Public

Understanding and responding to concerns brought forward by the public is a priority to Teal. Teal strives to address such concerns and develop good relationships with local communities. One of the ways Teal achieves this is through their Public Advisory Groups. Teal has two public advisory groups (PAG): Southwest Island Public Advisory Group (Honeymoon Bay portion of the DFA) and Fraser Public Advisory Group (Fraser portion of the DFA).

Value	Objective	Indicator	Target	Acceptable Variance
Information and Decision Making	To summarize issues of concern to the public and make these available	Availability of summary information on issues of concern to the public	Make summary information of issues of concern available to the public, including updating Teal's website at least once a year with PAG meeting minutes	Zero

Current Status & Results

This is a new proposed indicator in 2011, which has not been reported upon previously, but the target is a current practice.

Year	# meetings	# meeting minutes posted	Target Met (Y/N)
2010	3	100%	Y

Currently, Teal has minutes posted for the Fraser PAG at http://www.tealjones.com/Cert_FPAG_Meetings.htm and the South Island PAG at http://www.tealjones.com/Cert_SIPAG_Meetings.htm. All minutes for meetings since 2006 are posted on the website with the exception of minutes from Meeting #21 First Nations, which have not been posted as some of the content is confident.

In addition, all public inquiries are logged at Teal's offices; in 2010 there were two inquiries received by concerned citizens; one regarding harvesting in Avatar Grove and the other regarding Stave Lake. Teal responded to both citizens and supplied information as requested.



Strategy

All inquiries to Teal are logged. This includes email to environment@tealjones.com, written correspondence and phone calls from the public. Public inquiries and feedback from the referral process are also tracked and filed. These documents are available at the Teal office for review by the public except those considered confidential.

Meeting minutes are recorded during each PAG meeting. These are then sent out for review by the PAG and are approved (with changes if necessary) during the subsequent PAG meeting. Approved meeting minutes are posted on the Teal website by the IT department.

Monitoring

The Environment Department will check with the Operations and management to determine if any public inquiries or concerns have been made. They will also review the website annually to ensure meeting minutes are posted.

Forecast

It is anticipated all meeting minutes will be posted, at minimum, annually, for each Public Advisory Group.