

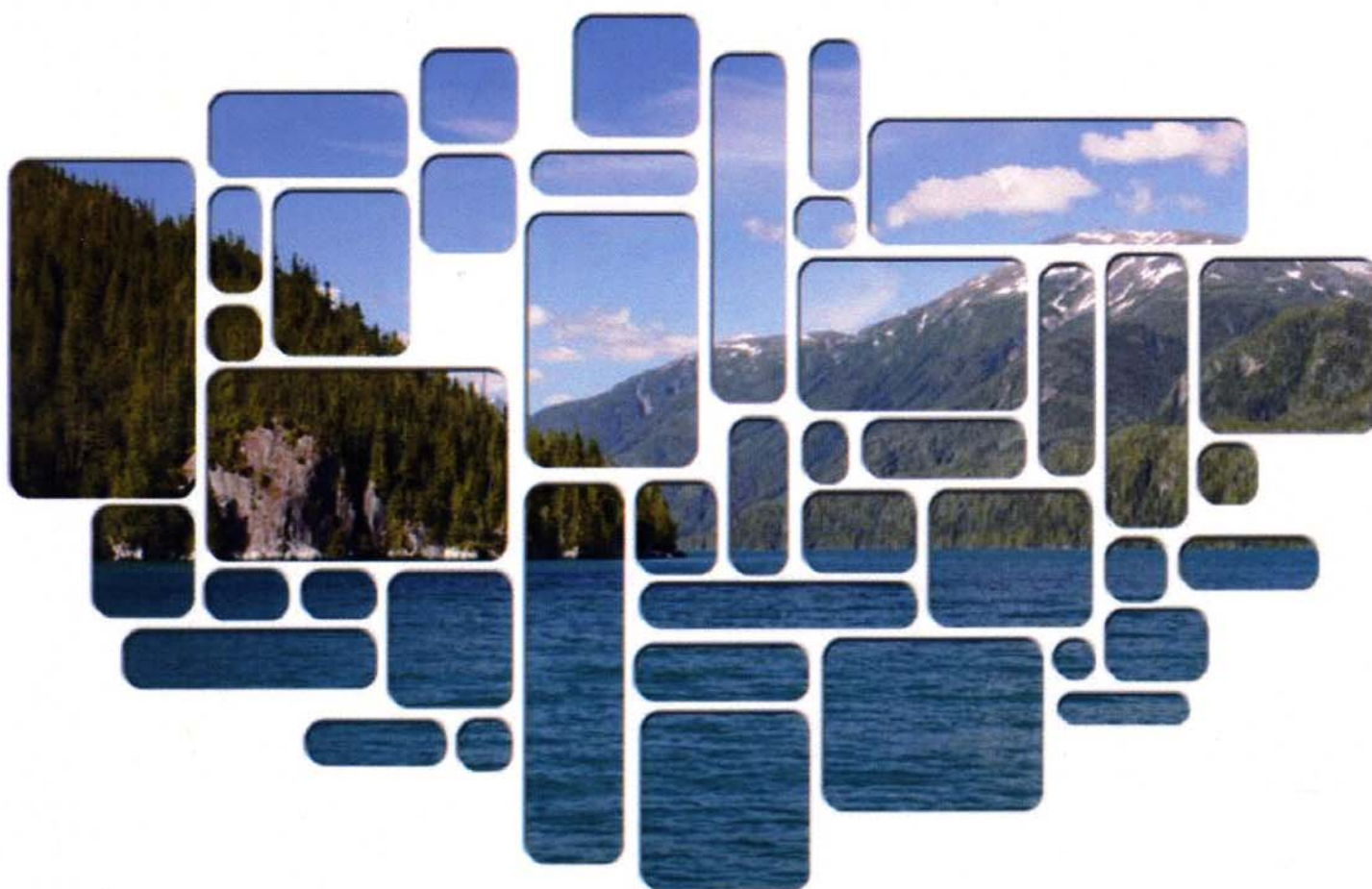
Joint Annual Report

2010



This is the 86th Annual Report on the maintenance of the International Boundary between the United States and Canada as set forth by Treaty in 1908 and 1925

**International Boundary
Commission,
United States and
Canada**



Portland Canal – Alaska / British Columbia



International
Boundary
Commission



Commission
de la frontière
internationale



The Honorable Hillary Clinton
The Secretary of State for the United States
Washington, D.C.

The Honorable John Baird
Minister of Foreign Affairs
Ottawa

Dear Ms. Clinton and Mr. Baird:

We have the honor to submit herewith to each government a joint report of the Commissioners regarding the maintenance and regulatory work performed in the calendar year 2010 with respect to the International Boundary between the United States and Canada.

This is the 86th annual joint report submitted by the Commissioners under the provisions of Article IV of the Treaty of Washington, February 24, 1925. This report contains a complete account of all boundary inspections and maintenance work executed.

Respectfully submitted,

Kyle K. Hipsley

Acting United States Commissioner

Peter Sullivan

Canadian Commissioner

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TABLE OF CONTENTS

INTRODUCTION	1
MISSION	2
2010 HIGHLIGHTS	2
MAJOR MAINTENANCE ACTIVITIES	2
PORTLAND CANAL	2
141ST MERIDIAN.....	3
45TH PARALLEL.....	4
THE HIGHLANDS.....	4
ST. FRANCIS AND ST. JOHN RIVERS.....	5
ADDITIONAL MAINTENANCE ACTIVITIES	6
LAKE OF THE WOODS TO LAKE SUPERIOR REFERENCE MARKS.....	6
AROOSTOOK VALLEY GOLF CLUB.....	6
TRAIL MARKERS.....	7
PASSAMAQUODDY BAY.....	7
OSOYOOS LAKE.....	8
GLACIER NATIONAL PARK.....	8
FIELD INSPECTIONS	9
A LOOK AHEAD TO 2011	9
CANADIAN SECTION.....	9
UNITED STATES SECTION.....	10
REGULATORY ITEMS	11
GEOGRAPHIC INFORMATION SYSTEM (GIS)	12
FINANCIAL REPORT	13
15 YEAR MAINTENANCE PLAN	15

Joint Annual Report

The 86th Annual Joint Report of the International Boundary Commission (IBC) sets out how the boundary between Canada and the United States – from Atlantic to Pacific Oceans, and from Pacific Ocean to Beaufort Sea – was maintained in 2010. This Report is an overview of activities, and correlates maintenance activities with short- and long-term maintenance plans.

Introduction

For the fourth year this report will be published on-line. This continues the IBC's commitment to allowing wide access to information while minimizing printing and distribution. The report will be produced in two parts. First, this narrative will be available for download on the IBC website. The second part containing the technical appendices will be stored in a Geographic Information System (GIS) data base. A nominal number of hard copies will be produced for formal distribution and archival purposes.

The boundary between Canada and the United States came into being as a result of some 26 Treaties, Conventions, Protocols, Decisions and Awards between the 1783 *Treaty of Peace* (between Great Britain and the United States) and the 1925 *International Boundary Treaty* (between Canada and the United States). Although there were ad hoc boundary commissions over the years, the IBC dates to the 1908 *Boundary Treaty* which appointed two Commissioners to locate and mark the boundary between the two countries. A permanent IBC, established by the 1925 Treaty, has a mandate to maintain the boundary under the supervision of the two Commissioners.

The IBC's mandate is thus found in the 1908 and 1925 treaties, and for the Canadian section, in the *International Boundary Commission Act*, 1960. It consists of a Canadian and a United States section, each of which reports to its respective Commissioner. Technical, administrative and policy personnel within each section are supplemented by seasonal employees. The Canadian Commissioner is Peter Sullivan, who has been appointed by Order in Council by virtue of being the Surveyor General for Canada Lands. The acting United States Commissioner is Kyle Hipsley, who has long served the United States section, most recently as Deputy Commissioner.



*Peter Sullivan
Canadian Commissioner*



*Kyle Hipsley,
Acting United States
Commissioner*

Mission

"The Commissioners appointed under the provisions of the Treaty of April 11, 1908, are hereby jointly empowered and directed: to inspect the various sections of the boundary line between the Dominion of Canada and the United States and between the Dominion of Canada and Alaska at such times as they shall deem necessary; to repair all damaged monuments and buoys; to relocate and rebuild monuments which have been destroyed; to keep the boundary vistas open; to move boundary monuments to new sites and establish such additional monuments and buoys as they shall deem desirable; to maintain at all times an effective boundary line between the Dominion of Canada and the United States and between the Dominion of Canada and Alaska"

(International Boundary Treaty 1925)¹

2010 Highlights

The IBC, now in its 102nd year as caretakers of the boundary between the United States and Canada, was able to make some significant milestones in 2010. Great strides were achieved in updating the original boundary maps with the first signing of several new map sheets since the late 1920's. The U.S. Section's acquisition of new high resolution imagery obtained through strong inter-agency cooperation with other U.S. government entities coupled with the Canadian section's use of Natural Resources Canada capabilities has helped put the IBC's mapping program on an accelerated track.

¹ Treaty regarding the Demarcation of the Boundary between the United States and Canada. Signed February 24, 1925. Ratifications exchanged at Washington on July 17, 1925.



Commissioner Sullivan and Commissioner Hipsley sign new boundary maps.

Major Maintenance Activities

Maintenance activities focused on four sections of the international boundary: Southeast Alaska / British Columbia along the Portland Canal; the 141st Meridian along the Alaska / Yukon border; the 45th Parallel (West Line) along the New York-Vermont / Quebec border; and the St. Francis River along the Maine / Quebec border.

Portland Canal: Alaska / British Columbia

The Portland Canal is a 180 mi / 290 km long section of water boundary between Southeast Alaska and British Columbia. It is defined by 28 Turning Points reference to 52 monuments and has been listed as a priority maintenance project since 2005. Given its rugged nature and often inhospitable weather, the canal represents a significant work effort. Continuing the work started in the 2008 season; the IBC recovered 51 reference monuments and surveyed 26 of these in the 2010 season completing the data collection over the past

three years needed to compute updated boundary coordinates from the Dixon Entrance to Mt. Saint Elias.



The Portland Canal: the world's 4th largest fjord – Alaska / British Columbia



The "Bear Necessity" Captained by Mark Galla was home for the IBC – Alaska / British Columbia

141st Meridian: Alaska / Yukon

Vista clearing operations got underway this year along the 141st meridian between Alaska and the Yukon Territory a 650 mi / 1,045 km section of land boundary marked by 191 boundary monuments. This IBC last performed clearing operations along this section in 1985



The Aurora Borealis putting on a show over the Yukon River – Alaska / Yukon



The daily commute to the field on the 141st Meridian – Alaska / Yukon

Weather dictates how much work can be accomplished anywhere along the boundary here and this year, despite near record levels of rainfall, the IBC was cleared 33.5 mi / 54 km of vista.

45th Parallel (West Line): New York, Vermont / Quebec, Ontario

This section of boundary is divided into two sections, Vermont-Quebec 90 mi / 145 km and New York-Quebec 65 mi / 105 km which are marked by a total of 421 monuments. Also, 32.9 miles / 53 km of line were cleared from monument 588A, located approximately 0.22 mi / 0.35 km west of the Highwater / North Troy crossing, on Road 243 (Mansonville Road), to the east shore of Lake Champlain near monument 631. This section was a key focal area for the Canadian section during the 2010 field season. All areas of boundary maintenance were engaged upon by Canadian field parties. IBC Field Engineer, Louis Carpentier's party worked west from Monument 588 to Monument 613 at Lake Champlain where 18mi / 26km of vista centerline was cleared and marked for contractors performing clearing operations. From the west side of the lake, they continued clearing and marking vista centerline for an additional 22 mi / 36 km in anticipation of clearing contracts in 2011. The field party inspected 74 monuments.



Monument 646 on the 45th Parallel – New York / Quebec

Surveys were conducted by the Canadian Section. Led by IBC Field Engineer, Joel Petit, GPS observations were made at 103 boundary monuments between Halls Stream and Lake Mephremagog. Additionally, 22 of these were also cleaned and painted.

Senior Field Engineer, Joe Harrietha and his crew inspected 127 monuments, renewed 4, and established 7 new boundary monuments.



Looking west from Mon 570 across Lake Mephremagog (left) and Anna Markouchina at Monument 522A1 (right) – Vermont / Quebec

Highlands : Maine/Quebec

Under the supervision of the Canadian Section, contracts were issued to clear a total of 76.4 mi / 123 km of vista in the Highlands Section, between Maine and the province of Quebec. The section of the vista cleared along the International Boundary extends from monument 314 on the west shore of little lake St-John, located approximately 5.6 mi / 9 km southeast of St-Zacharie, following the boundary west to monument 405, on top of Moose Hill.



Looking down the vista along the 45th Parallel – New York / Quebec

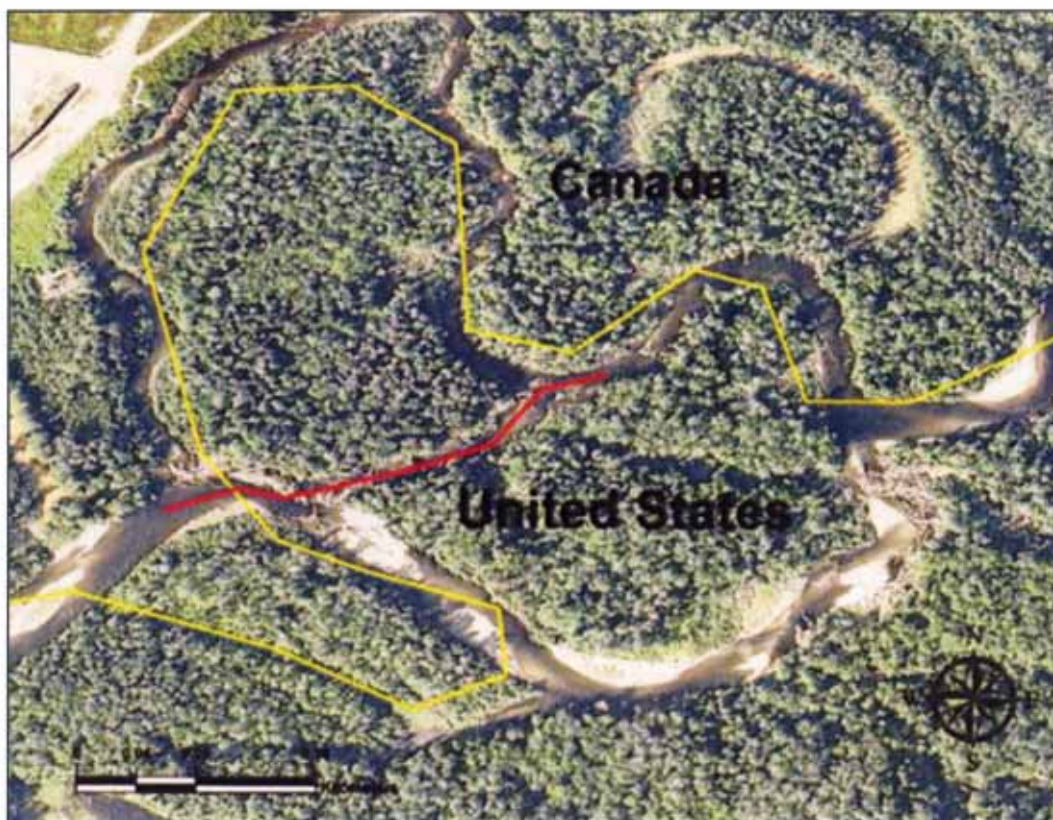
St. John River and St. Francis River: Maine / Quebec

The first part of the season was the continuation of the previous year's efforts to recover and repair the reference monuments along the St. John River. The boundary follows the St. John River westward from the North Line for a distance of 72 mi / 115 km to the mouth of the St. Francis River. The line consists of 230 straight-line boundary courses which are referenced by approximately 280 reference monuments. The areas surrounding the river are developed with roads, towns and farms and access to the reference monuments was obtainable with little effort. The development of this area and bank erosion (most notably the spring thaw of 2008) over the years has destroyed many reference monuments.



Before and after photographs of a Reference Monument (S-10) along the St John River – Maine / Quebec

The second part of the season crews moved northward to Estcourt, Maine / Lake Pohenegamook, Quebec and begin maintenance and boundary enhancement on the St. Francis River. The river, its source at Lake Pohenegamook, runs southerly for a distance of 43 mi / 70 km to the St. John River. The boundary of the river consists of 485 turning points which are referenced by 122 monuments. The United States side of the river is dense forested area and the Canadian side is low laying farm fields. North of Beau Lake the course has changed and what was once water is now long stretches of land which need to be maintained and marked.



Portion of the St. Francis River showing the changes to the course of the river – Maine / Quebec

Additional Maintenance Activities

In addition to the larger projects undertaken each year, the IBC manages many smaller, but no less important activities in its mandate to provide for a clearly marked boundary. Described below are these projects.

- Recovery and maintenance of reference marks for the water boundaries between Lake of the Woods and Lake Superior along the Minnesota / Ontario border took place early in the field season. Working from canoes and camping along the way, the IBC field party endured difficult weather conditions as the change in season usually produces.
- The IBC has been actively engaged with the Aroostook Valley Golf Club in New Brunswick for several years seeking compliance with its vista policies. New trees were planted this year that will allow for the eventual removal of existing trees in the vista. A new boundary monument was also placed near the clubhouse to demonstrate its close proximity to the border. The IBC will continue its efforts to ensure the policies are adhered to.



A Reference Mark after it has been cleaned and painted – Minnesota / Ontario



Aroostook Valley Golf Club – “North Line” Maine / New Brunswick

- In an effort to enhance border marking in areas where additional monumentation is not viable or cost effective, the IBC has been placing orange trail markers to help people identify when they are near the border. Trail markers were placed in high traffic areas along the 49th parallel in western North Dakota and eastern Montana which were identified to IBC by U.S. Customs and Border Protection. These trail markers also prove helpful to populations living right up against the border like the Vermont / Quebec boundary shown below.

- Trail markers were also left at several U.S. Customs and Border Protection offices with instructions on how to set. CBP Officers in the field would be able to place some of our markers in locations at their discretion.
- Equally important as the land boundaries, the water boundaries in many areas are marked and also cared for. This field season, the U.S. oversaw a contract to clean, paint, and re-clear the lines of sight between Range Pairs along Passamaquoddy Bay, Maine - New Brunswick. The harsh environment requires that these ranges be looked after every five years



Looking south across the boundary – Vermont / Quebec



Range Towers provide orientation to the boundary in Passamaquoddy Bay – Maine / New Brunswick



Range Mark 39 cross ranging International Boundary Turning Point 11 – Maine / New Brunswick

- Clearing operations were performed for the Range Towers marking the boundary along the 49th parallel at Osoyoos Lake – Washington / British Columbia. Small areas of brush cover to the east of the lake along the 49th were also cleared at the end of the field season.



Before and after photos of clearing around Range Marks – Washington / British Columbia

- GPS measurements were taken near the end of the field season to supplement previous work performed along the St. John and St. Francis Rivers. These additional measurements were critical in the completion of the adjustments from the NAD27 datum to the NAD83 for this section of boundary.
- With an ongoing agreement in place, the National Park Service continued annual clearing operations for the Commission in Glacier National Park. An IBC team marked 3.1 mi / 5 km of centerline after which park personnel performed clearing operations from Monument 263 heading east to a point 0.5 mi / 0.8 km east of Monument 266.



The vista seen from the air looking east from over Monument 266 – Montana / British Columbia

Field Inspections

Commissioner Sullivan and Acting Commissioner Hipsley inspected Canadian crews working along the 45th parallel (West Line) during the week of July 19-23. They were accompanied by Daniel Fortin and Al Arsenault from the Canadian Section. During the week, the Commissioners also met with various representatives from agencies of both the United States and Canada to discuss future plans for marking trans-boundary waterways in this region.

Commissioner Hipsley then went on to inspect a United States Section field party working along the North Line of Maine / New Brunswick.

Plans to inspect the U.S. crews working along the Alaska / Yukon border during the week of August 16-20 had to be cancelled. Weather conditions prevented access to the crews.

The IBC has another aggressive field season planned for 2011. Following is a brief description of the field work scheduled.

Canadian Section:

The Canadian field parties will again be focusing on the 45th parallel continuing where they left off in 2010. Senior Field Engineer, Joe Harrietha will manage roughly 37.3 mi / 60 km of vista clearing through contract while performing monument repairs. Many monuments through this section are in need of major repairs or replacement. Estimates for completion of repairs to monuments are upwards of three years. Working west from Lake Champlain, Field Engineers Joel Petit and Rodger Reid will be conducting surveys along this section. Clearing contracts will also be issued by the Canadian section for the Highlands of Maine-Quebec.



The 45th parallel is also known as the "West Line"

A Look Ahead to 2011

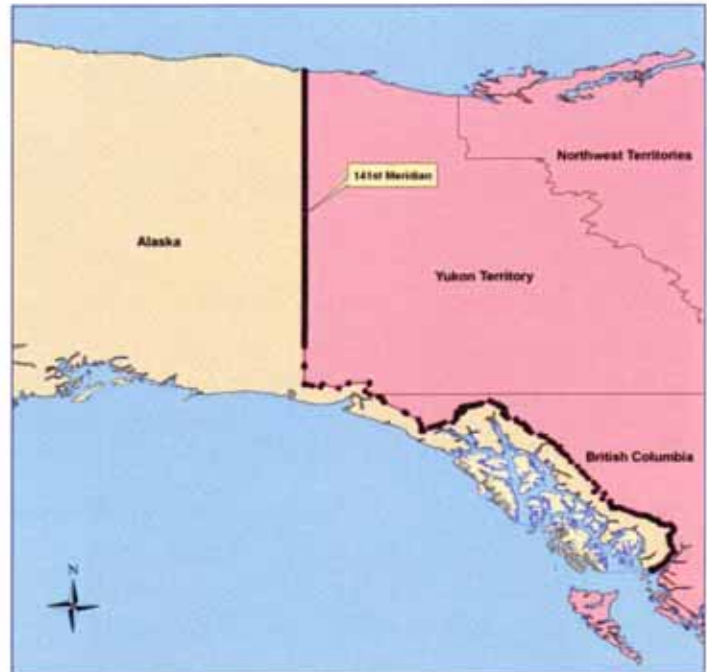


New York, Vermont / Quebec; and the rugged country of the "Highlands" – Maine / Quebec

United States Section:

The United States section will advertise for two 50 mi / 80.5 km clearing contracts this field season. One will continue north from where IBC field parties concluded operations this season, and one continuing south.

Montana Field Officer, Phil Hargrove will continue surveys and rebuilding monuments heading east from Osoyoos, WA / BC and across the Cascades towards Glacier National Park. He will also clear patches of trees and brush through a 20 mi / 32.2 km stretch across the Okanagon Valley.



The 141st Meridian – Alaska / Yukon



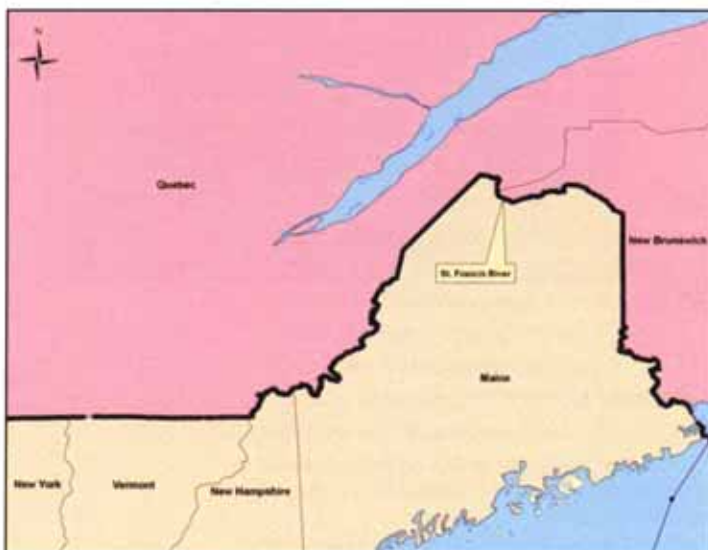
The 49th Parallel– Washington / British Columbia

Minnesota Field Officer, Bryan Cloutier will continue maintenance efforts of Reference Monuments from Lake of the Woods to Lake Superior.



Lake of the Woods to Lake Superior – Minnesota / Ontario

Maine Field Officer, Kevin Bagwell will continue his efforts of clearing and monumentation along the St. Francis River



St. Francis River – Maine / Quebec, New Brunswick

Regulatory Items

It is the responsibility of the IBC to oversee any construction taking place within the 20 foot vista. As part of this mandate, authorization was granted by the Commissioners for the following projects:

- Installation of fiber optics cable; Houlton, Maine / Woodstock, New Brunswick
- Installation of fiber optics cable; Sumas and Lynden, Washington / Huntingdon and Aldergrove, British Columbia
- Heavy Truck bypass lanes; Sweetgrass, Montana / Coutts, Alberta
- Oil Pipeline; Philips County, Montana / Monchy, Saskatchewan
- Power line; Sweetgrass, Montana / Coutts, Alberta
- New bridge construction; Fort Kent, Maine / Clair, New Brunswick

Geographic Information System (GIS) Development

For the GIS, this year was highlighted by the loading, checking, approval and use of many different data sets. Data from the adjustment of 12 years of surveys of the St. Francis River, the Highlands, Halls Stream, the St. Lawrence River, the Great Lakes, the Lake of the Woods and the Fraser Valley, and parts of the 45th parallel were loaded and checked. This data has kick-started the mapping for these areas of the boundary. By the end of 2010 maps of Halls Stream had been produced and signed off by the Commissioners. In addition, templates and prototype map sheets for the other areas have been created and the production of these maps is underway as 2011 begins.

In addition to survey data, all of the recently acquired high resolution imagery of the boundary has been loaded into an ESRI Image Server along with IBC aerial photography of the North Line, Halls Stream and Southeast Alaska. All historical maps of the boundary have also been loaded as one seamless image of the entire boundary. All these sources can be accessed as and displayed with various levels of transparency providing an invaluable tool in the checking and verifying of other data and understanding client requests for approval of work within the vista.

The tools developed by ESRI for the IBC have been completely documented and some instructional videos created. Using these tools, the data and photographs from the 2010 field season was incorporated into the GIS and materials for the upcoming 2011 created. These included letters to landowners, detailed landowner maps of the Halls Stream area, coordinate listings for specific sections of the boundary and various products as required.

This year, the IBC GIS became a working tool for supporting the IBC's operations and decision making and a repository for new data, photos and other related materials.

Financial Report



CERTIFIED STATEMENT OF COMPARATIVE EXPENDITURES

MADE BY
CANADA AND THE UNITED STATES
JOINTLY INCURRED BY THE COMMISSIONERS IN
MAINTAINING THE DEMARCATION OF THE BOUNDARY LINE
IN ACCORDANCE WITH THE PROVISIONS OF
THE TREATY OF 1925, AS OF MARCH 31, 2010

	Expended By United States Section (U.S. \$)	Expended By Canadian Section (Canadian \$)
Total to March 31, 2009:	\$14,127,533.34	\$17,237,111.77

From April 1, 2009 to March 31, 2010

West Line – (45 th Parallel) (Vista Clearing and Monument inspection)		\$154,165.00
Southeast Alaska–British Columbia (Field Survey & Monumentation)		\$172,231.00
Southeast Alaska–British Columbia Survey	\$197,622.77	
Maine – New Brunswick (North Line) Clearing Contract	\$94,300.00	
Cascade Mountains Clearing Contract		\$119,718.00
Fraser Valley Vista Clearing Contract		\$153,460.00
Minnesota – Manitoba (49 th Parallel) Clearing Contract	\$127,825.00	
Vista Clearing Contract Inspections		\$28,242.00
Montana – Alberta Glacier Park Clearing Contract	\$22,421.84	
Montana–North Dakota / Saskatchewan–Alberta (Prairies)		
Monument Maintenance 49 th Parallel	\$83,536.44	
Minnesota–Ontario /Lake of the Woods to Lake Superior		
Reference Monument Maintenance	\$57,359.43	
Maine–New Brunswick–St. John River		
Reference Monument Maintenance	\$76,637.17	
ESRI GIS Development Contract		\$226,675.00
Southeast Alaska–British Columbia Digital Imagery & Aerotriangulation		\$605,519.00

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- 3 -

Note: It is recognized that fluctuations in exchange rates are not reflected in the total expenditures by each country.

I hereby certify that the above amount of \$15,004,118.54 is an accurate statement of the total amount expended to March 31, 2010 on the part of the United States in the joint maintenance of the International Boundary Line under Article IV of the Treaty of 1925.




KYLE HIPSLEY
A/United States Commissioner

Signed in Edmonton, Alberta

Dated: 10/20/2010

I hereby certify that the above amount of \$18,806,189.77 is an accurate statement of the total amount expended to March 31, 2010 on the part of Canada in the joint maintenance of the International Boundary Line under Article IV of the Treaty of 1925.



PETER SULLIVAN
Canadian Commissioner

Signed in Edmonton, Alberta

Dated: OCTOBER 20 / 2010

15 Year Maintenance Plan

Background

In 2004, a revised maintenance plan² (consisting of 5- and 15-year forecasts) was developed by both Commissioners to better address the priorities of the IBC. The 15-year forecast addresses recurring routine maintenance (brush clearing, monument maintenance and surveying). The 5-year plan focused on projects that had fallen behind.

Progress to Date

The Canadian section was funded in 2005 to meet its requirements under the 2004 maintenance plan; however, the U.S. Section did not receive funding to meet its requirements under the plan until this year. Using the anticipated funding levels for each section, a reevaluation was conducted to determine our progress with respect to both the 5 year plan and 15 year plan. To do this the 15 year maintenance plan and unfinished programs and projects from the now obsolete 5 year plan were combined. Programs or projects not identified in the original 2004 maintenance plan were also included in the revised version and shows that the IBC will be on track with the 15 year plan by the end of the 2013 field season.

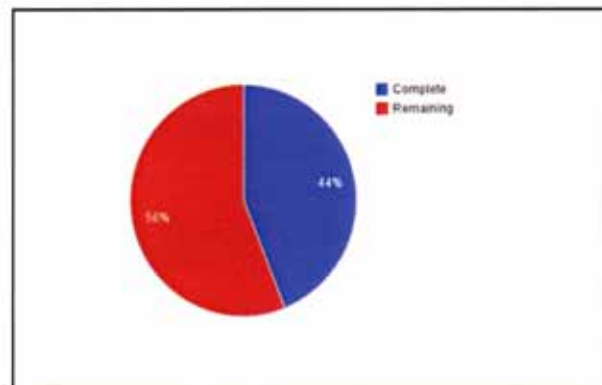


Figure 1: Forecasted percentage to catch up to 15-year plan

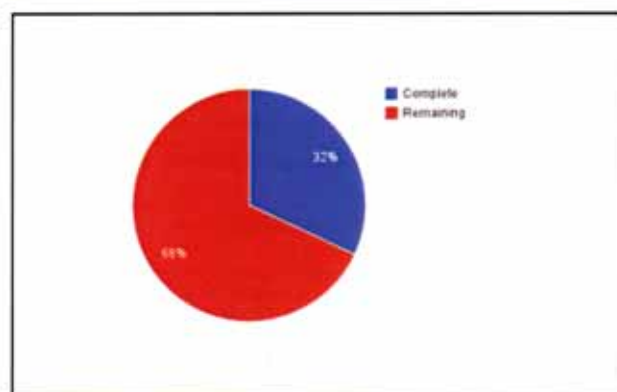


Figure 2: Actual percentage to catch up to 15-year plan

As illustrated in the charts above (fig. 1 and fig. 2), The IBC has fallen behind the forecasted plan by 12 percent, many of the 5-year projects have been delayed or deferred for the following reasons. Most notably, the U.S. section was not funded to the levels required to meet the 5 and 15 year goals until 2009. Although much of the preliminary mapping work has been completed, only a few maps have been completed versus forecasted.

Much of this delay was working with National Geospatial and Intelligence Agency (NGA) and the Royal Mounted Canadian Police (RCMP) obtaining the imagery which we now have in place for the majority of the boundary excluding Alaska. With the basic structure and procedures now in place our mapping productivity should significantly increase over the next year. If the current funding level of the U.S. Sections is maintained we anticipate being fully in compliance with the forecasted plan by the end of the 2013 field season

² Paquette & Moore. *Report on the Present State of Maintenance of the United States and Canada Boundary and Recommendations for the Future*. February 2004.

Shown in tables below are the projected maintenance schedules for the boundary. Items in red indicate projects that have not been completed from the 5 year forecasts from the 2004 Revised

Maintenance Plan. These items were rolled into the new 15 year plan. Also in red are items that are new requirements or requests to the Commission and therefore never addressed.

2011	<i>Passamaquoddy Bay, inspection & clearing</i>	<i>Completed in 2010</i>
	<i>North Line & Monument Brook, vista clearing (2 year project)</i>	<i>Deferred 2017</i>
	<i>St. Francis River, vista clearing</i>	<i>Future Work</i>
	<i>Southwest and South Line, vista clearing (3 year project)</i>	<i>Future Work</i>
	<i>Highlands (S.W. Section), vista clearing (3 year project)</i>	<i>Future Work</i>
	<i>West Line (Vt- Que), vista clearing & monumentation (3 year project)</i>	<i>80% Complete</i>
	<i>Detroit River, inspection & monumentation</i>	
	<i>Lake Sup. To Rainy River, monumentation & clearing (2 year project)</i>	<i>50% Complete</i>
	<i>49th Parallel (Pemb.-Turtle Mts.), vista clearing (2 year project)</i>	<i>Future Work</i>
	<i>St. Mary's River, inspection & monumentation</i>	<i>5% Complete</i>
	<i>West Line Resurvey</i>	
	<i>Implementation of GIS Technology & Survey processing (3 year Project)</i>	
	<i>Boundary Mapping (3 year Project)</i>	
	<i>North Line & Monument Brook, vista clearing (2 year project)</i>	<i>95% Complete</i>
	<i>Rainy River, inspection & monumentation (2 year project)</i>	<i>80% Complete</i>
	<i>141st Meridian, vista clearing (4 year project)</i>	<i>25% Complete</i>
	<i>(Prairies), monumentation & 49th Parallel clearing</i>	<i>50% complete</i>
	<i>49th Parallel Resurvey (MT-AB)</i>	

2012	North Line vista & Monument Brook, vista clearing (2 year project)	Deferred to 2017
	S.W. Branch of St. John River, insp. & monumentation	
	Highlands (S.W. Section), vista clearing (3 year project)	
	Halls Stream, vista clearing	
	West Line (VT- Que), vista clearing & monumentation (3 year project)	
	Lake Sup. To Rainy River, inspection & monumentation (2 year project)	50% Complete
	49th Parallel (Pemb.- Turtle Mts.), vista clearing (2 year project)	
	Pt. Roberts Range Towers, inspection & refurbish	
	St. Lawrence River, inspection & monumentation	
	Niagara River, inspection & monumentation	
	141 st Meridian, vista clearing (4 year project)	
	Implementation of GIS Technology & Survey processing (3 year Project)	
	Boundary Mapping (3 year Project)	
	Demarcation of Transboundary Waters (2 year project)	
	GPS Survey 49 th Parallel (ID-MT to Glacier NP)	
	GPS Survey 141 st (2 year project)	
	Pt. Roberts vista maintenance	
2013	S.W. Branch of St. John River, insp. & monumentation	Future Work
	Highlands (N.E. Section), vista clearing (3 year project)	Completed in 2010
	West Line (N.Y.- Que), vista clearing & monumentation (2 year project)	
	49th Parallel (Minn.- Man.), vista clearing (2 year project)	
	49th Parallel (Fraser & Columbia V.), vista clearing	
	Boundary Mapping (3 year Project)	
	Implementation of GIS Technology & Survey processing (3 year Project)	
	Demarcation of Transboundary Waters (2 year project)	
	GPS Survey 141 st (2 year project)	

2014	<i>Passamaquoddy Bay, inspection & clearing</i>	<i>Future Work</i>
	<i>Highlands (N.E. Section), vista clearing (3 year project)</i>	Completed in 2010
	<i>West Line (N.Y.- Que), vista clearing & monumentation (2 year project)</i>	
	<i>49th Parallel (Minn.- Man.), vista clearing (2 year project)</i>	
2015	<i>Southwest & South Line, vista clearing (3 year project)</i>	<i>Future Work</i>
	<i>Highlands (N.E. Section), vista clearing (3 year project)</i>	Completed in 2010
	<i>49th Parallel (Foothills to W. Koot.), vista clearing</i>	
	<i>S.E. Alaska, vista clearing (3 year project)</i>	
	<i>Pt. Roberts Range Towers, inspection & refurbish</i>	
	<i>St. Clair River, inspection & monumentation</i>	
2016	<i>Southwest and South Line, vista clearing (3 year project)</i>	<i>Future Work</i>
	<i>Highlands (S.W. Section), vista clearing (3 year project)</i>	
	<i>West Line (Vt- Que), vista clearing & monumentation (3 year project)</i>	
	<i>St. Lawrence River, inspection & monumentation</i>	
	<i>Rainy River, inspection & monumentation (2 year project)</i>	
	<i>49th Parallel (Foothills to W. Koot.), vista clearing</i>	
	<i>49th Parallel (Fraser & Columbia V.), vista clearing</i>	
	<i>S.E. Alaska, vista clearing (3 year project)</i>	
2017	<i>Passamaquoddy Bay, inspection & clearing</i>	<i>Future Work</i>
	<i>North Line & Monument Brook, vista clearing (2 year project)</i>	
	<i>St. John River, inspection & monumentation</i>	
	<i>St. Francis River, vista clearing & mapping</i>	
	<i>Southwest and South Line, vista clearing (3 year project)</i>	
	<i>Highlands (S.W. Section), vista clearing (3 year project)</i>	
	<i>West Line (Vt- Que), vista clearing & monumentation (3 year project)</i>	
	<i>St. Mary's River, inspection & monumentation</i>	
	<i>Rainy River, inspection & monumentation (2 year project)</i>	
	<i>49th Parallel (Pemb.-Turtle Mts.), vista clearing</i>	

2017	<i>49th Parallel (Foothills to W. Koot.), vista clearing</i>	<i>Future Work</i>
	<i>S.E. Alaska, vista clearing (3 year project)</i>	
2018	<i>North Line & Monument Brook, vista clearing (2 year project)</i>	<i>Future Work</i>
	<i>Highlands (S.W. Section), vista clearing (3 year project)</i>	
	<i>Halls Stream, vista clearing & mapping</i>	
	<i>West Line (N.Y.- Que), vista clearing</i>	
	<i>49th Parallel (Pemb.- Turtle Mts.), vista clearing</i>	
	<i>49th Parallel (W. Koot. to Similk.), vista clearing</i>	
	<i>Pt. Roberts Range Towers, inspection & refurbish</i>	
2019	<i>Highlands (N.E. Section), vista clearing (3 year project)</i>	<i>Future Work</i>
	<i>West Line (N.Y.- Que), vista clearing (2 year project)</i>	
	<i>Niagara River, inspection & monumentation</i>	
	<i>49th Parallel (Minn.- Man.), vista clearing</i>	
	<i>49th Parallel (W. Koot. to Similk.), vista clearing</i>	
	<i>49 th Parallel (Similk. to Columbia V.), vista clearing</i>	
	<i>49th Parallel (Fraser & Columbia V.), vista clearing</i>	

(*) Completion percentages refer to the entire project. Some projects are multiyear (2 or 3 years)