

APPENDIX A

Freshwater Air Photo Interpretation / Field Survey Map Series

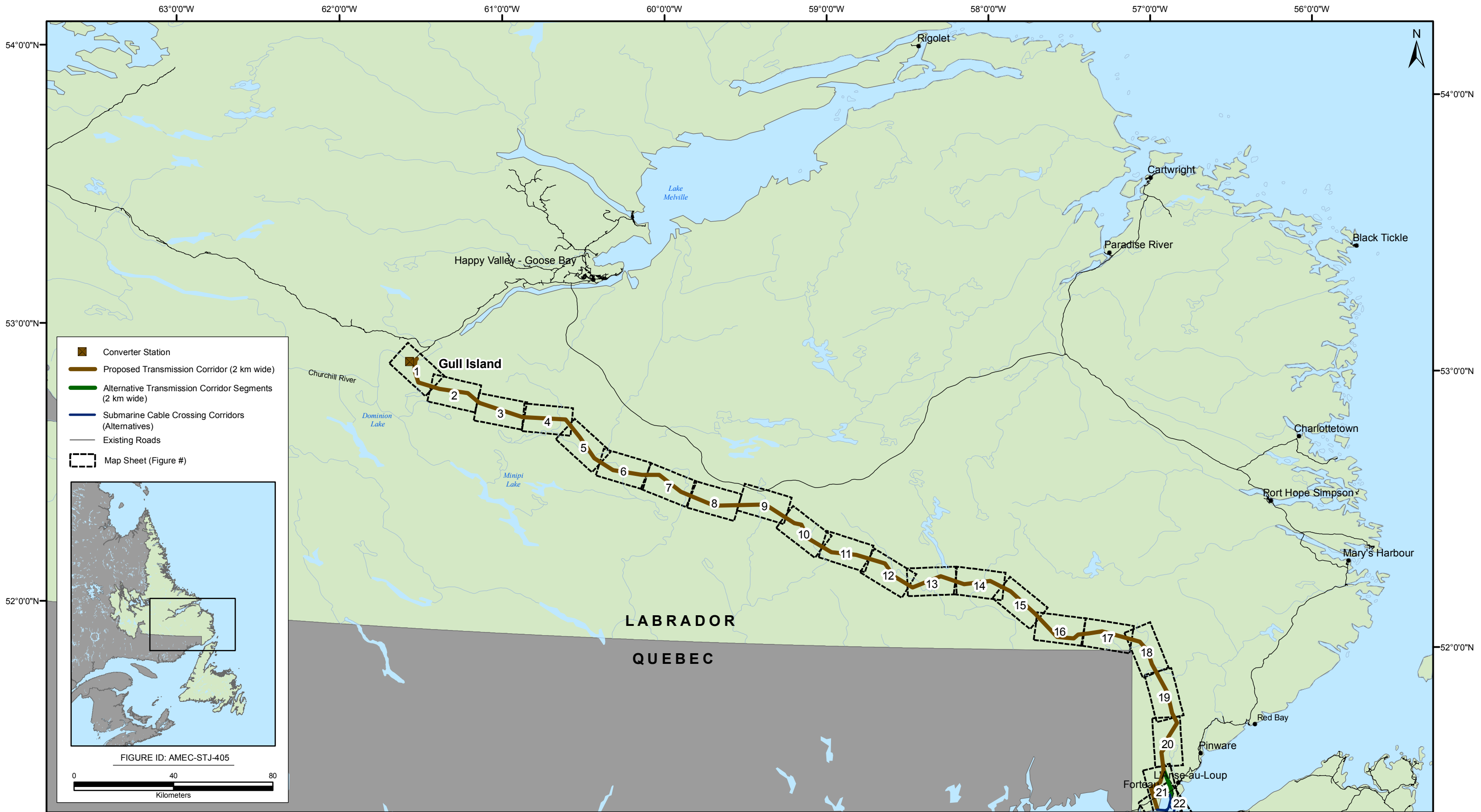
Note: There are various factors that have contributed to any noted discrepancies between the results of the air photo interpretation and the 2008 freshwater field survey, as described earlier in this report, including: temporal fluctuations in water flow, the resolution of particular air photos, and differences in focus and methodology between the desktop and field analysis scale.



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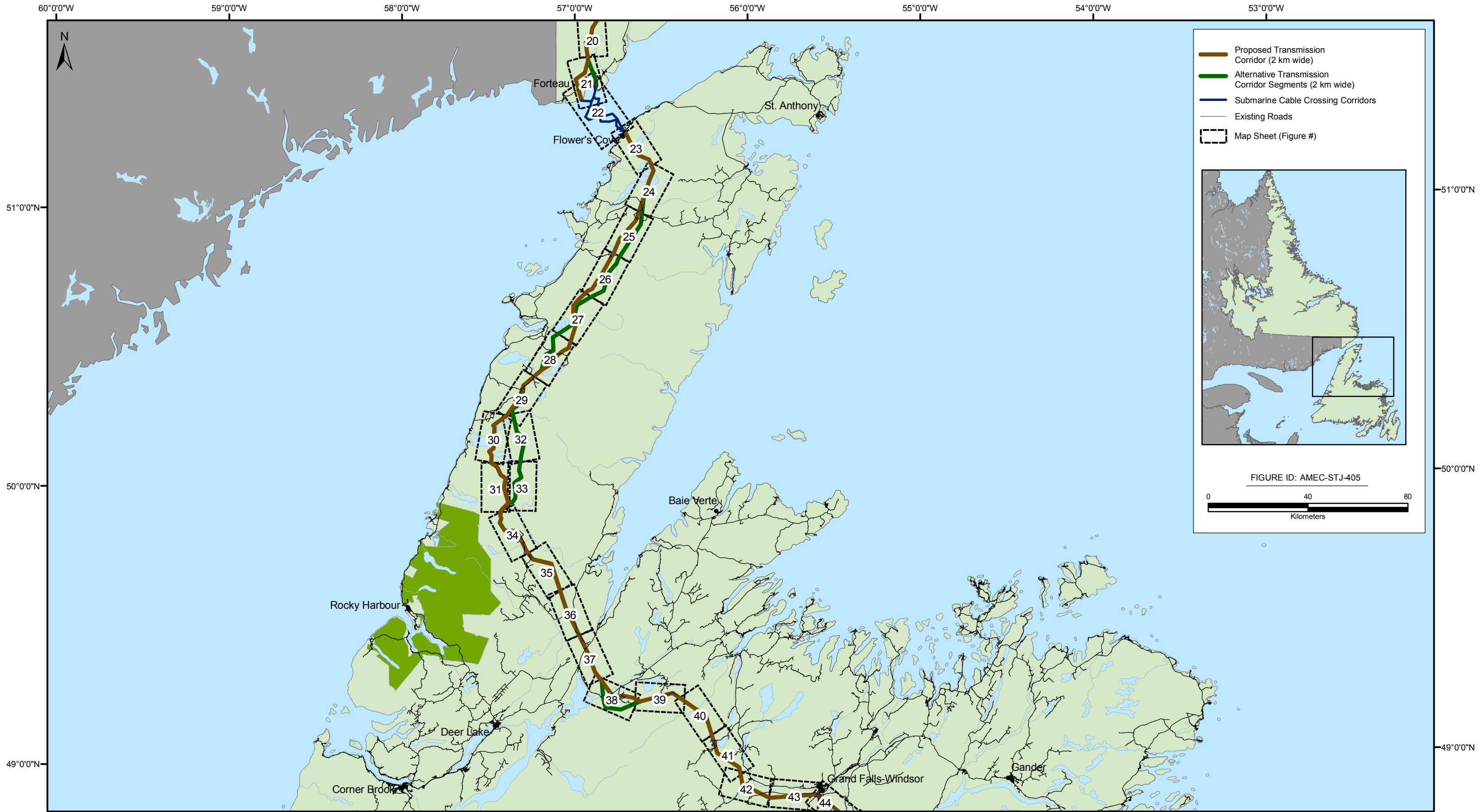
Labrador - Island Transmission Link: Project Overview



INDEX B



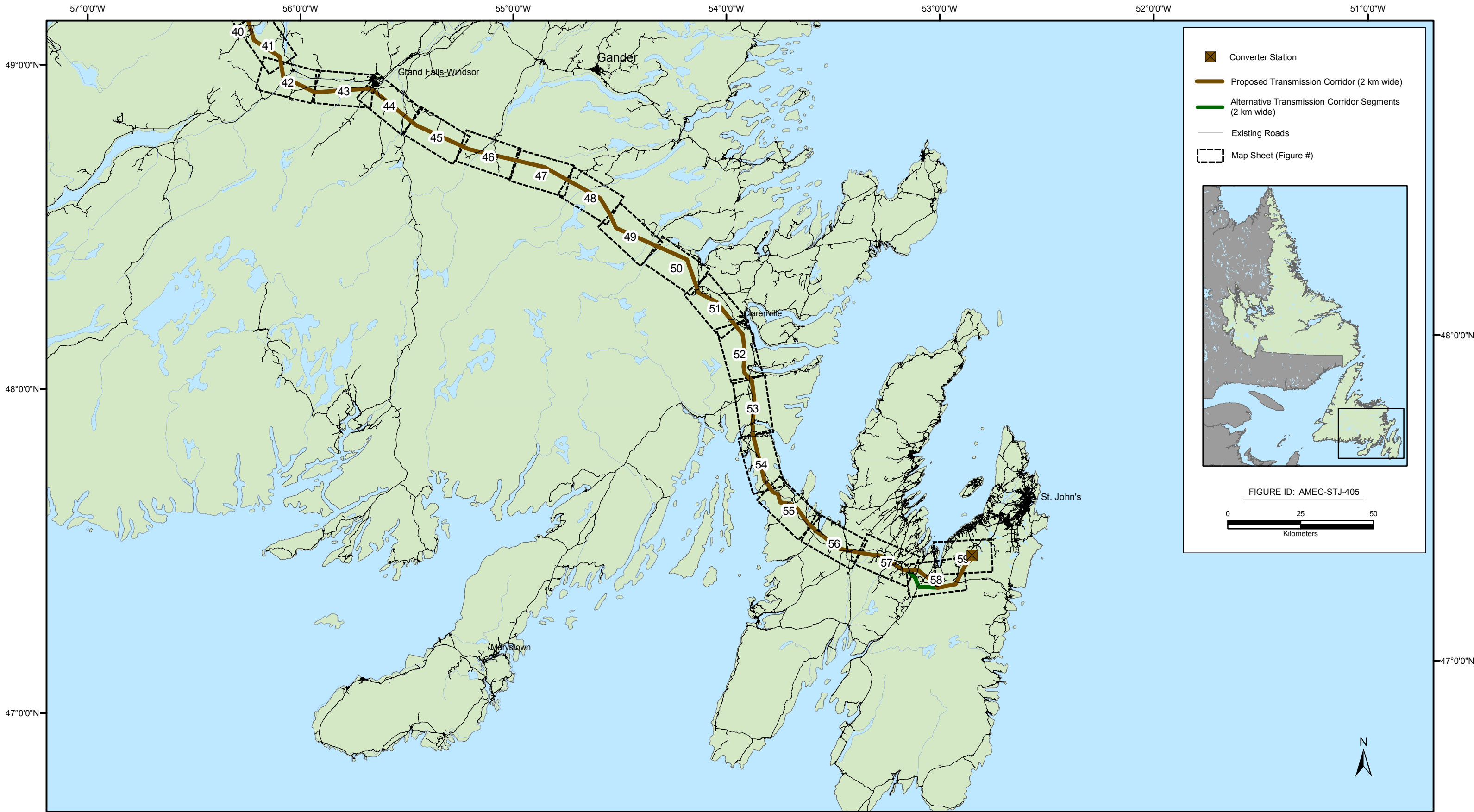
Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey



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Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey



INDEX D



Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey

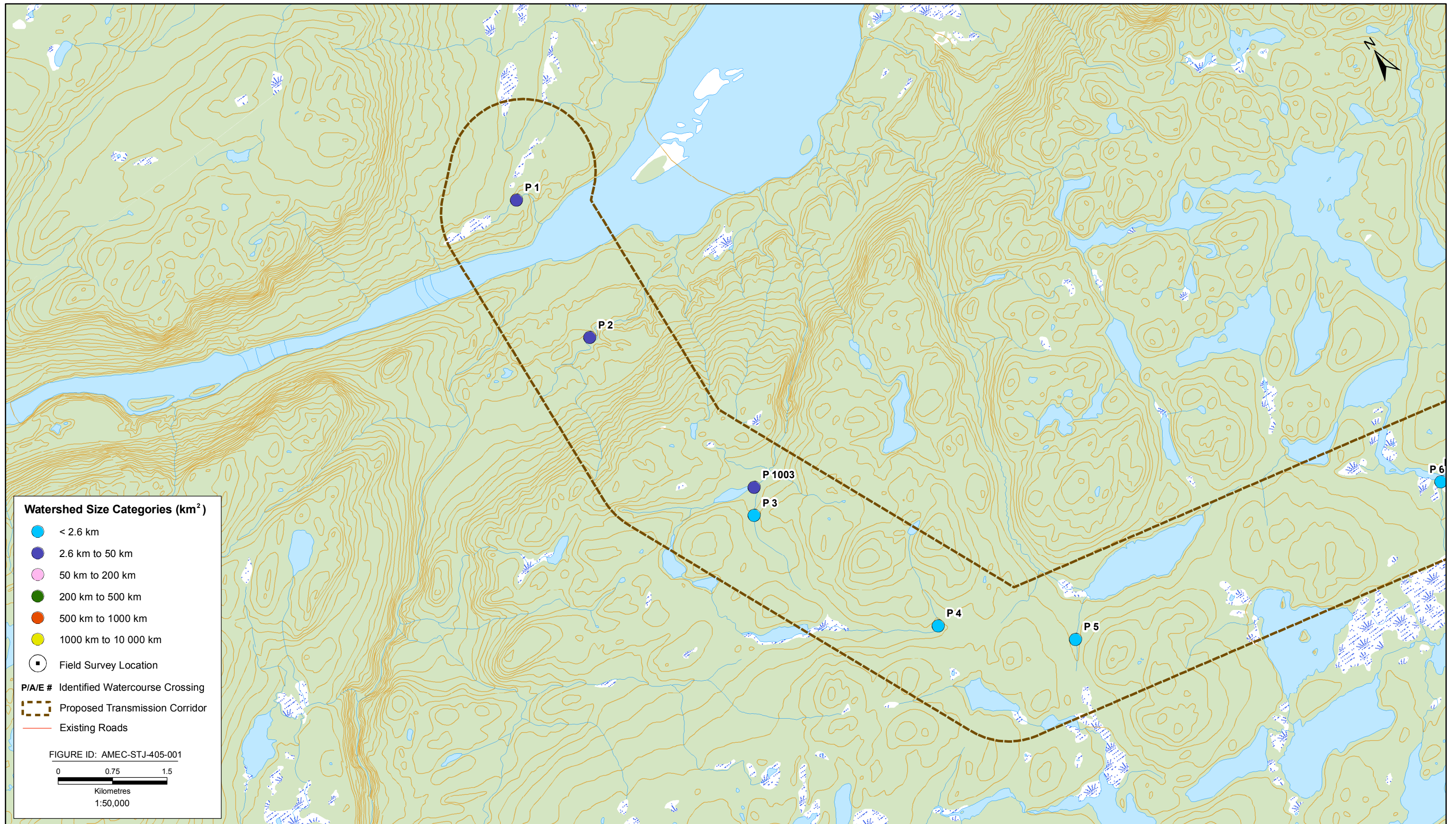


FIGURE 1



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 1	4.59	-	-	Fine	-	Stream not visible
P 2	1.99	28.1	28.1	Coarse	Riffle	
P 1003	2.84	46.6	31.1	Fine	Flat	
P 3	1.90	-	-	-	-	Stream not visible
P 4	2.00	59.4	34.0	Coarse	Flat	
P 5	2.67	10.6	10.6	Coarse	Riffle	
P 6	1.26	48.6	13.9	Coarse	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

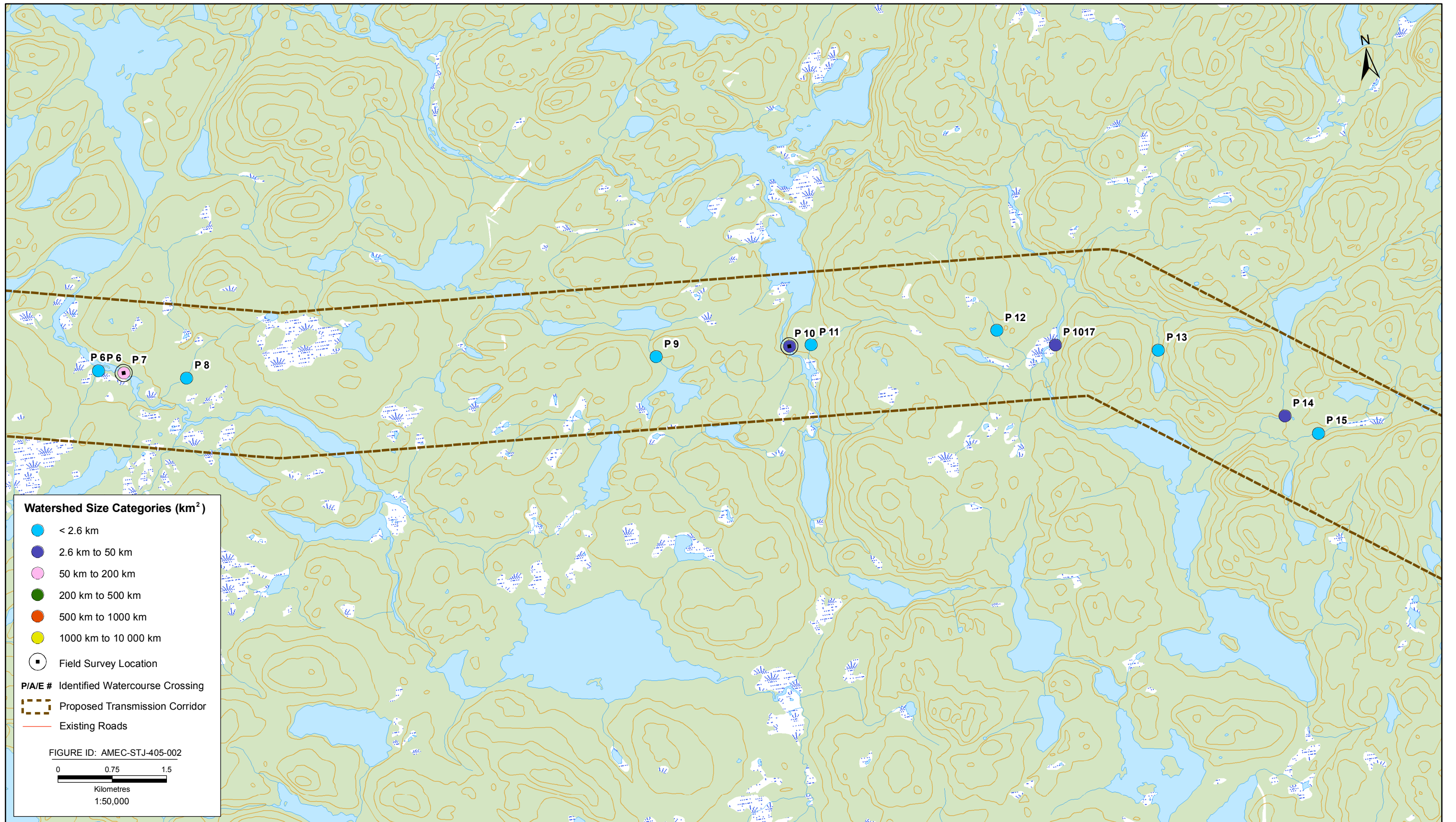


FIGURE 2



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 6	1.26	48.6	13.9	Coarse	Flat	
P 7	0.25	57.8	28.3	Coarse	Flat	
P 8	1.80	13.6	13.6	Fine	Flat	
P 9	2.47	5.3	5.3	Fine	Riffle	
P 10	0.76	36.2	12.8	Coarse	Flat	
P 11	3.79	28.1	11.7	Fine	Riffle	
P 12	2.61	19.9	13.3	Fine	Riffle	
P1017	0.44	34.5	19.8	Fine	Flat	
P 13	0.75	29.5	11.8	Coarse	Riffle	
P 14	1.38	14.0	14.0	Coarse	Riffle	
P 15	0.84	8.2	8.2	Fine	Riffle	

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Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 7	Unknown	Unnamed, Churchill Trib	88.8	23.50	20.60	0.25	0.14	Riffle / Run	Coarse	PD
P 10	Unknown	Unnamed, Churchill Trib	27.3	40.00	23.00	0.38*	0.00*	Steady	Fine	Bur, PD, WS

^a names were taken from 1:50000 topographic map

* Velocities and depths across a complete transect could not be measured due to size of stream.

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

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P 10



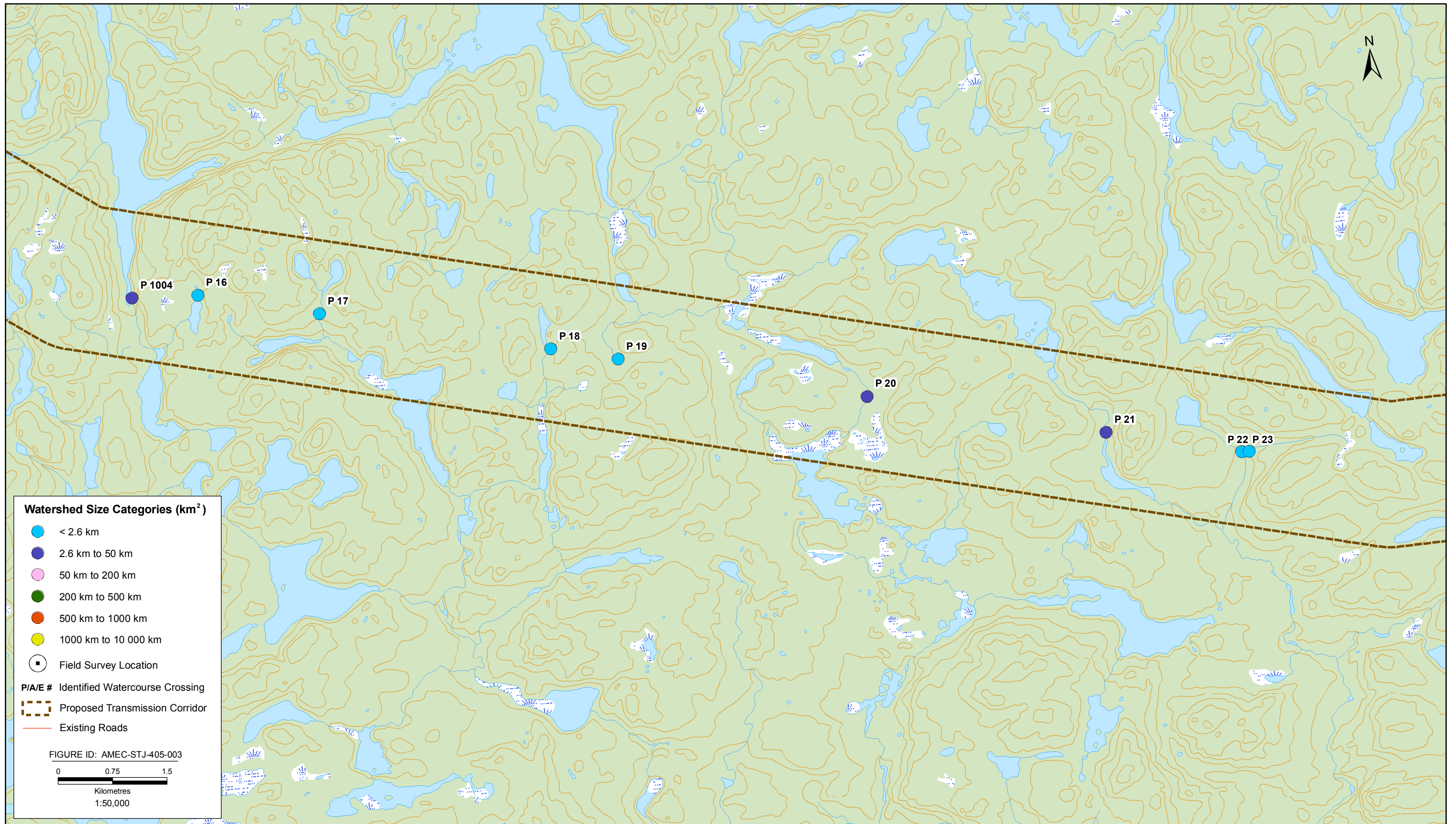


FIGURE 3

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P1004	0.83	-	-	-	-	Poor image, no visible stream
P 16	1.38	-	-	-	-	Cloud Cover
P 17	2.91	21.6	9.7	Coarse	Riffle	
P 18	1.56	133.0	105.0	Coarse	Riffle	
P 19	1.66	45.0	3.8	Fine	Discontinuous	
P 20	0.57	28.1	5.3	Fine	Flat	
P 21	0.74	13.9	6.5	Fine	Flat	
P 22	1.67	20.1	6.2	Fine	Flat	
P 23	3.03	-	-	-	-	No visible stream

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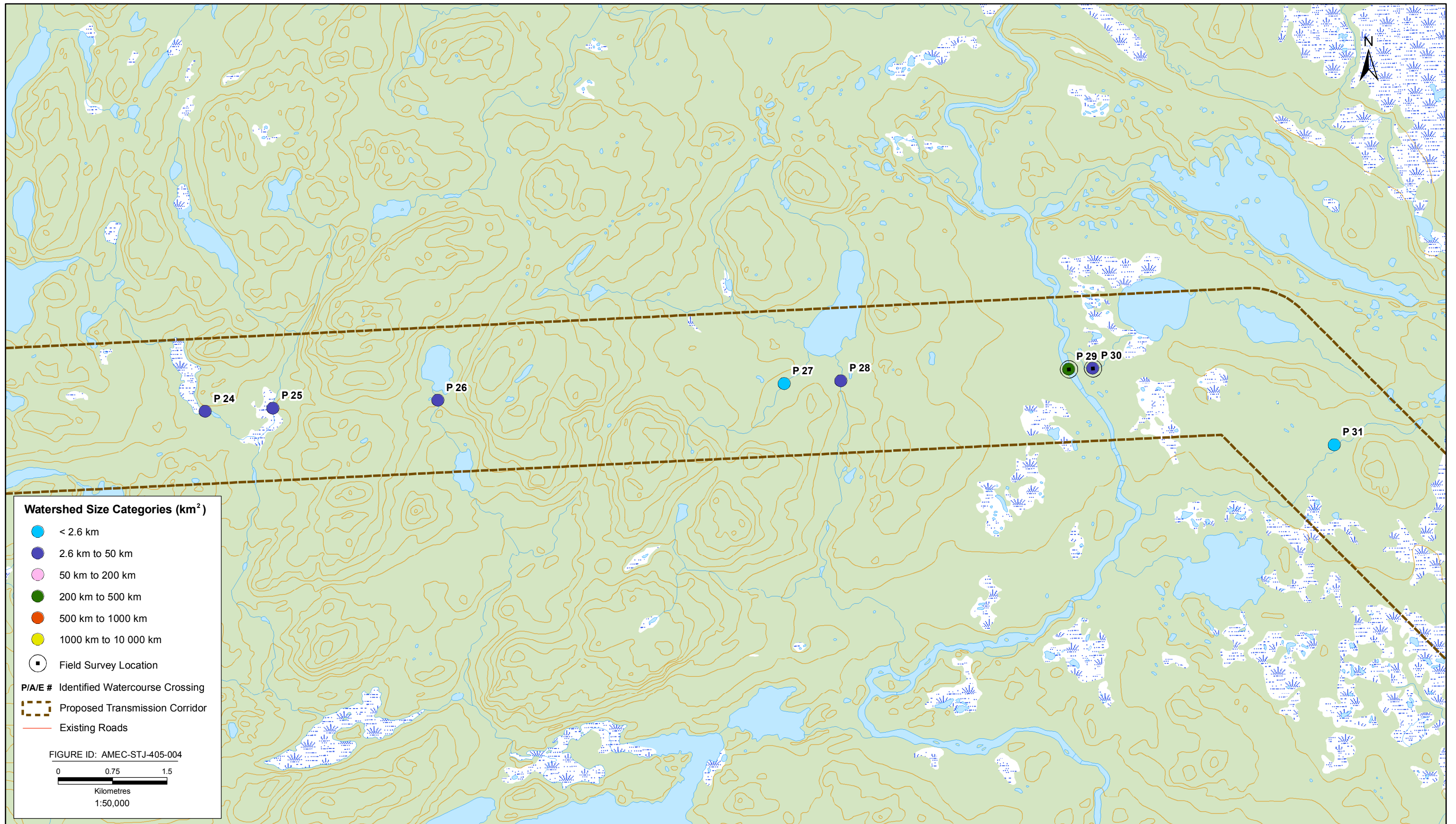


FIGURE 4



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 24	4.26	35.2	25.5	Fine	Riffle	
P 25	0.48	9.4	4.7	Coarse	Riffle	
P 26	2.31	45.0	4.8	Fine	Flat	
P 27	2.14	13.7	2.7	Fine	Flat	
P 28	0.80	21.1	5.3	Fine	Flat	
P 29	0.07	64.9	54.9	Coarse	Flat	
P 30	0.51	3.6	3.6	Fine	Flat	
P 31	0.56	73.4	3.3	Fine	Flat	

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Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 29	Unknown	Kenamu	442.4	69.10	62.60	0.26	0.29	Riffle / Run	Medium	AS, BUR, PD, LND
P 30	Unknown	Kenamu	6.2	14.00	4.10	0.13	0.04	Steady	Fine	AS, BT, LND

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

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P 30



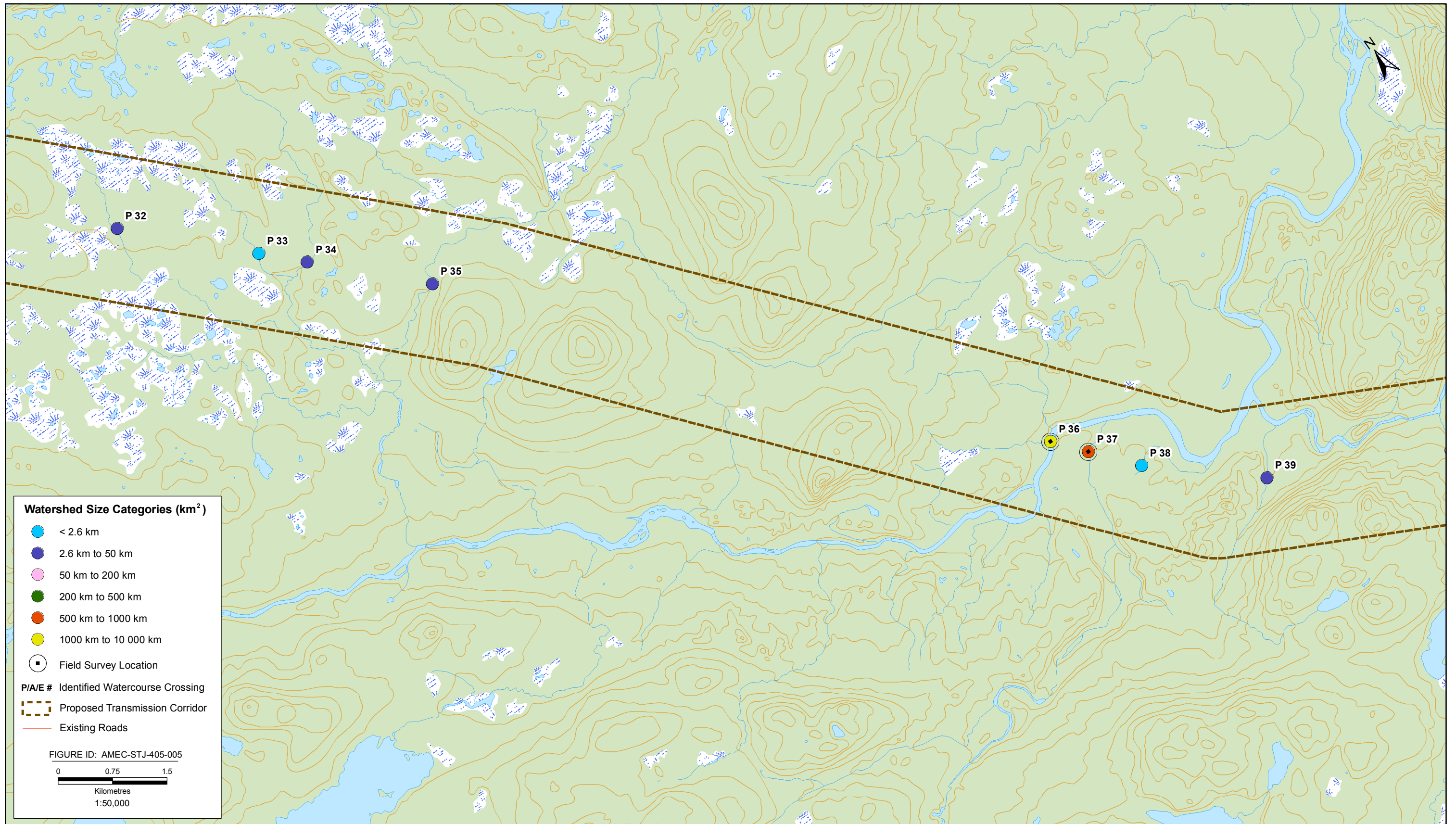


FIGURE 5

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 32	0.46	45.9	5.4	Fine	Flat	
P 33	1.13	71.4	3.2	Fine	Flat	
P 34	0.64	10.9	5.0	Fine	Flat	
P 35	0.41	10.4	4.3	Coarse	Flat	
P 36	0.52	71.4	63.1	Coarse	Riffle	
P 37	0.63	24.7	8.9	Coarse	Riffle	
P 38	0.99	11.9	7.8	Fine	Flat	
P 39	2.55	12.1	9.1	Fine	Flat	

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Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 36	Kenamu River	Kenamu	1167.0	74.50	66.00	0.35	0.41	Riffle / Run	Coarse	AS, LND, PD
P 37	Unknown	Kenamu	560.8	18.60	15.00	0.31	0.23	Riffle / Run	Coarse	AS, MS

^anames were taken from 1:50000 topographic map

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LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

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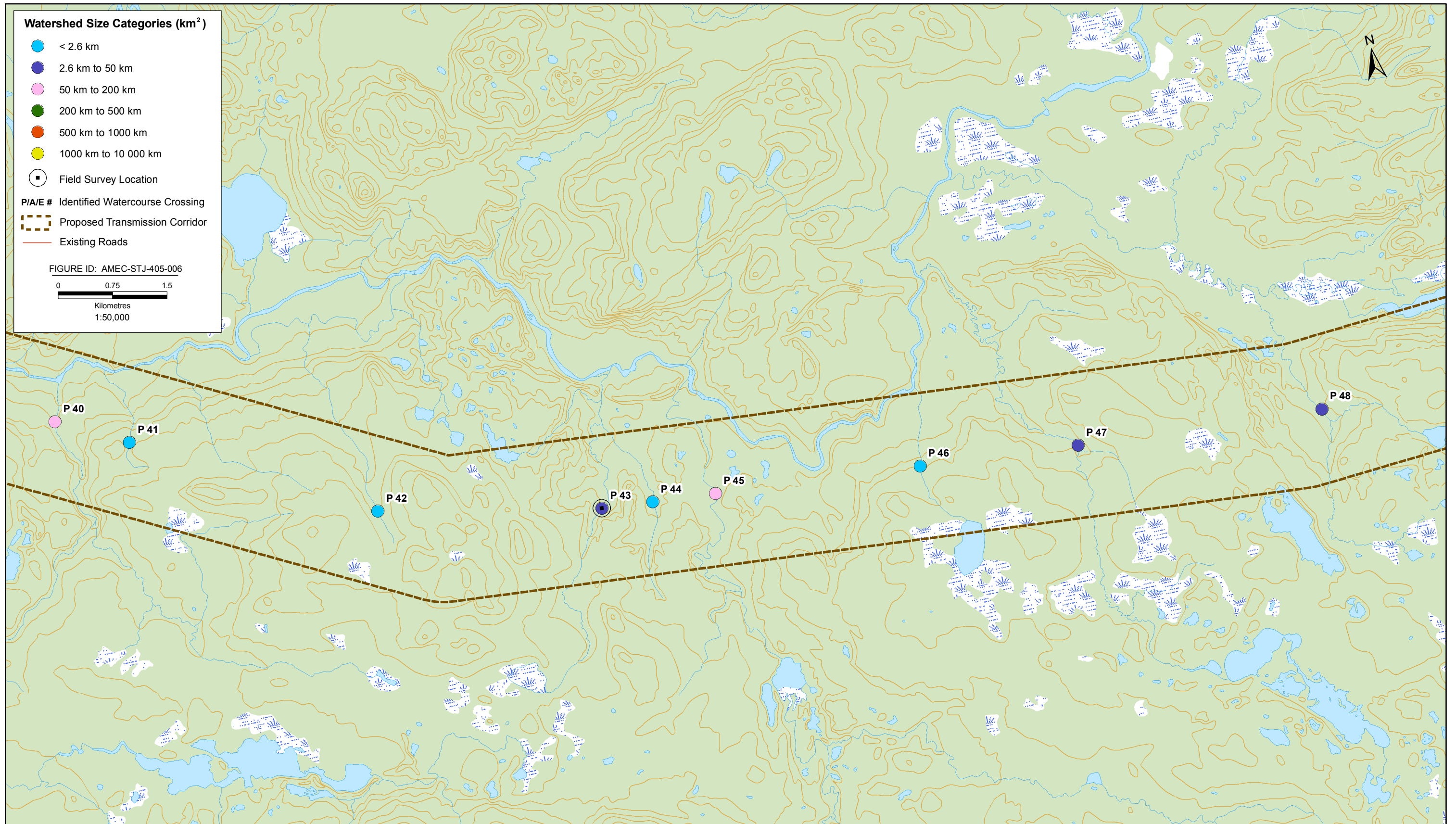


FIGURE 6



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 40	2.82	18.9	7.1	Coarse	Riffle	
P 41	4.51	15.4	5.7	Fine	Flat	
P 42	2.22	3.6	3.6	Fine	Riffle	
P 43	2.22	21.2	5.9	Fine	Flat	
P 44	1.57	11.3	11.3	Coarse	Riffle	
P 45	0.68	29.9	21.2	Coarse	Flat	
P 46	3.23	3.7	3.7	Fine	Riffle	
P 47	1.23	4.1	4.1	Fine	Flat	
P 48	0.95	3.4	3.4	Fine	Riffle	

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Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 43	Unknown	Kenamu	6.1	9.10	1.50	0.31	0.28	Riffle / Run	Fine	BT

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

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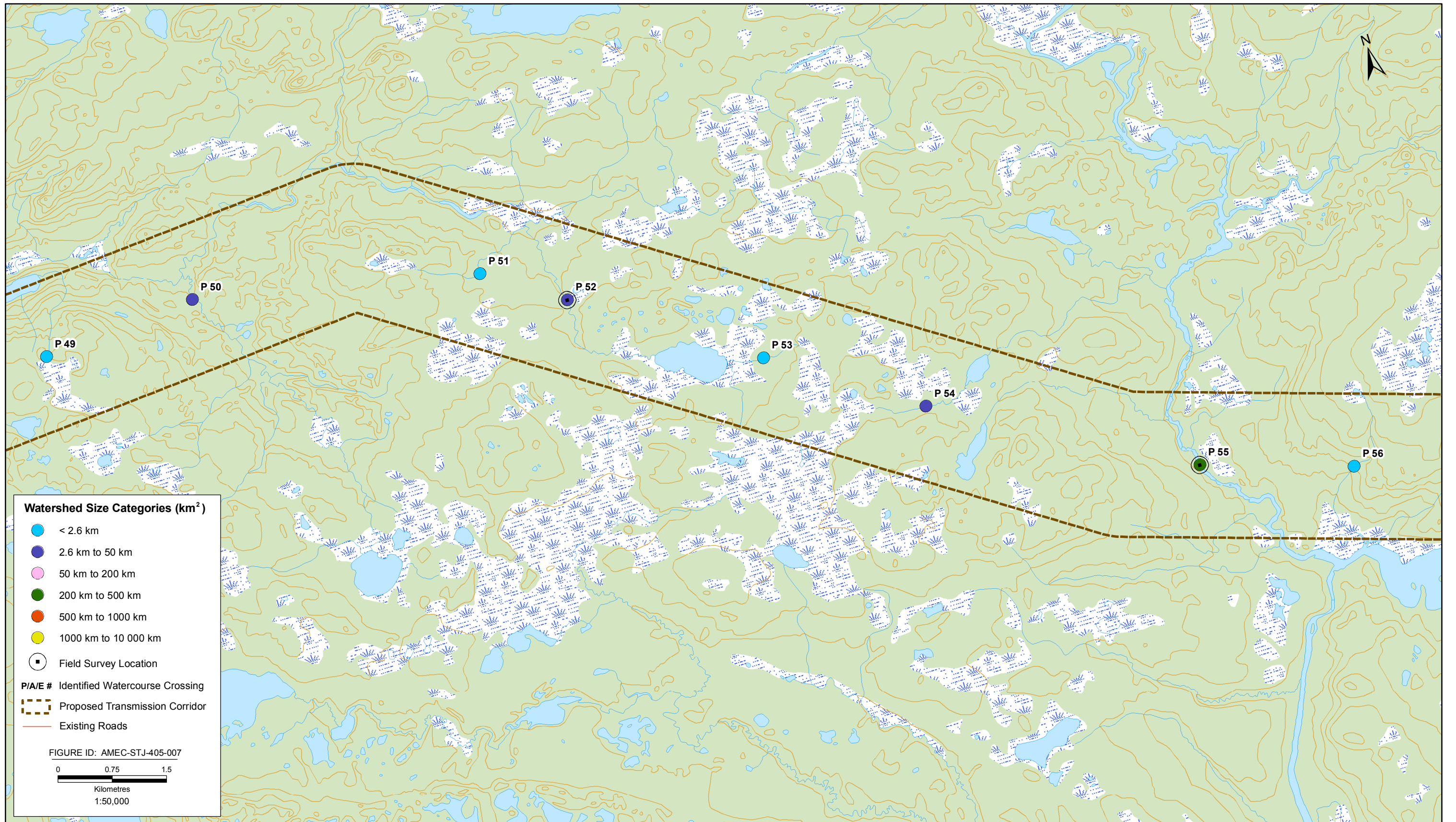


FIGURE 7



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 49	5.29	3.3	3.3	Fine	Riffle	
P 50	0.91	49.6	3.3	Fine	Flat	
P 51	1.66	8.2	8.2	Fine	Flat	
P 52	0.71	42.1	4.5	Fine	Flat	
P 53	0.46	1.0	1.0	Fine	Flat	
P 54	0.61	2.6	2.6	Fine	Flat	
P 55	0.10	122.9	42.6	Fine	Flat	
P 56	2.35	23.0	8.4	Coarse	Riffle	

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Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 52	Unknown	Kenamu	9.7	13.75	3.60	0.12	0.48	Steady	Coarse	BT
P 55	Joir River	Kenamu	217.6	43.70	28.10	0.29	0.25	Steady	Medium	BT, WS

^anames were taken from 1:50000 topographic map

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BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

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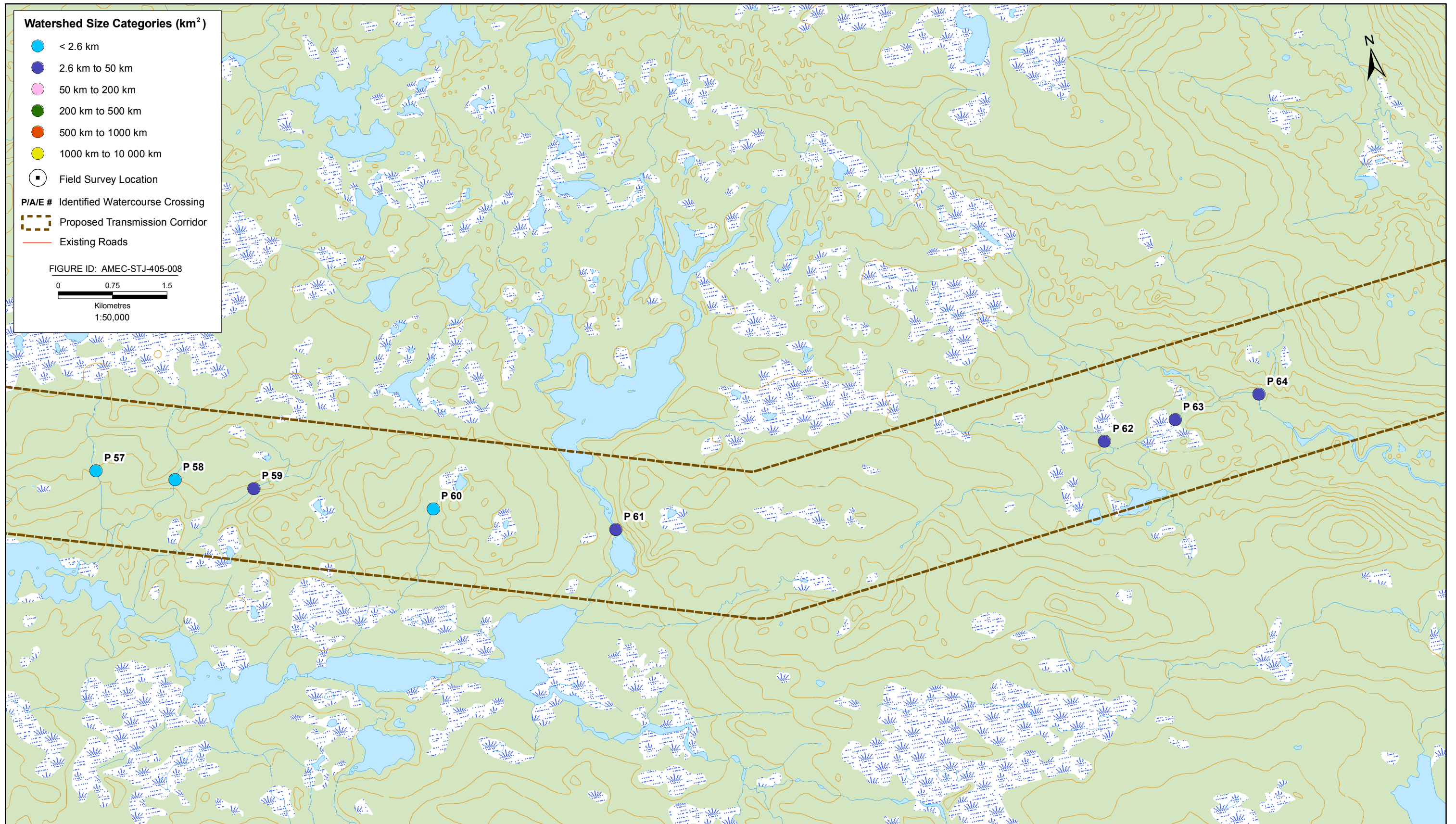


FIGURE 8



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 57	2.58	21.6	3.1	Fine	Flat	
P 58	2.36	4.8	4.8	Fine	Flat	
P 59	0.86	39.5	18.5	Fine	Flat	
P 60	2.36	1.0	1.0	Fine	Flat	
P 61	0.42	48.2	31.4	Coarse	Riffle	
P 62	0.63	17.7	7.3	Fine	Flat	
P 63	0.64	22.5	17.1	Fine	Flat	
P 64	0.52	36.7	5.1	Fine	Flat	

¹change in elevation of the water's surface over a given length

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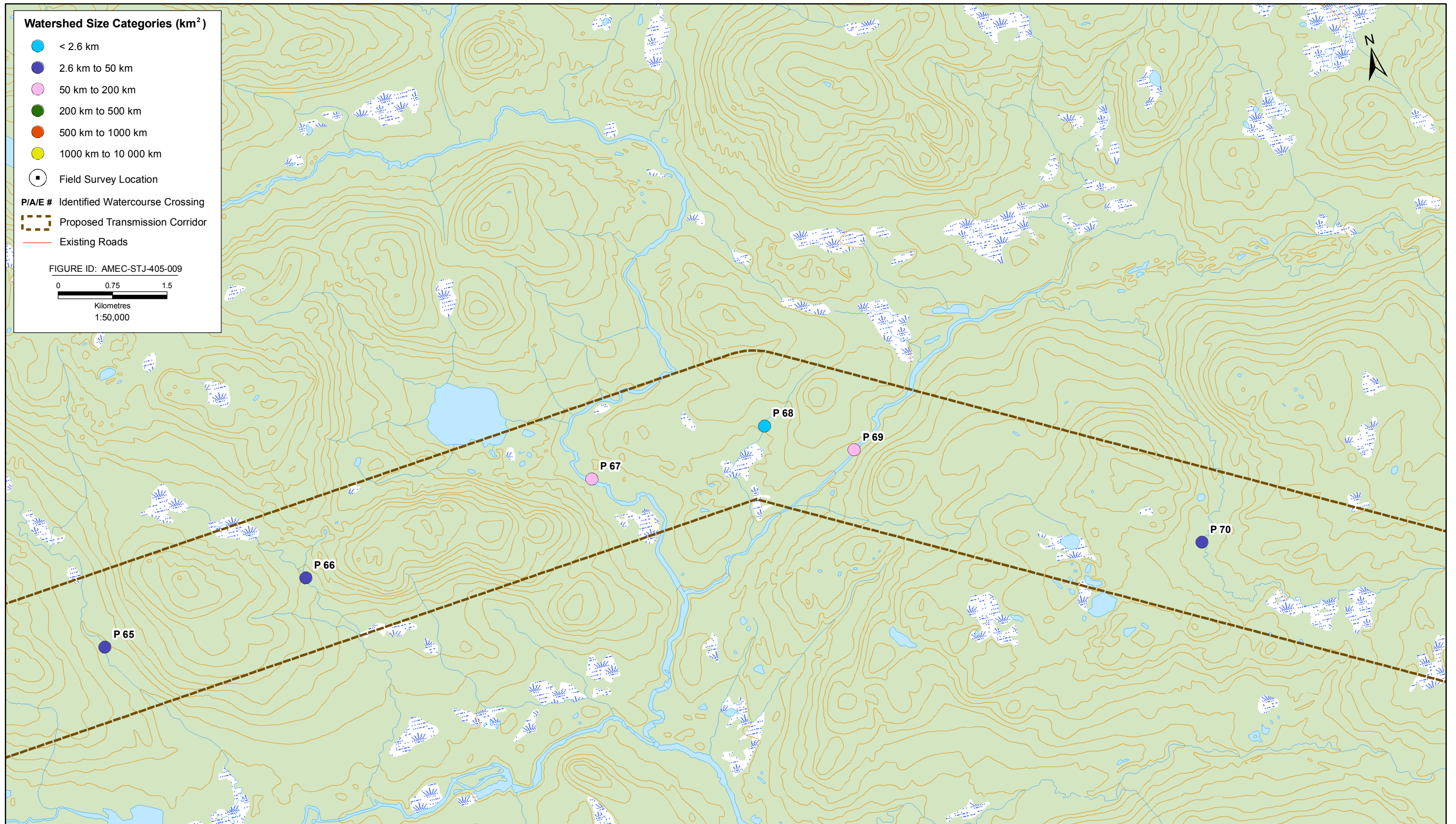


FIGURE 9



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 65	0.58	27.4	13.8	Fine	Flat	
P 66	1.78	3.5	3.5	Fine	Discontinuous	
P 67	0.14	69.6	44.1	Fine	Flat	
P 68	1.04	4.9	4.9	Fine	Flat	
P 69	0.70	30.9	23.4	Coarse	Flat	
P 70	0.61	294.3	12.6	Fine	Flat	

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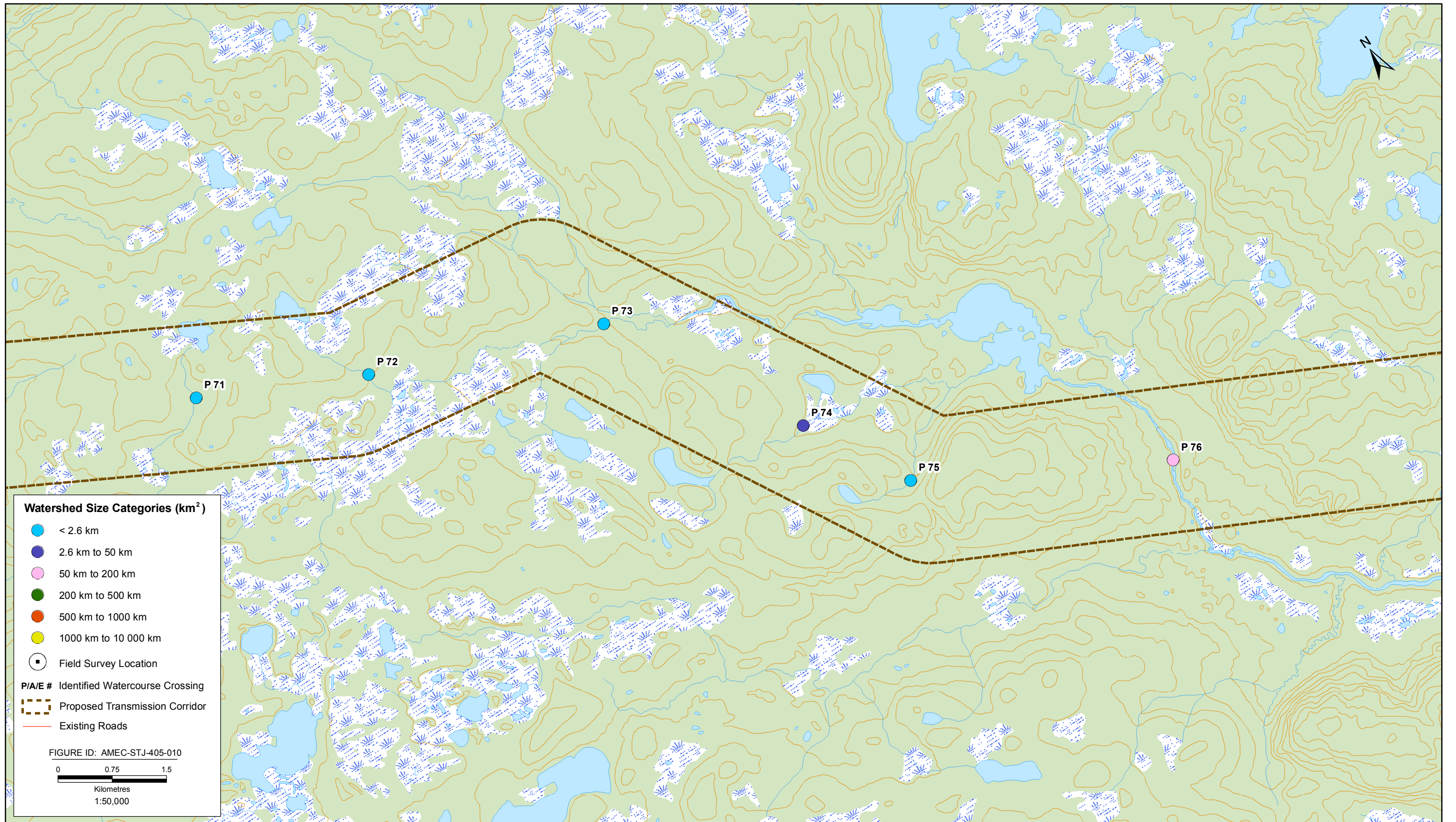


FIGURE 10

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 71	0.81	11.2	5.1	Fine	Flat	
P 72	1.26	11.2	7.0	Fine	Flat	
P 73	0.92	15.2	9.1	Fine	Flat	
P 74	1.09	8.8	3.4	Fine	Flat	
P 75	2.01	14.0	4.0	Fine	Discontinuous	
P 76	1.00	66.3	36.6	Coarse	Riffle	

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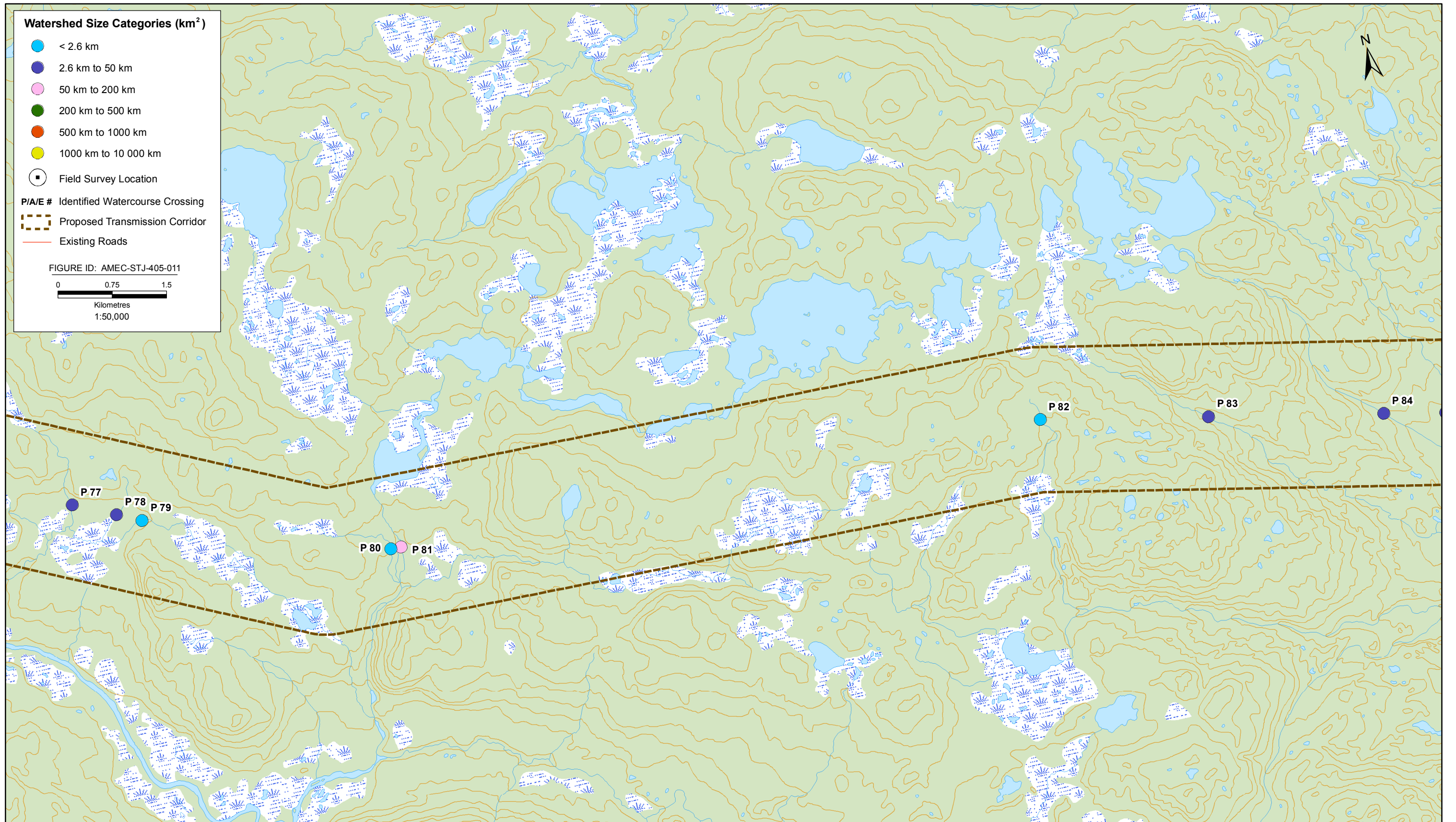


FIGURE 11



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 77	1.39	18.9	3.6	Fine	Riffle	
P 78	1.20	1.0	1.0	Fine	Flat	
P 79	0.72	5.2	4.0	Fine	Flat	
P 80	1.38	9.3	4.3	Fine	Flat	
P 81	0.19	33.8	27.2	Fine	Flat	
P 82	1.13	11.9	-	-	Discontinuous	
P 83	1.77	7.7	3.2	Fine	Flat	
P 84	2.04	21.0	6.4	Coarse	Flat	

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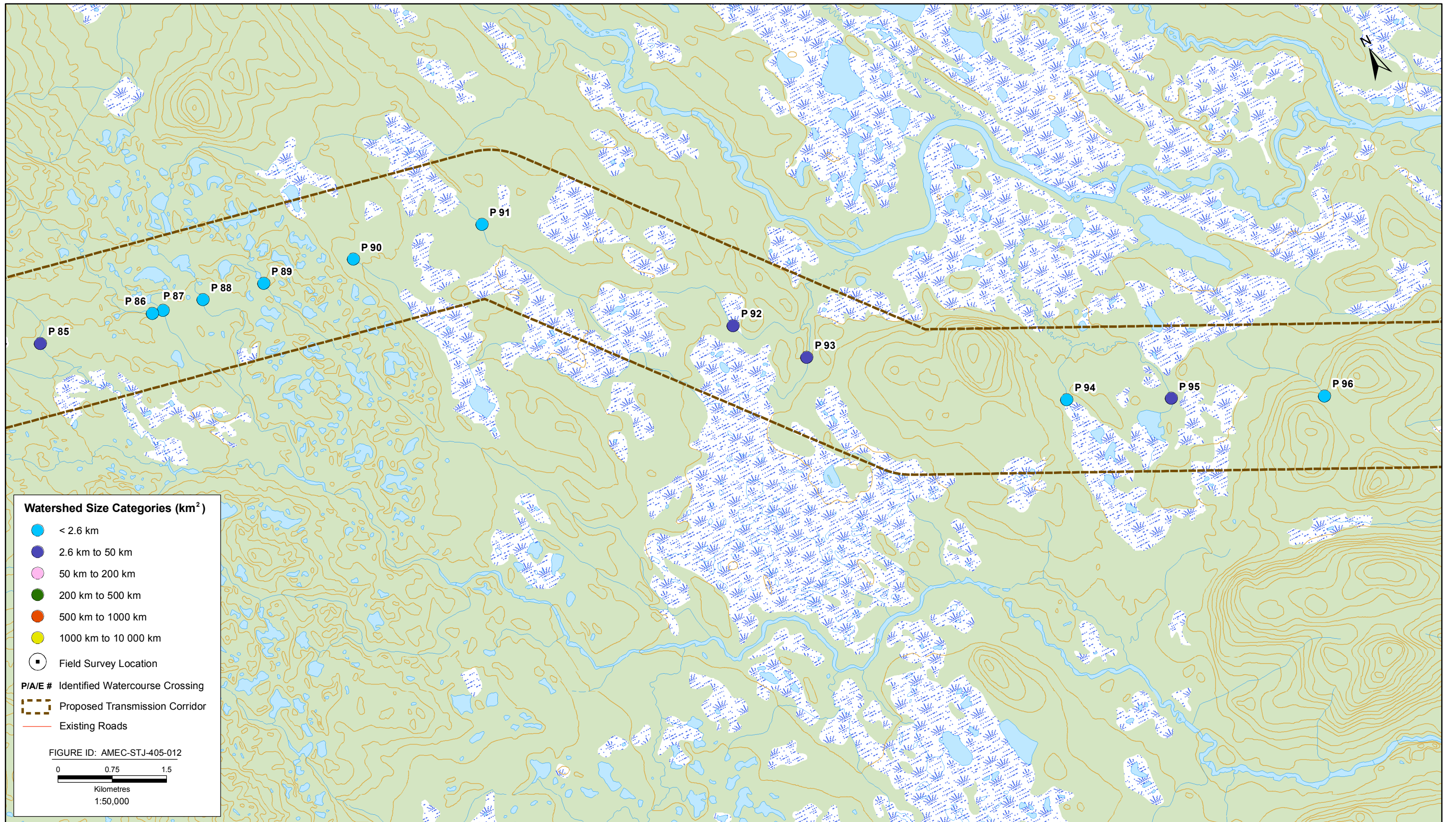


FIGURE 12

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 85	1.59	19.5	6.8	Fine	Flat	
P 86	0.88	63.4	1.0	Fine	Flat	
P 87	0.71	10.8	6.1	Fine	Flat	
P 88	0.82	42.1	2.1	Fine	Flat	
P 89	0.94	53.1	6.7	Fine	Flat	
P 90	0.76	30.2	8.9	Fine	Flat	
P 91	0.67	17.2	3.9	Fine	Flat	
P 92	0.76	65.1	28.8	Fine	Flat	
P 93	0.30	21.2	3.6	Fine	Flat	
P 94	1.04	45.1	1.3	Fine	Flat	
P 95	0.32	1.7	1.7	Fine	Flat	
P 96	2.39	17.1	2.2	Fine	Flat	

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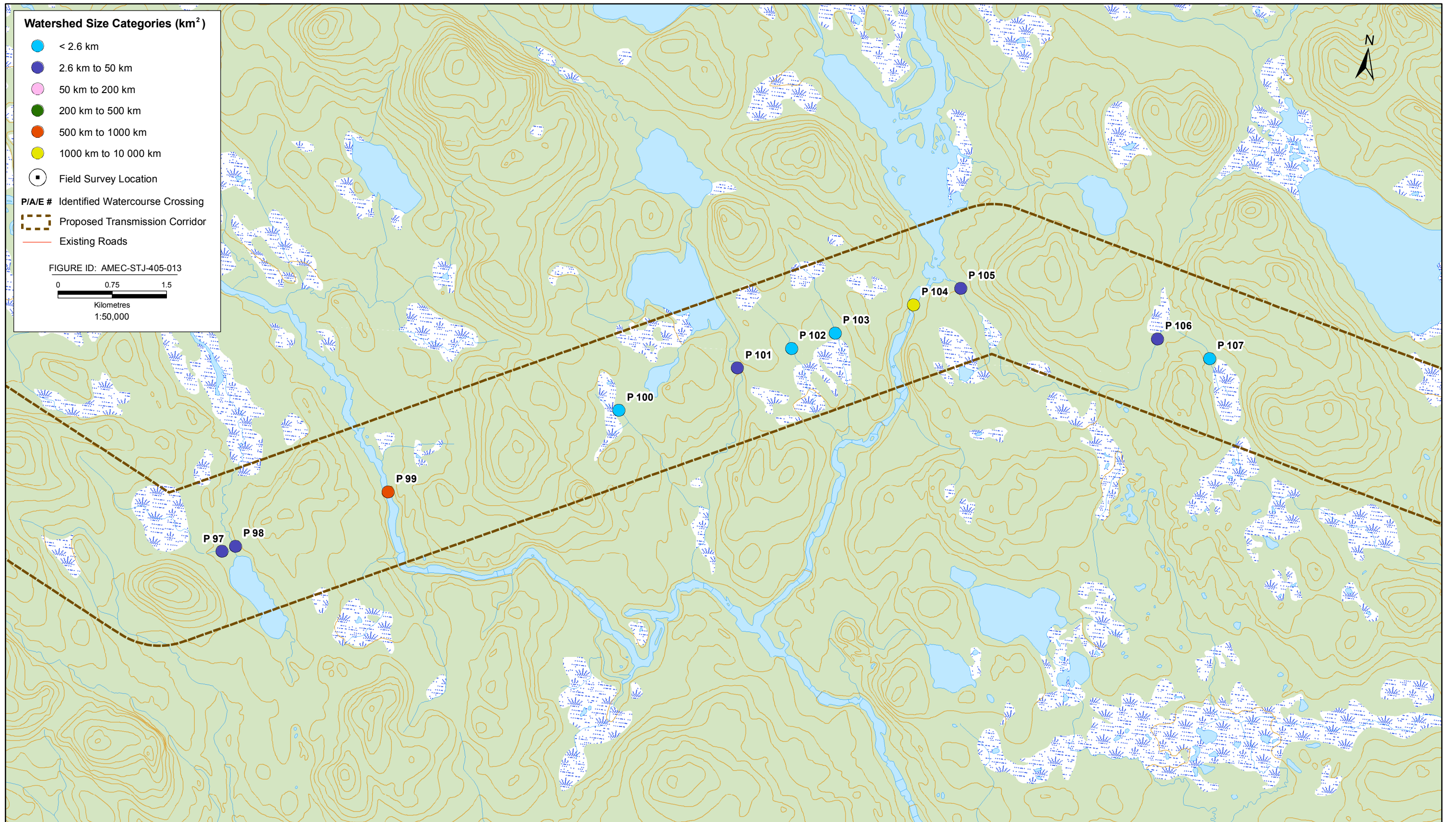


FIGURE 13



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 97	0.69	28.5	5.3	Fine	Flat	
P 98	0.07	49.5	5.0	Fine	Flat	
P 99	0.40	60.6	32.8	Fine	Flat	
P 100	1.11	22.5	12.4	Fine	Flat	
P 101	0.74	20.3	10.1	Fine	Flat	
P 102	1.12	22.2	7.6	Fine	Flat	
P 103	0.90	34.6	15.1	Fine	Riffle	
P 104	0.31	78.6	61.2	Coarse	Flat	
P 105	0.32	7.2	3.8	Fine	Flat	
P 106	1.03	31.0	4.8	Fine	Flat	
P 107	0.92	27.4	3.2	Fine	Flat	

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Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

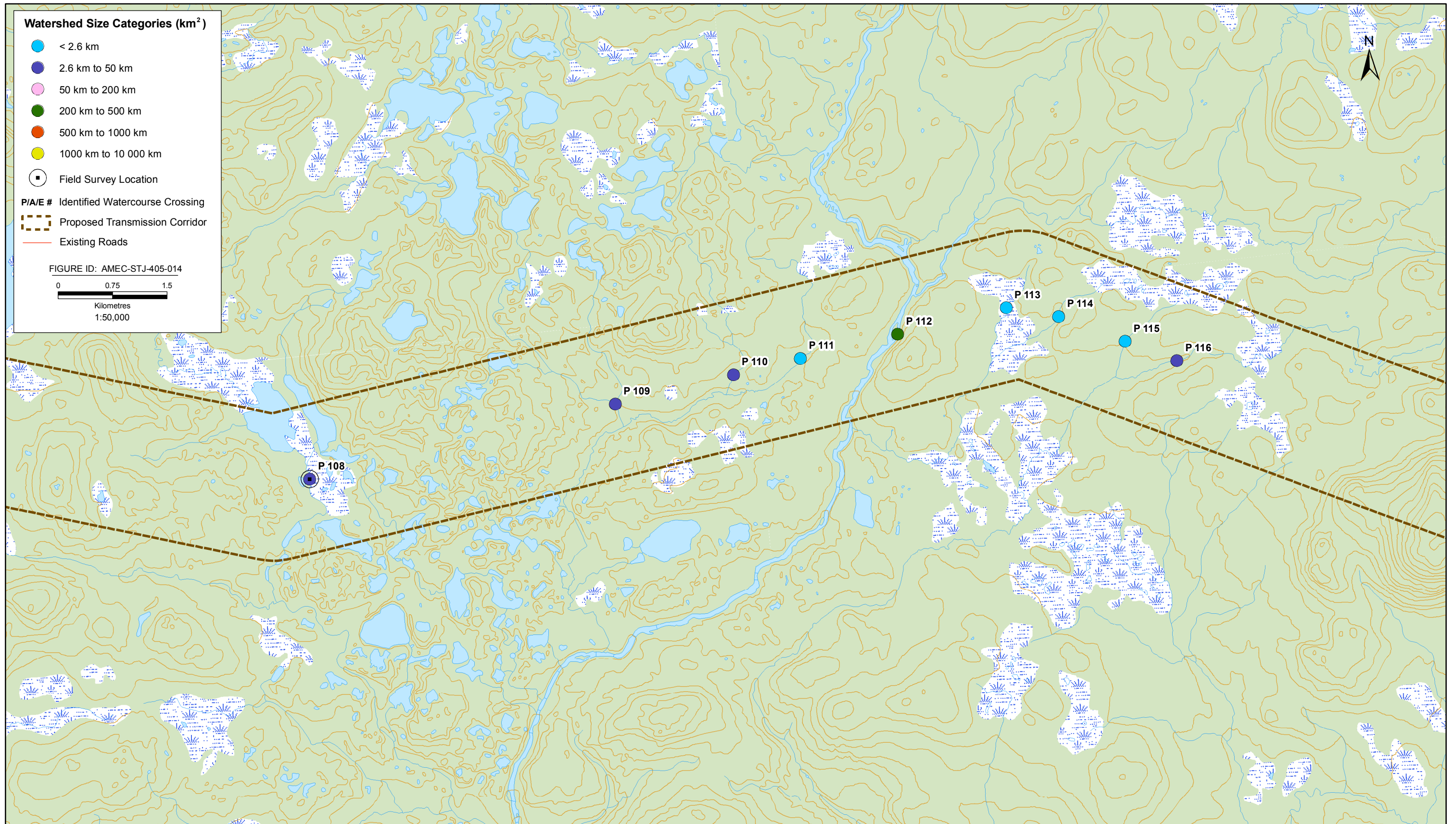


FIGURE 14

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 108	0.16	18.3	2.8	Coarse	Riffle	
P 109	1.75	32.1	9.9	Coarse	Riffle	
P 110	1.86	63.2	20.0	Fine	Flat	
P 111	0.58	69.8	43.6	Fine	Flat	
P 112	0.56	64.8	27.6	Coarse	Flat	
P 113	0.39	33.3	33.3	Fine	Flat	
P 114	0.73	31.7	8.5	Fine	Flat	
P 115	0.91	31.3	16.6	Fine	Flat	
P 116	0.58	5.9	1.7	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 108	Unknown	St. Paul	27.7	29.70	22.50	0.27	0.15	Steady	Fine	BT, WS

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 108



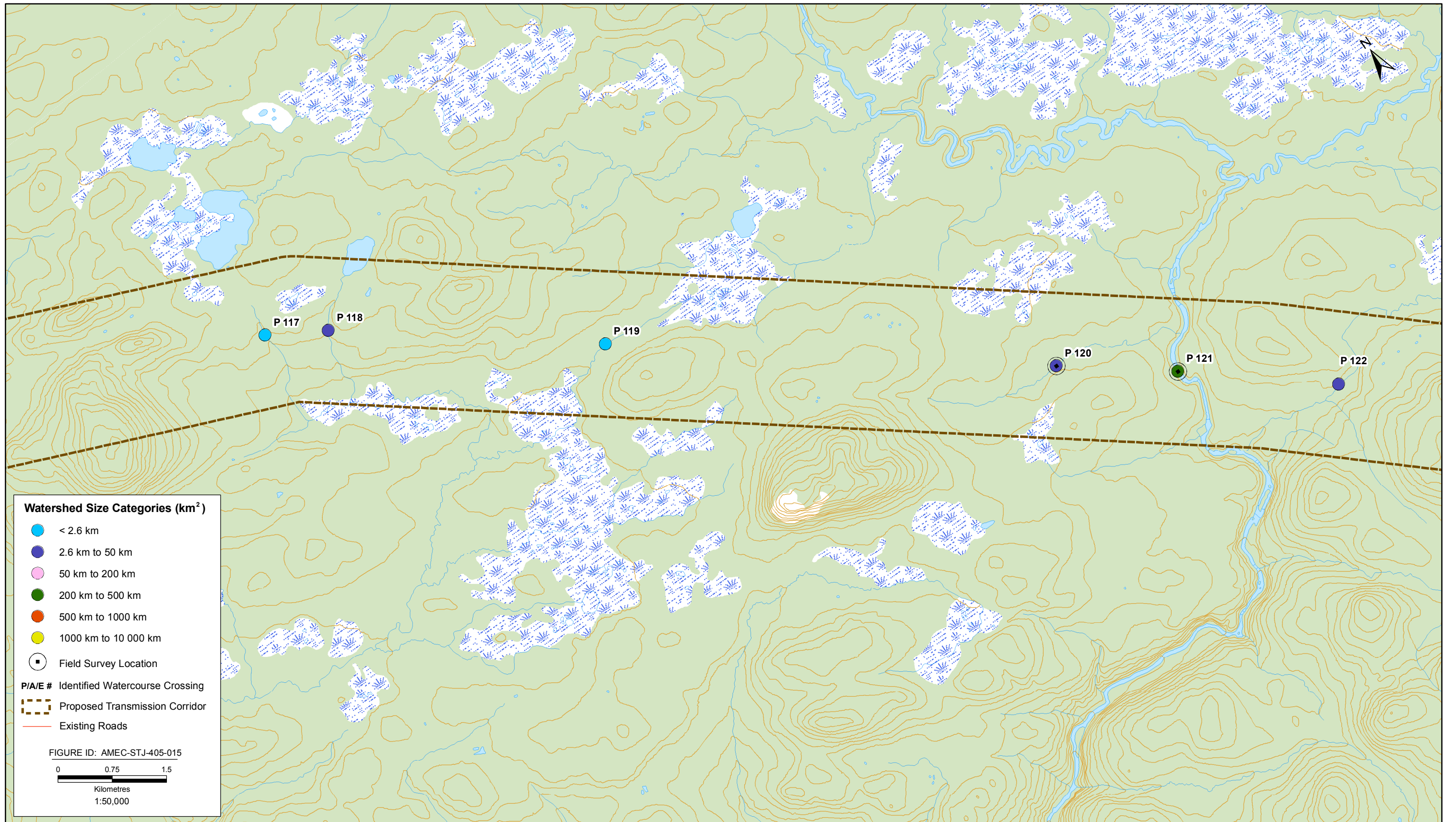


FIGURE 15

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 117	2.15	47.7	25.7	Coarse	Riffle	
P 118	1.89	32.4	17.5	Coarse	Riffle	
P 119	0.34	30.8	30.8	Fine	Flat	
P 120	0.77	41.3	41.3	Fine	Flat	
P 121	0.56	63.1	22.2	Coarse	Flat	
P 122	0.58	198.1	31.6	Coarse	Rapid	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 120	Unknown	St. Paul	6.3	49.60	4.10	0.59	0.00	Steady	Fine	BT
P 121	St. Paul River	St. Paul	489.5	62.00	41.20	0.53*	0.35*	Riffle / Run	Coarse	BT, Salamander

^a names were taken from 1:50000 topographic map

* Velocities and depths across a complete transect could not be measured due to size of stream.

Brn - Brown Trout

PD - Pearl Dace

BT - Brook Trout

Bur - Burbot

AS - Atlantic Salmon

MS - Mottled Sculpin

3SB - Threespine Stickleback

A. Eel - American Eel

LND - Longnose dace

WS - White Sucker

P 121



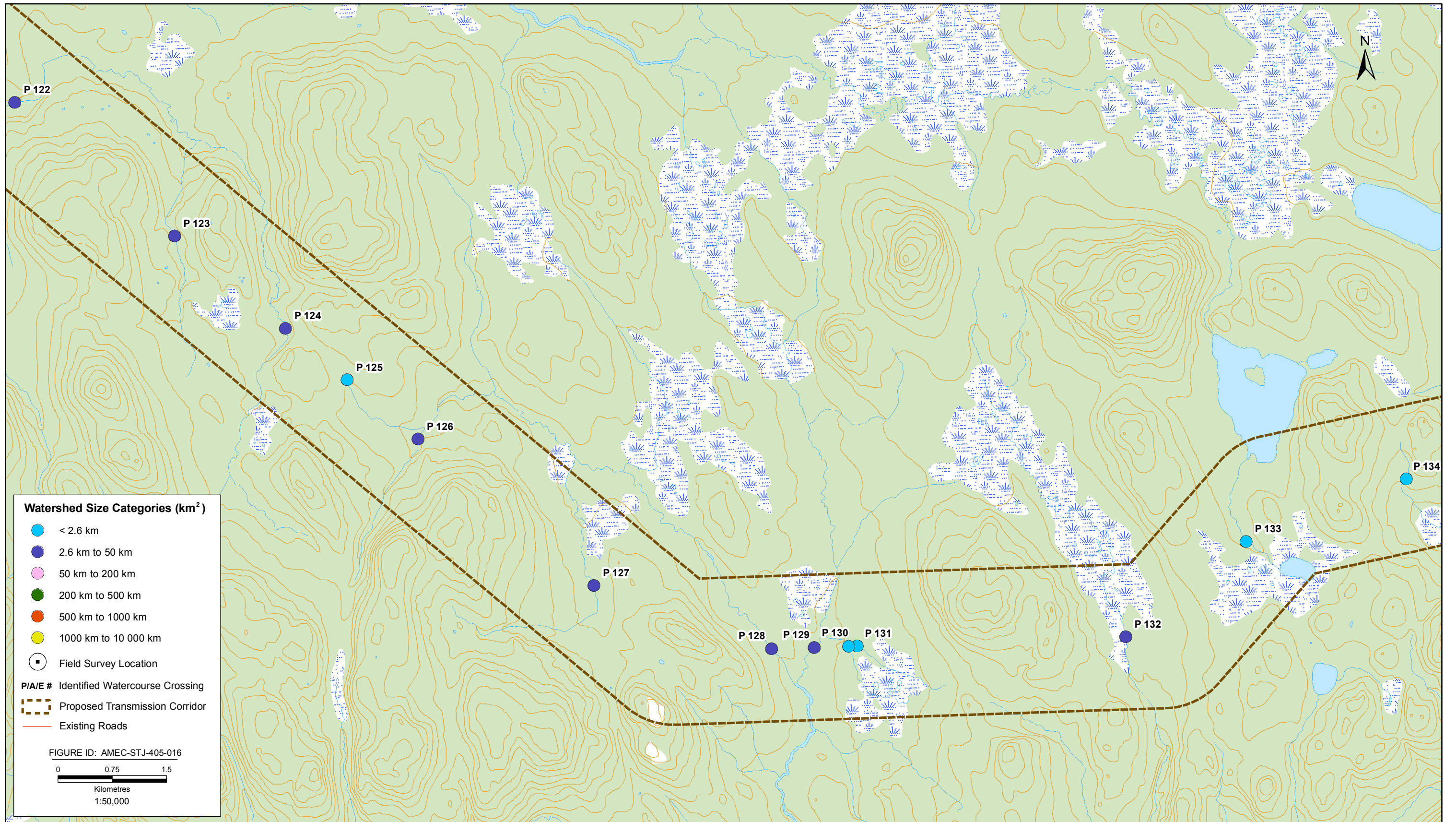


FIGURE 16



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 122	0.58	198.1	31.6	Coarse	Rapid	
P 123	1.52	140.1	28.2	Fine	Riffle	
P 124	0.78	18.6	7.4	Fine	Flat	
P 125	1.18	73.0	25.6	Fine	Flat	
P 126	1.36	50.6	19.1	Fine	Riffle	
P 127	0.83	87.9	56.6	Fine	Riffle	
P 128	0.54	29.5	8.7	Coarse	Rapid	
P 129	0.22	31.8	13.9	Fine	Flat	
P 130	0.47	20.9	20.9	Fine	Flat	
P 131	0.89	23.2	8.9	Fine	Flat	
P 132	0.36	34.7	23.9	Coarse	Rapid	
P 133	0.51	18.6	4.5	Fine	Flat	
P 134	1.01	23.7	5.8	Coarse	Rapid	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

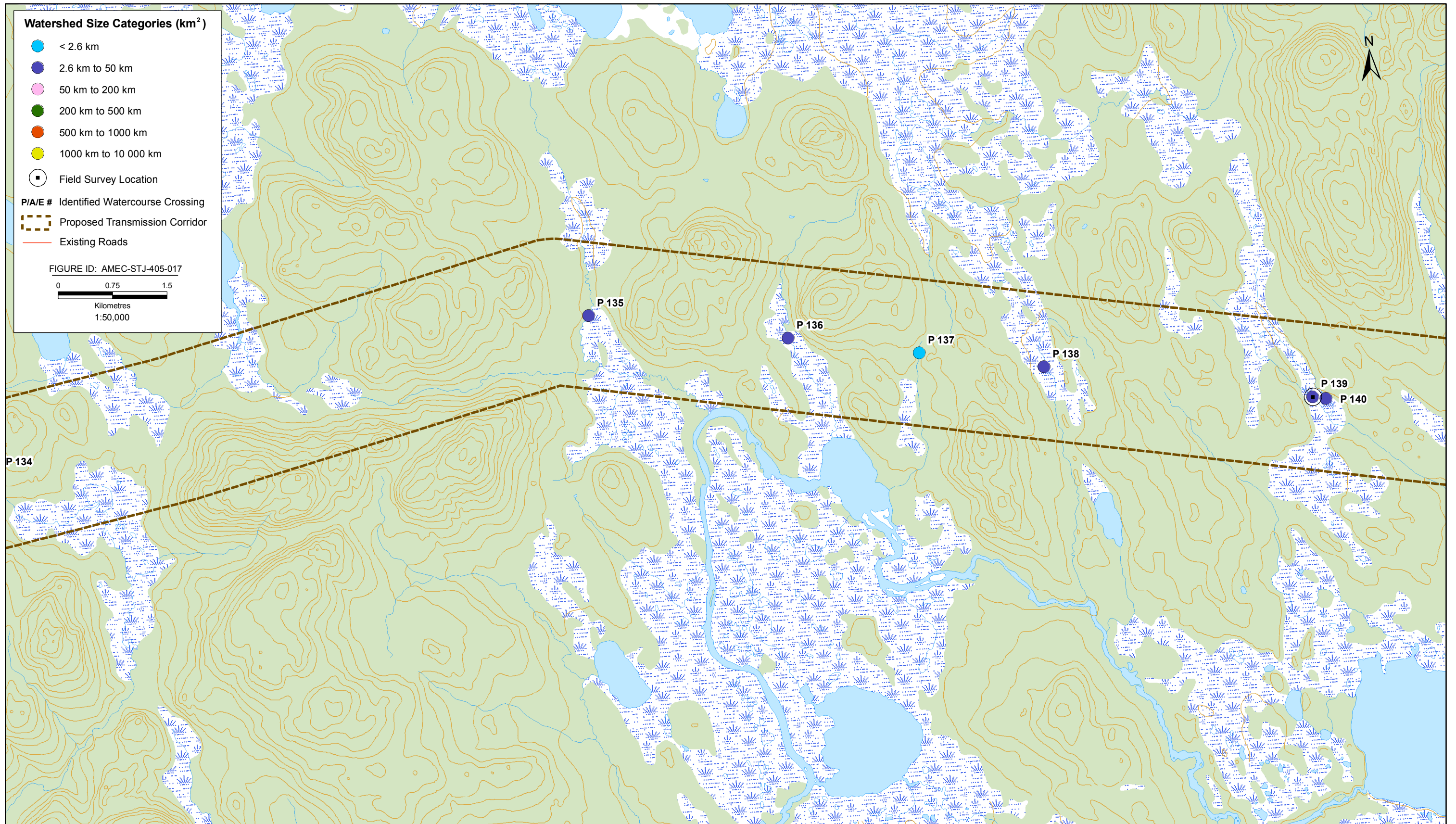


FIGURE 17



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 135	0.08	19.1	7.2	Fine	Flat	
P 136	0.07	171.1	29.4	Fine	Flat	
P 137	1.07	61.8	61.8	Coarse	Riffle	
P 138	0.32	5.4	5.4	Fine	Discontinuous	
P 139	0.53	7.5	7.5	Fine	Discontinuous	
P 140	0.28	7.5	7.5	Fine	Discontinuous	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 139	Unknown	St. Paul	2.8	31.50	5.40	0.26	0.00	Steady	Fine	BT

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 139



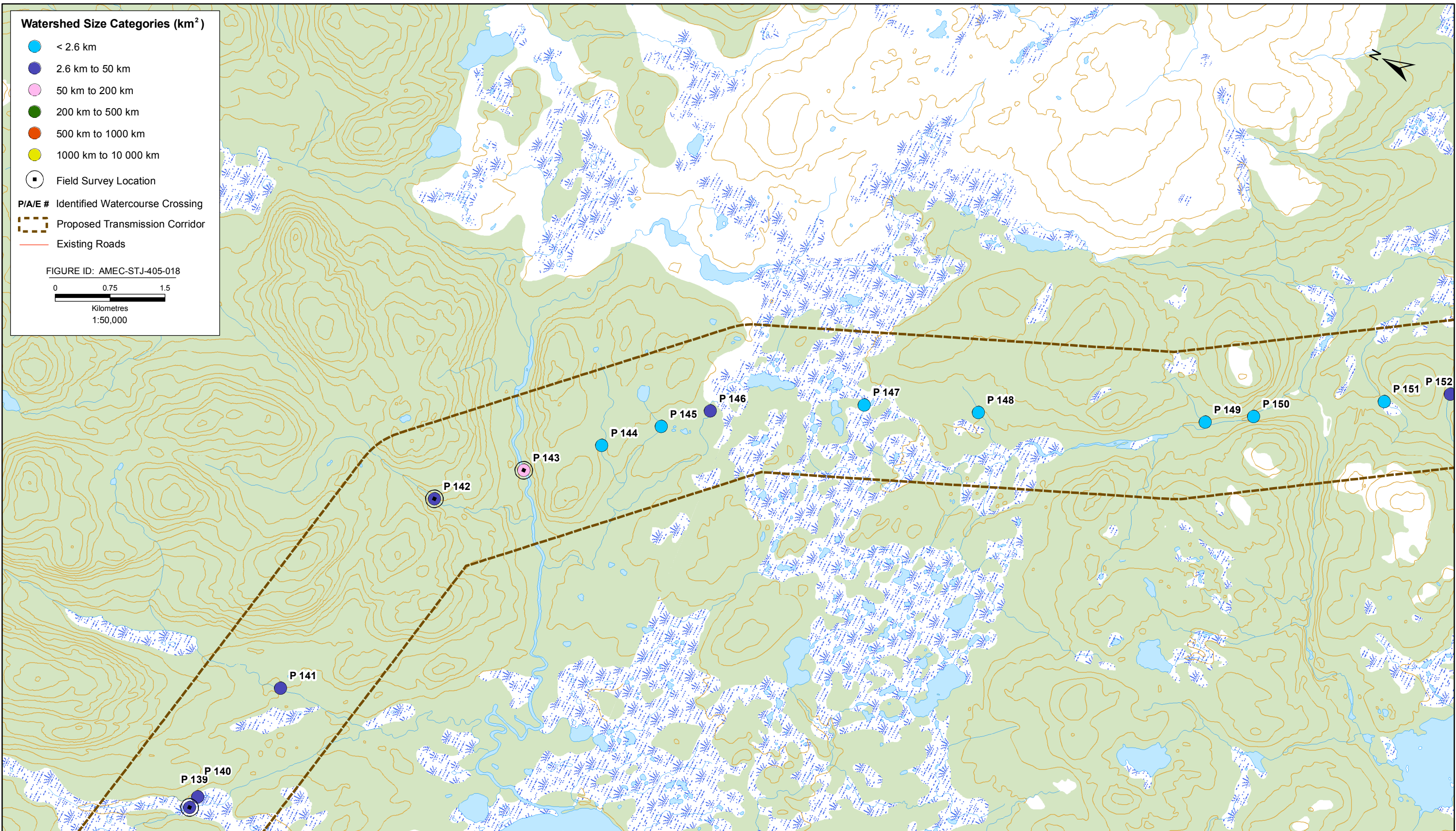


FIGURE 18



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 139	0.53	7.5	7.5	Fine	Discontinuous	
P 140	0.28	7.5	7.5	Fine	Discontinuous	
P 141	0.86	19.4	4.1	Fine	Flat	
P 142	2.30	14.0	14.0	Coarse	Riffle	
P 143	0.39	23.1	10.2	Coarse	Rapid	
P 144	1.13	1	1	Fine	Flat	
P 145	1.06	1.9	1.9	Fine	Flat	
P 146	0.46	2.8	2.8	Fine	Flat	
P 147	0.56	7.4	7.4	Fine	Flat	
P 148	1.57	-	-	-	-	Cloud Cover
P 149	3.27	-	-	-	-	Cloud Cover
P 150	2.12	-	-	-	-	Cloud Cover
P 151	2.29	-	-	-	-	Cloud Cover
P 152	1.75	-	-	-	-	Cloud Cover

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 142	Unknown	St. Paul	6.4	19.90	3.40	0.33	0.06	Riffle / Run	Coarse	BT
P 143	Unknown	St. Paul	61.2	31.60	14.00	0.25	0.71	Riffle	Medium	BT, WS

^a names were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

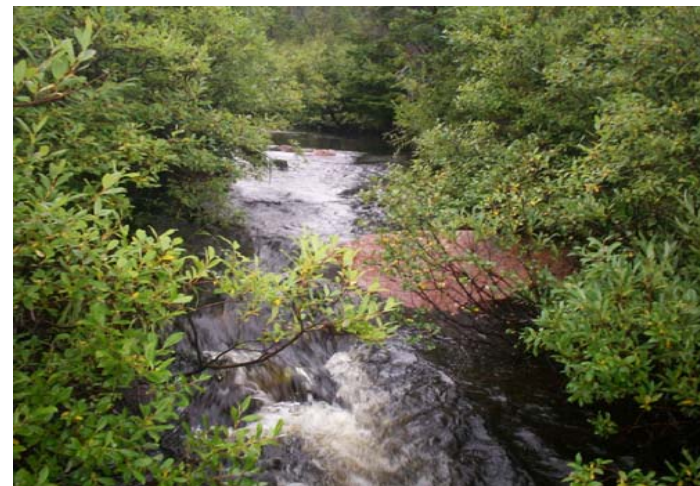
Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 142



P 143



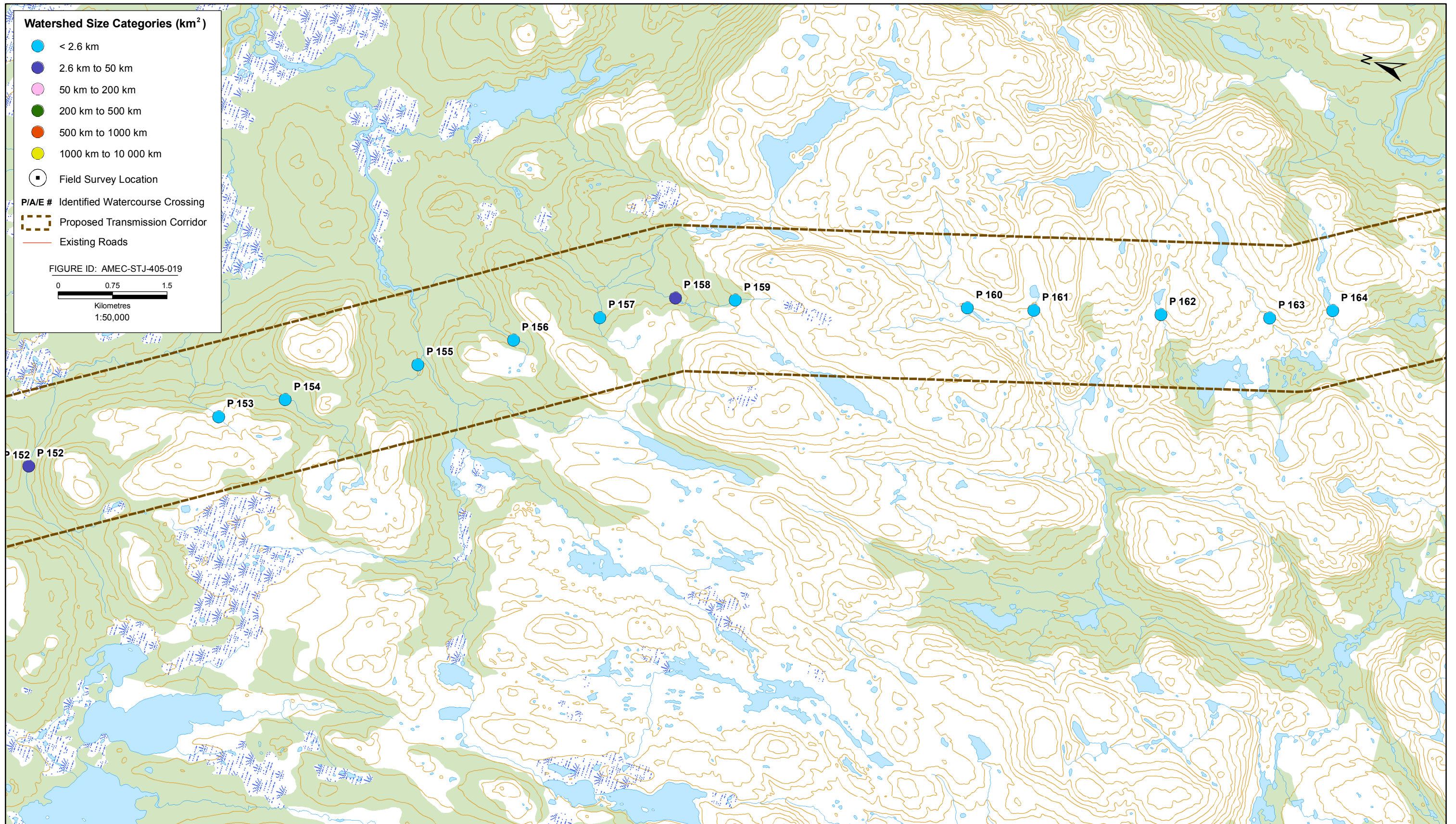


FIGURE 19



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 152	1.75	-	-	-	-	Cloud Cover
P 153	8.48	-	-	-	-	Cloud Cover
P 154	2.29	-	-	-	-	Cloud Cover
P 155	4.25	1.2	1.2	Fine	Flat	
P 156	3.47	5.5	5.5	Fine	Flat	
P 157	3.04	1.9	1.9	Coarse	Flat	
P 158	2.69	4.3	4.3	Fine	Flat	
P 159	6.37	9.8	9.8	Coarse	Riffle	
P 160	2.11	3.5	3.5	Fine	Flat	
P 161	6.96	3.7	3.7	Fine	Riffle	
P 162	6.62	5.2	5.2	Fine	Riffle	
P 163	3.31	2.6	2.6	Fine	Flat	
P 164	3.12	1.5	1.5	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

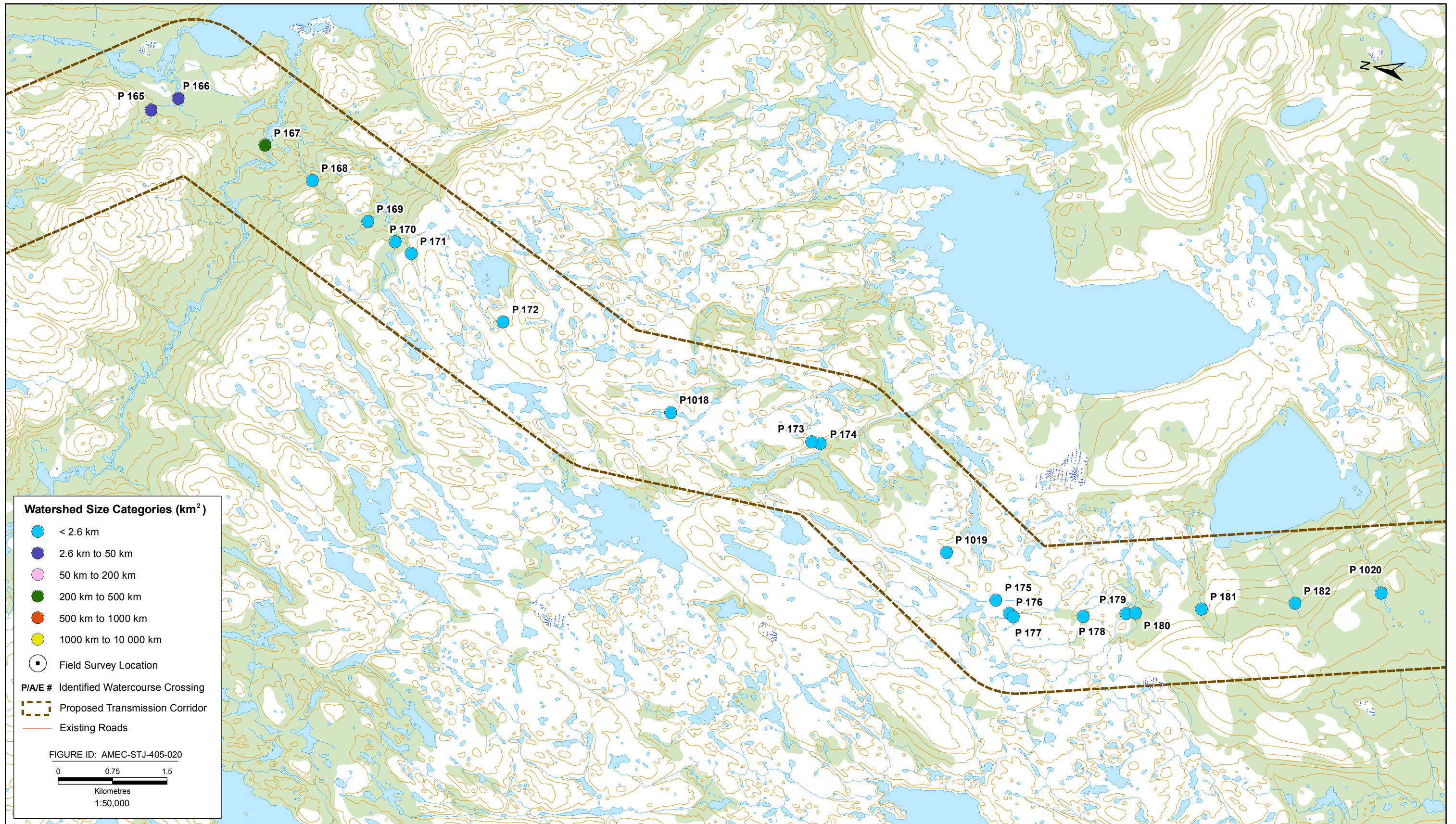


FIGURE 20



Labrador - Island Transmission Link: Gull Island to Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 165	2.70	1.7	1.7	Fine	Flat	
P 166	0.47	2.5	2.5	Fine	Flat	
P 167	1.20	2.7	2.7	Fine	Riffle	
P 168	8.35	2.2	2.2	Fine	Riffle	
P 169	2.67	1.5	1.5	Fine	Flat	
P 170	4.32	-	-	-	-	Cloud Cover
P 171	4.16	-	-	-	-	Cloud Cover
P 172	3.38	1.5	1.5	Fine	Flat	
P 1018	0.00	15.0	4.7	Fine	Flat	
P 173	6.82	6.8	6.8	Fine	Flat	
P 174	1.38	8.4	8.4	Fine	Flat	
P 1019	4.95	9.4	6.2	Fine	Flat	
P 175	1.76	54	40	Coarse	Riffle	
P 176	3.43	2	2	Fine	Flat	
P 177	5.20	3.7	3.7	Fine	Flat	
P 178	2.27	1.5	1.5	Fine	Flat	
P 179	2.45	3.2	3.2	Fine	Flat	
P 180	2.76	1.8	1.8	Fine	Flat	
P 181	5.83	1.5	1.5	Fine	Flat	
P 182	6.68	3.8	3.8	Fine	Flat	
P 1020	8.12	128.6	14.7	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation



FIGURE 21

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 183	6.22	3.8	3.8	Fine	Discontinuous	
P 184	1.02	8.1	8.1	Fine	Flat	
A 1	3.05	34.2	-	Fine	-	
A 2	0.57	42.1	22.9	Fine	Flat	
A 3	7.50	33.6	-	Fine	-	
A 9	5.75	-	-	-	-	No visible stream
A 10	7.03	-	-	-	-	No visible stream
A 11	0.73	36.5	17.5	Fine	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

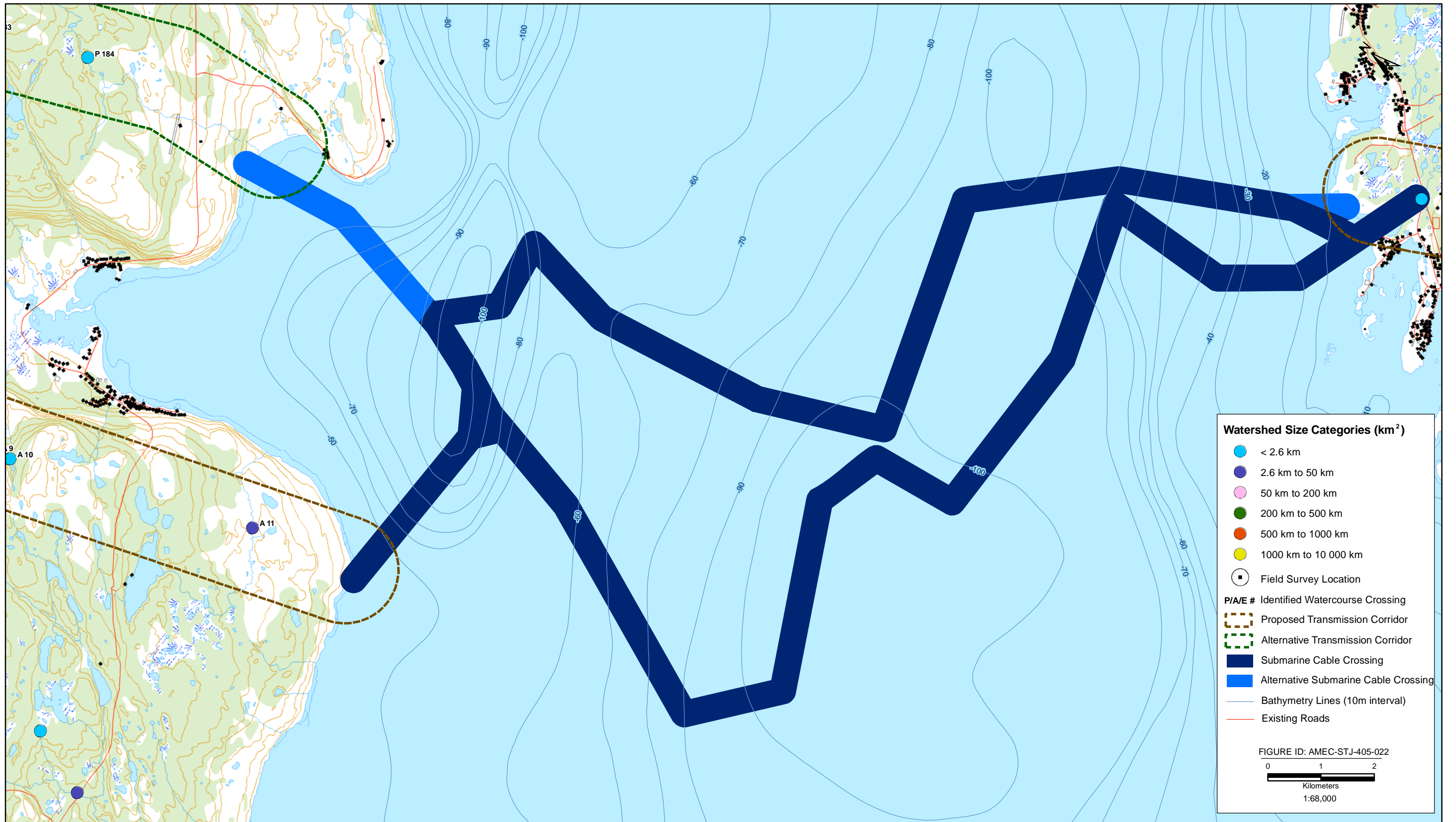


FIGURE 22



Labrador - Island Transmission Link: Strait of Belle Isle
Freshwater Air Photo Interpretation/Field Survey

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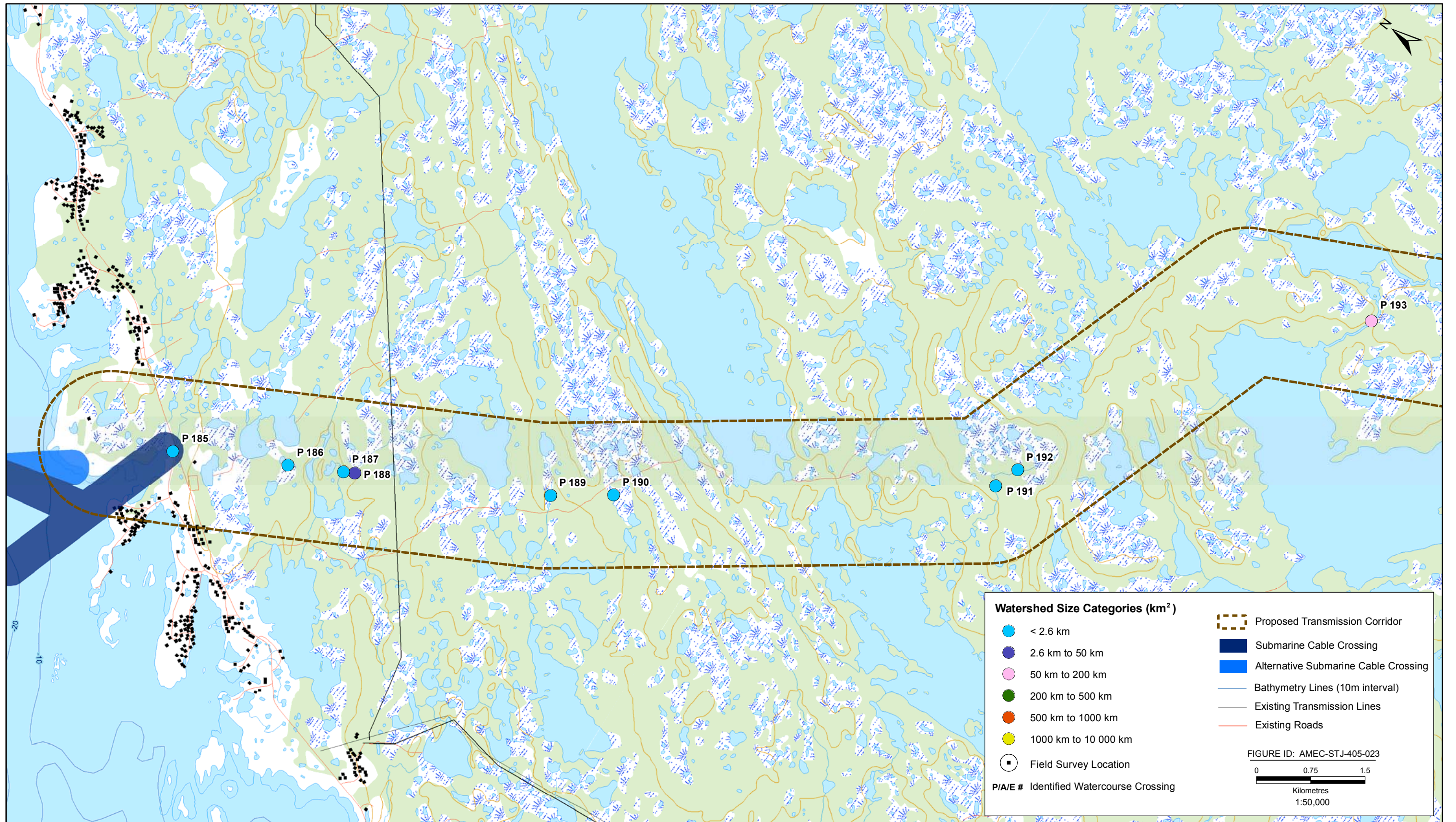


FIGURE 23



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 185	1.38	-	-	-	-	No visible stream
P 186	0.00	-	-	-	-	No visible stream
P 187	0.00	2.8	2.8	Fine	Flat	
P 188	1.08	4.8	4.8	Fine	Flat	
P 189	0.87	1.0	1.0	Fine	Discontinuous	
P 190	1.07	2.4	2.4	Fine	Discontinuous	
P 191	1.54	4.6	4.6	Fine	Discontinuous	
P 192	1.00	2.4	2.4	Fine	Discontinuous	
P 193	0.47	15.7	9.1	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

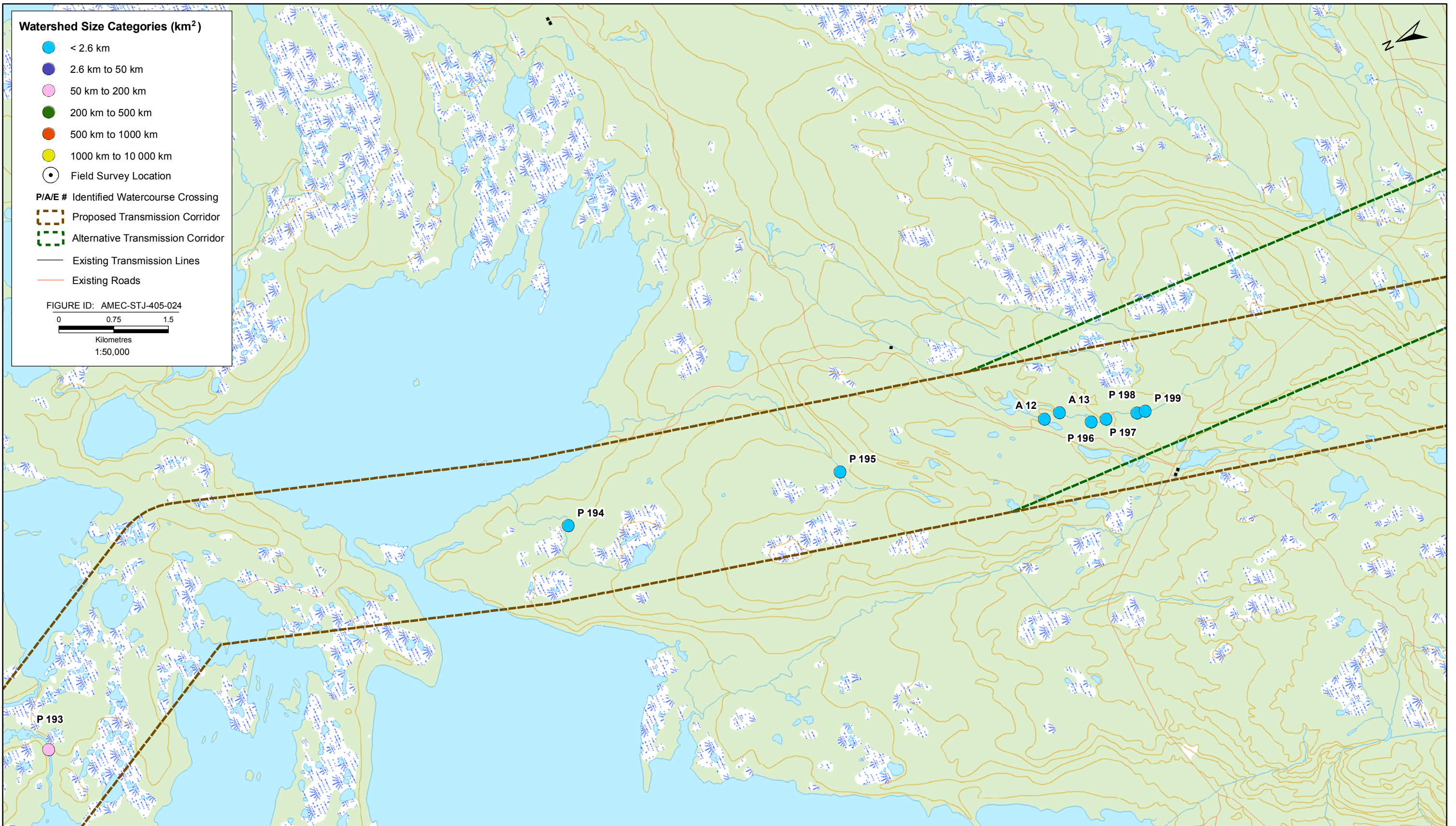


FIGURE 24



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 193	0.47	15.7	9.1	Fine	Flat	
P 194	1.37	3.8	3.8	Fine	Discontinuous	
P 195	1.66	2.9	2.9	Fine	Discontinuous	
A 12	1.27	-	-	-	-	No visible stream
A 13	1.49	-	-	-	-	No visible stream
P 196	1.68	3.4	3.4	Fine	Flat	
P 197	1.68	-	-	Fine	Flat	
P 198	1.68	4.9	4.9	Fine	Discontinuous	
P 199	1.68	4.9	4.9	Fine	Discontinuous	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

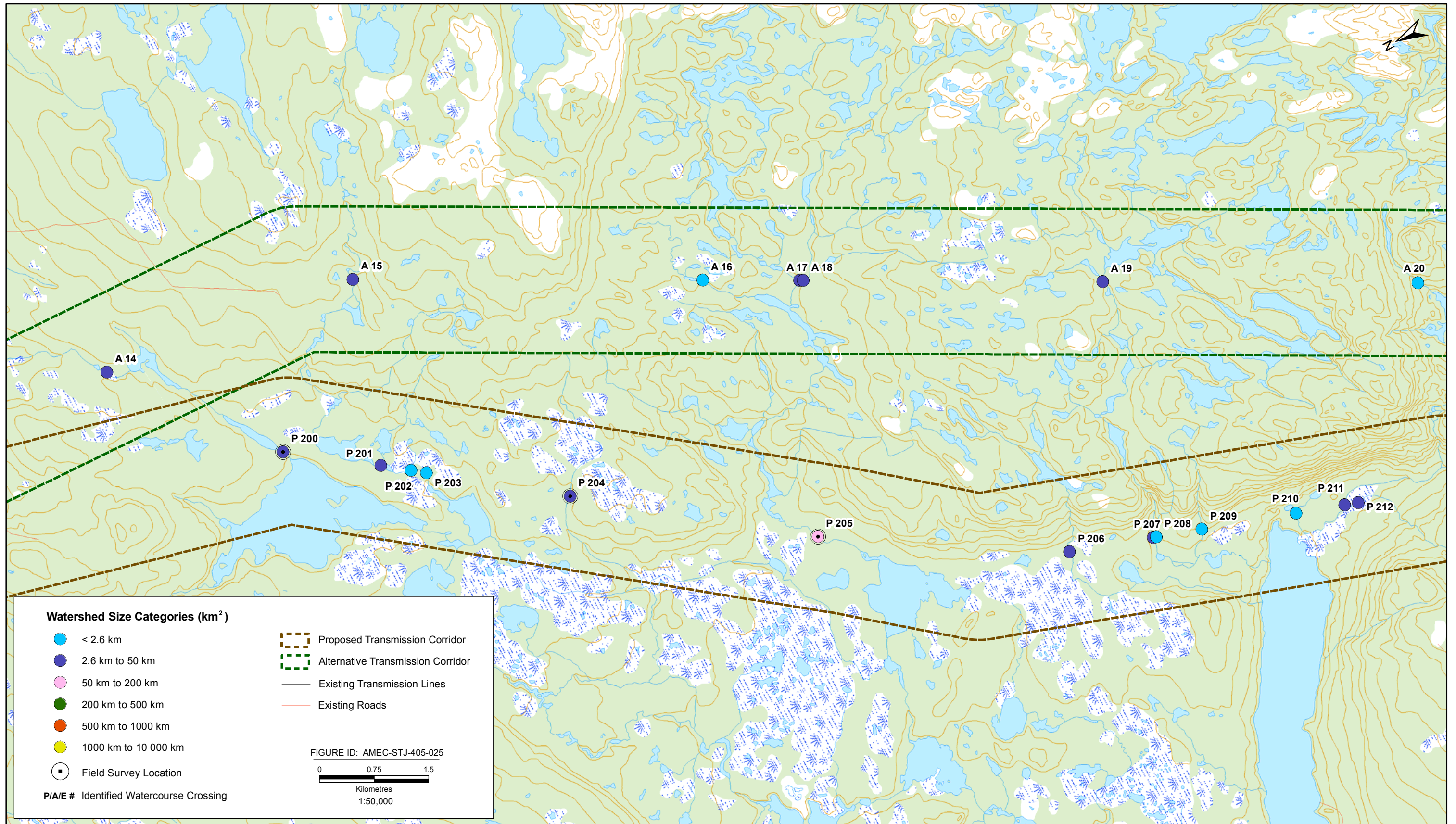


FIGURE 25



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
 Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
A 14	1.04	-	-	-	-	No visible stream, pond ~75mx100m
A 15	2.43	11.2	11.2	Fine	Flat	
A 16	2.49	11.7	11.7	Fine	Flat	
A 17	0.97	12.0	12.0	Fine	Riffle	
A 18	1.74	3.3	3.3	Fine	Discontinuous	
A 19	2.97	16.0	14.5	Coarse	Riffle	
A 20	5.28	3.2	3.2	Coarse	Rapid	
P 200	4.90	1.0	1.0	Fine	Riffle	
P 201	0.83	10.5	7.1	Fine	Flat	
P 202	0.31	18.1	6.4	Fine	Flat	
P 203	1.68	4.3	4.3	Fine	Flat	
P 204	2.98	5.8	5.8	Fine	Discontinuous	
P 205	0.70	13.2	4.4	Fine	Flat	
P 206	4.89	4.6	4.6	Fine	Flat	
P 207	8.63	-	-	-	-	No visible stream
P 208	10.48	20.4	11.4	Coarse	Riffle	
P 209	8.62	3.1	3.1	Fine	Riffle	
P 210	1.76	3.1	3.1	Fine	Riffle	
P 211	1.33	39.2	12.4	Coarse	Riffle	
P 212	4.88	8.3	3.1	Fine	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 200	Toms Feeder	Castor River	7.5	13.10	4.30	0.15	0.08	Riffle	Medium	BT, AS
P 204	Unknown	Castor River	2.8	24.60	8.40	0.13*	0.04*	Steady	Fine	None
P 205	Unknown	Castor River	65.4	40.40	28.00	0.21	0.02	Steady	Coarse	AS

^a names were taken from 1:50000 topographic map

* Velocities and depths across a complete transect could not be measured due to size of stream.

Brn - Brown Trout

PD - Pearl Dace

BT - Brook Trout

Bur - Burbot

AS - Atlantic Salmon

MS - Mottled Sculpin

3SB - Threespine Stickleback

A. Eel - American Eel

LND - Longnose dace

WS - White Sucker

P 200



P 204



P 205



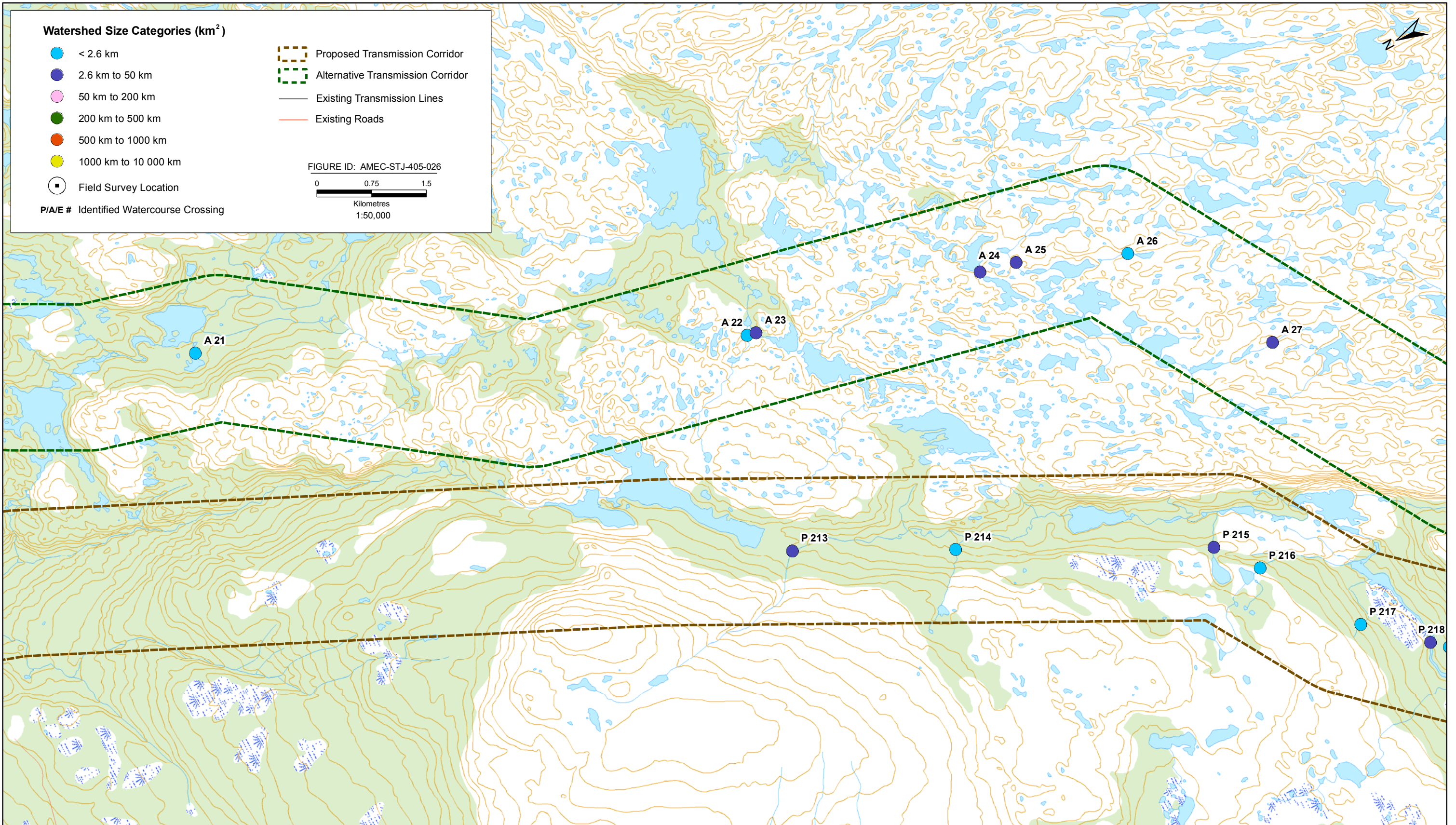


FIGURE 26



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
A 21	2.84	18.3	1.9	Fine	Discontinuous	
A 22	4.63	2.7	2.7	Fine	Riffle	
A 23	1.98	32.4	16.3	Coarse	Riffle	
A 24	1.41	4.3	4.3	Fine	Flat	
A 25	1.86	12.4	5.6	Fine	Flat	
A 26	4.84	19.6	8.1	Fine	Flat	
A 27	2.48	28.8	14.7	Coarse	Rapid	
P 213	4.46	35.8	26.0	Coarse	Rapid	
P 214	9.06	14.8	3.5	Coarse	Rapid	
P 215	7.13	11.8	-	Fine	Discontinuous	
P 216	10.54	0.9	0.9	Fine	Riffle	
P 217	5.76	2.8	2.8	Fine	Riffle	
P 218	1.06	104.7	20.8	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

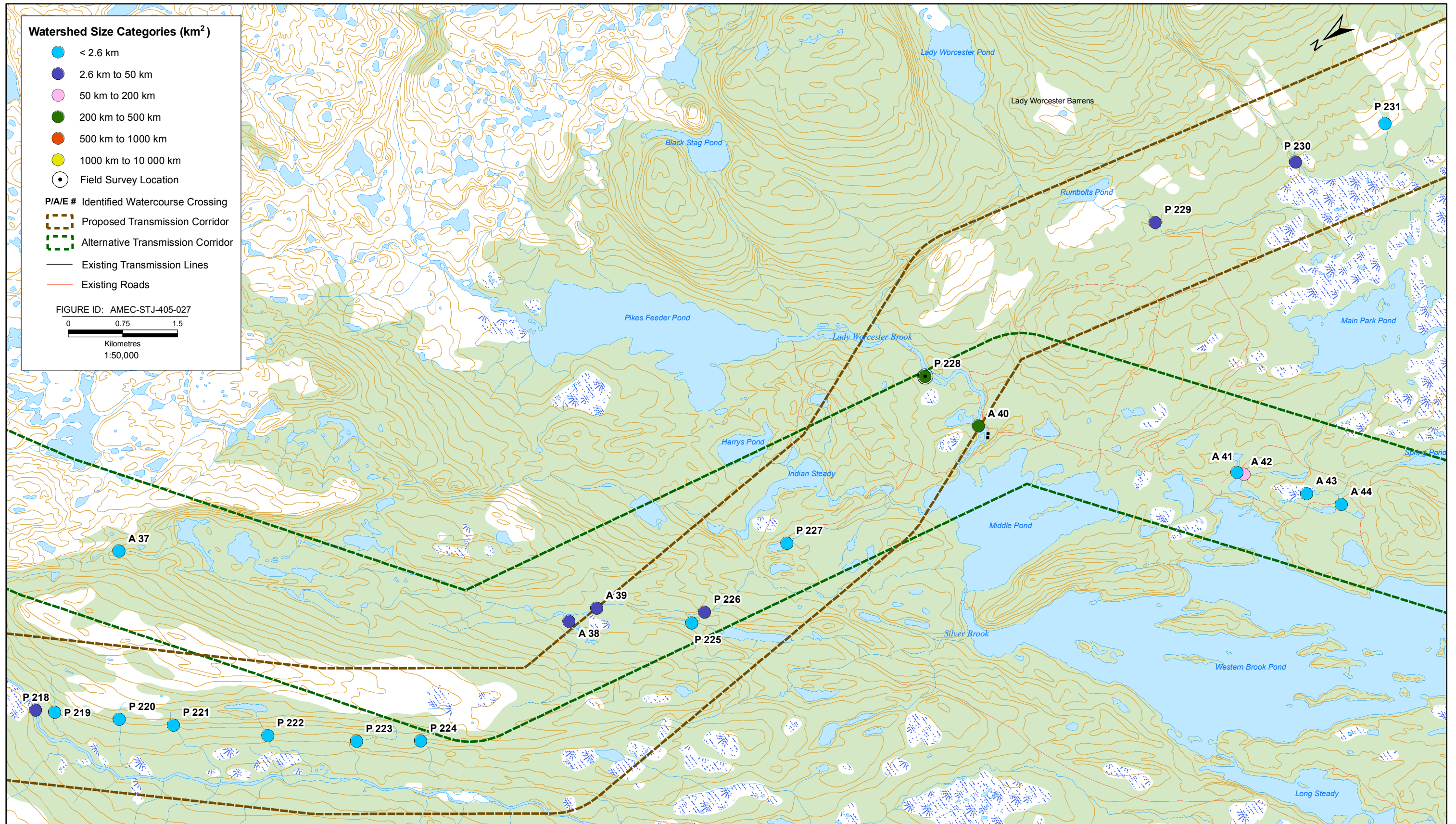


FIGURE 27



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
A 37	4.47	43.6	17.6	Fine	Riffle	
A 38	2.36	32.3	6.1	Fine	Riffle	
A 39	3.51	23.7	3.6	Coarse	Flat	
A 40	0.66	80.9	61.9	Coarse	Rapid	
A 41	5.68	17.4	9.6	Coarse	Riffle	
A 42	3.18	22.0	15.7	Coarse	Riffle	
A 43	0.37	4.4	4.4	Fine	Flat	
A 44	0.27	2.3	2.3	Fine	Flat	
P 218	1.06	104.7	20.8	Coarse	Riffle	
P 219	5.60	2.2	2.2	Fine	Flat	
P 220	7.54	3.9	3.9	Coarse	Riffle	
P 221	6.56	1.4	1.4	Fine	Riffle	
P 222	7.82	1.5	1.5	Fine	Riffle	
P 223	5.39	2.6	2.6	Fine	Flat	
P 224	5.77	1.9	1.9	Coarse	Riffle	
P 225	2.84	2.6	2.6	Fine	Riffle	
P 226	3.51	1.8	1.8	Fine	Riffle	
P 227	1.87	3.7	3.7	Fine	Flat	
P 228	0.66	9.4	9.4	Fine	Flat	
P 229	1.80	4	4	Fine	Flat	
P 230	1.93	5.7	5.7	Coarse	Riffle	
P 231	4.67	3.8	3.8	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 228	Torrent River	Torrent River	393.0	37.80	18.40	0.17	0.38	Riffle	Medium	AS

^a names were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 228



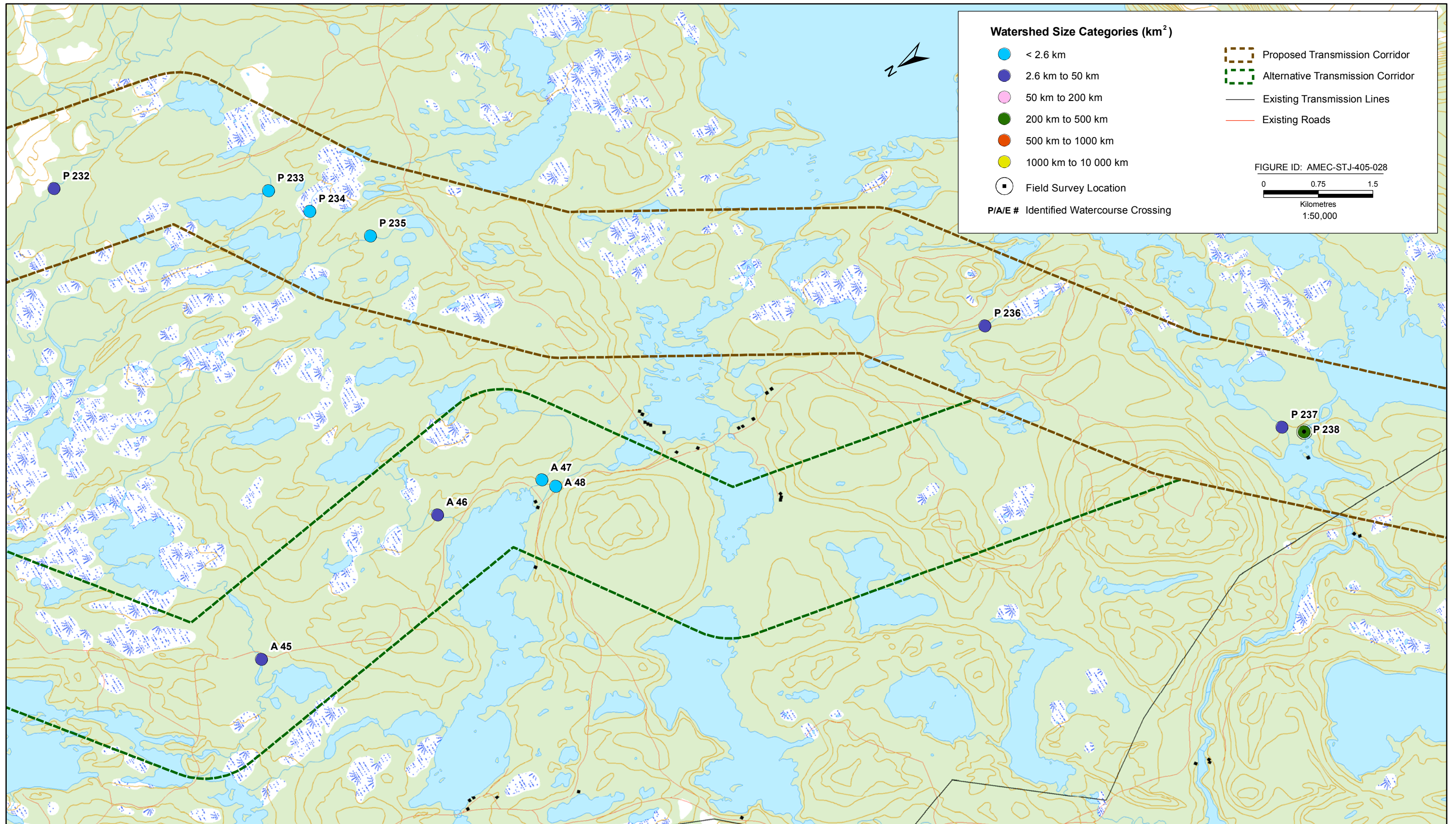


FIGURE 28

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 232	0.81	2.5	2.5	Fine	Flat	
P 233	1.49	6.7	6.7	Fine	Flat	
P 234	1.87	3.7	3.7	Fine	Flat	
P 235	1.33	2.5	2.5	Fine	Flat	
P 236	0.54	2.4	2.4	Fine	Riffle	
P 237	0.68	3.1	3.1	Fine	Flat	
P 238	1.60	46	37.3	Coarse	Riffle	
A 45	0.54	14.9	6.7	Fine	Riffle	
A 46	2.23	9.7	3.2	Coarse	Riffle	
A 47	2.10	3.7	3.7	Fine	Flat	
A 48	1.27	8.7	-	-	-	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 238	Torrent River	River of Ponds	330.1	52.40	37.90	0.17	0.2	Riffle	Coarse	AS, 3SB, A.Eel

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 238



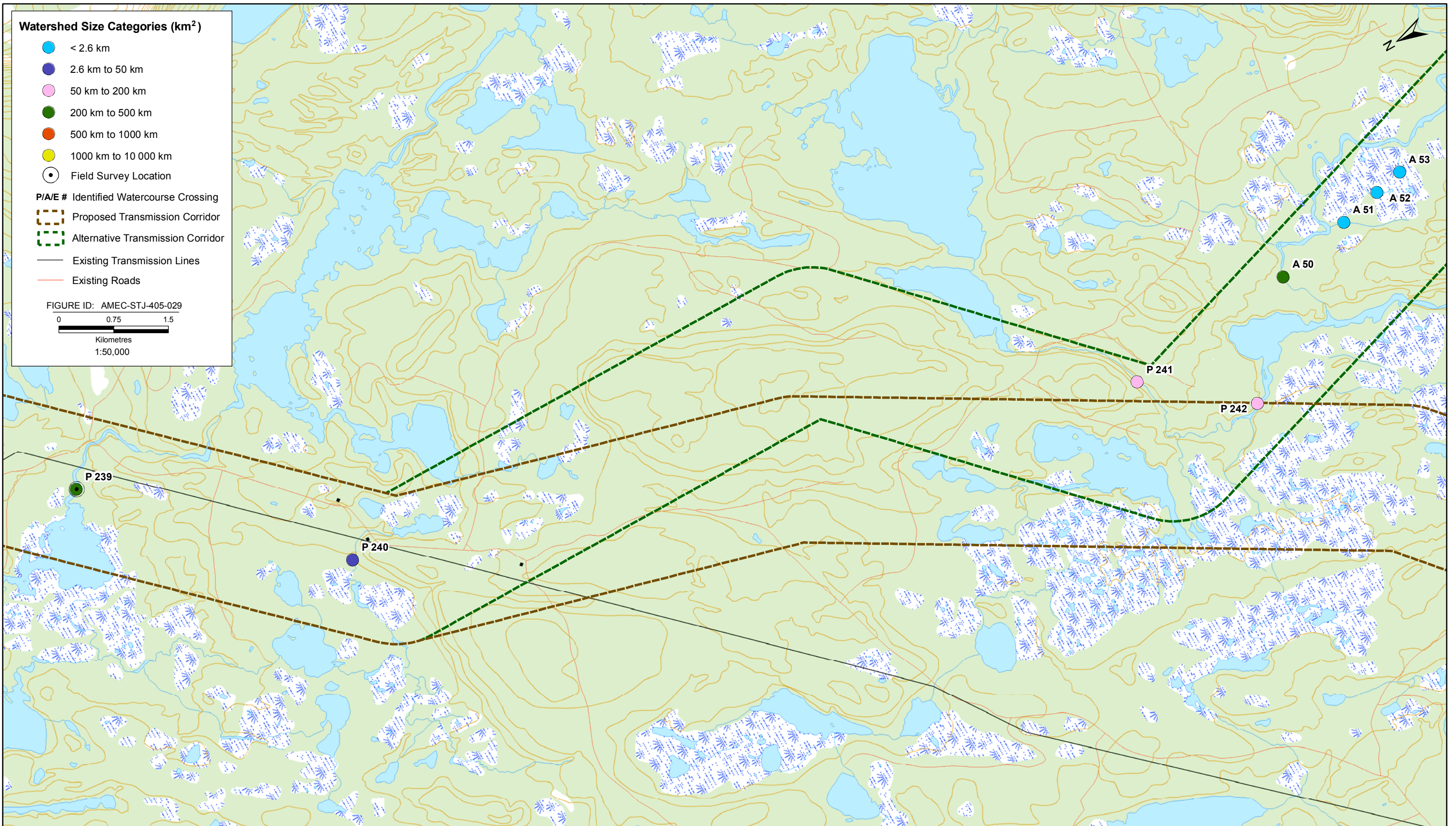


FIGURE 29



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 239	1.44	45.3	39.4	Coarse	Riffle	
P 240	2.27	3.1	3.1	Fine	Flat	
P 241	0.85	16.2	10.6	Coarse	Rapid	
P 242	0.54	46	46	Coarse	Riffle	
A 50	1.00	10.3	10.3	Fine	Flat	
A 51	0.99	6.7	6.7	Fine	Flat	
A 52	0.48	4.9	4.9	Fine	Flat	
A 53	0.34	8.8	8.8	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 239	Unknown	River of Ponds	264.5	61.10	51.90	0.09	0.19	Run	Medium	AS, BT

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 239



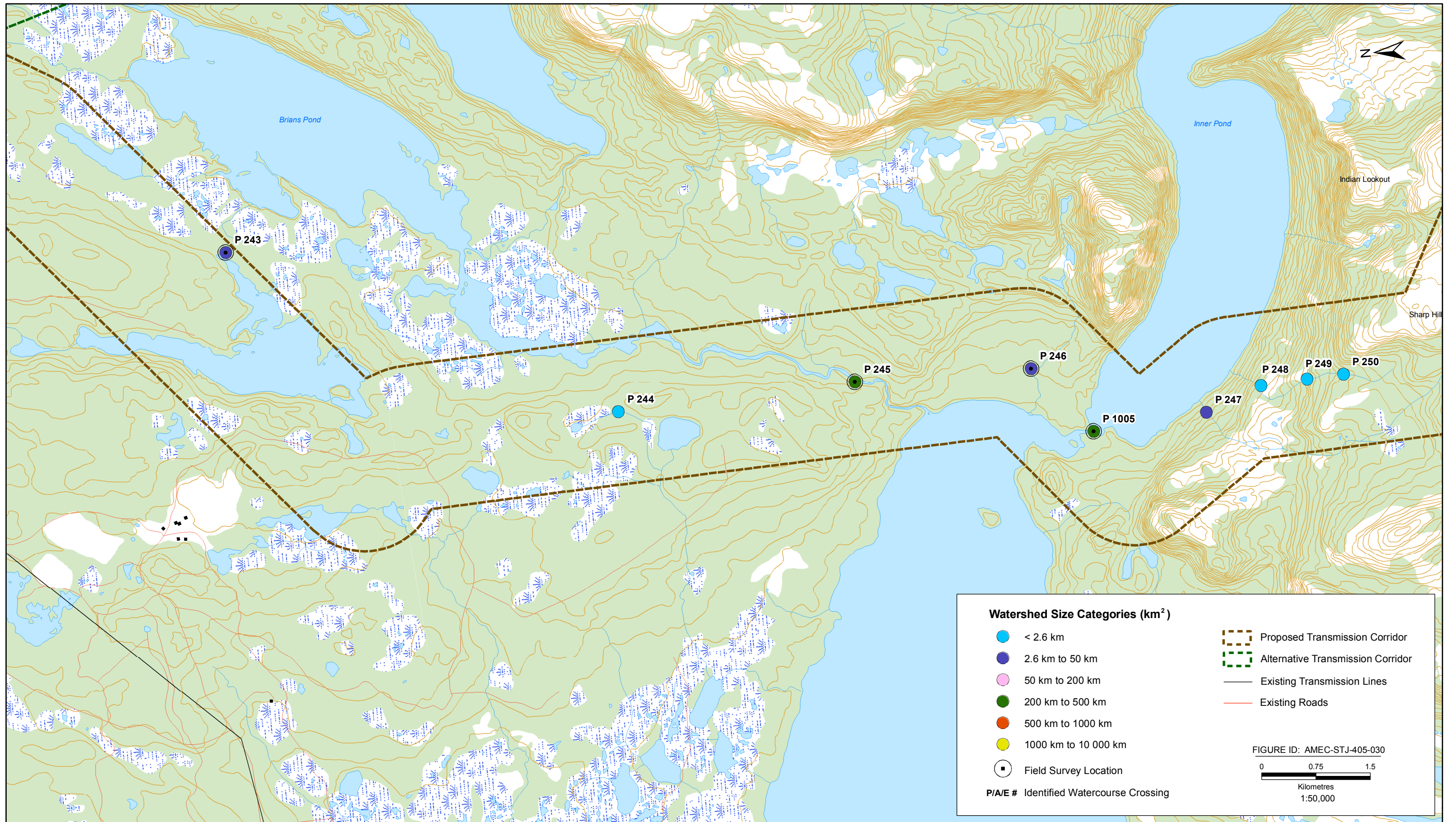


FIGURE 30



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 243	1.28	5.5	5.5	Fine	Flat	
P 244	0.56	2.4	2.4	Fine	Flat	
P 245	3.17	27.7	21.7	Coarse	Riffle	
P 246	5.09	2.6	2.6	Fine	Flat	
P1005	0.17	50.6	35.6	Coarse	Rapid	
P 247	18.68	4.5	4.5	Coarse	Rapid	
P 248	15.44	24	24	Fine	Flat	
P 249	15.44	-	-	-	-	No visible stream
P 250	15.44	-	-	-	-	No visible stream

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 243	Unknown	Portland Creek	19.5	18.65	12.80	0.10	0.15	Riffle	Medium	BT, 3SB
P 245	Unknown	Portland Creek	425.2	50.55	35.80	0.26	0.4	Run	Coarse	BT
P 246	Unknown	Portland Creek	3.2	16.40	6.00	0.17	0.00	Steady	Fine	BT
P 1005	Bowing Brook	Portland Creek	343.6	45.95	26.40	0.46*	0.32*	Steady	Medium	A. Eel

^a names were taken from 1:50000 topographic map

* Velocities and depths across a complete transect could not be measured due to size of stream.

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 243



P 245



P 246



P 1005



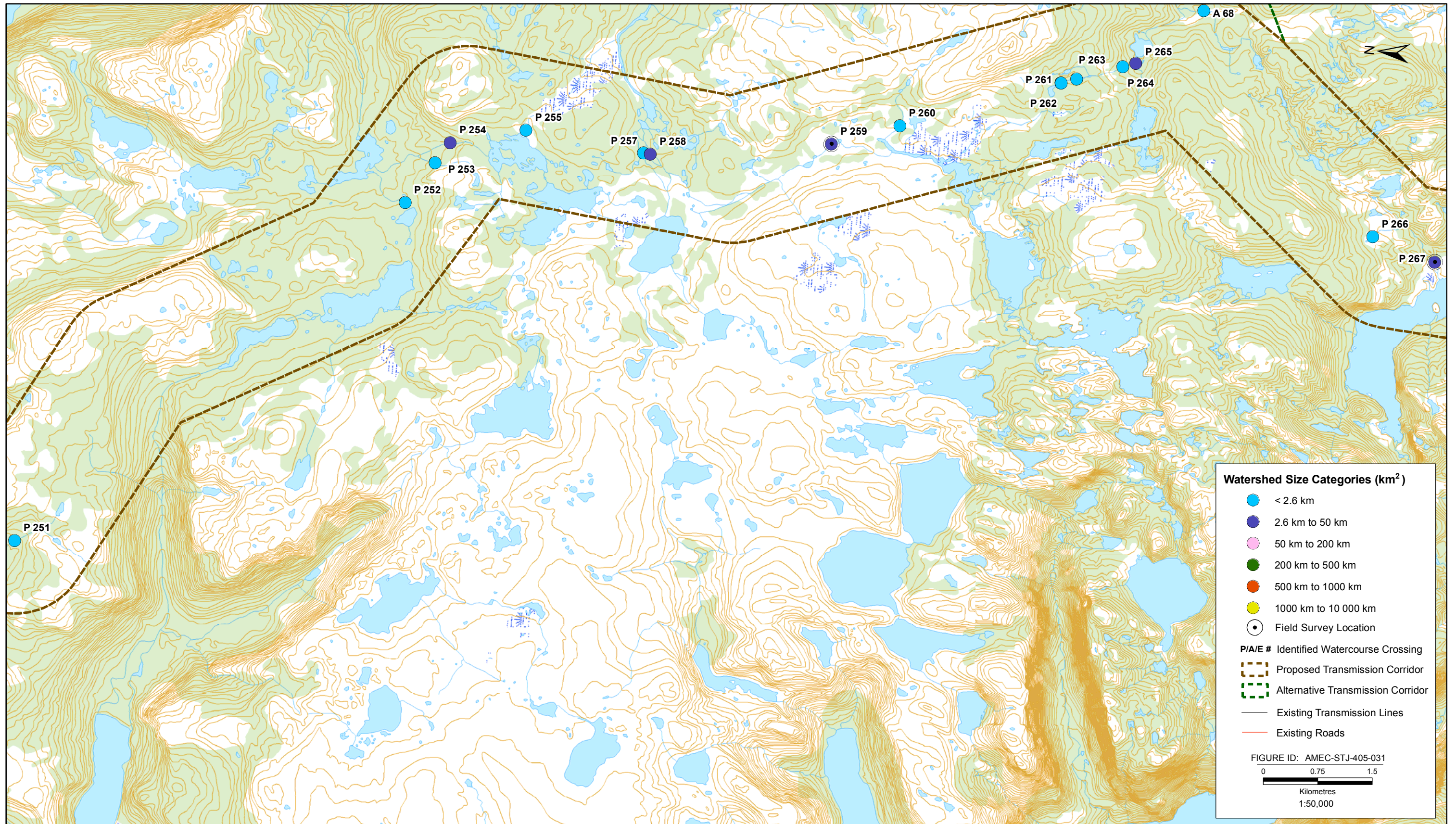


FIGURE 31

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 251	8.50	3.3	3.3	Fine	Riffle	
P 252	3.80	1.3	1.3	Fine	Flat	
P 253	8.43	2.8	2.8	Fine	Riffle	
P 254	6.44	37.2	22.7	Fine	Flat	
P 255	3.85	12.2	12.2	Coarse	Riffle	
P 257	0.81	24	24	Fine	Flat	
P 258	1.33	6.3	6.3	Fine	Flat	
P 259	0.36	1.8	1.8	Fine	Flat	
P 260	5.59	2.5	2.5	Fine	Flat	
P 261	0.00	-	-	-	-	No visible stream
P 262	2.28	-	-	-	-	No visible stream
P 263	2.82	1.0	1.0	Fine	Flat	
P 264	9.27	10.6	4.8	Coarse	Rapid	
P 265	6.29	3.6	1.2	Coarse	Riffle	
A 68	4.09	4.2	4.2	Fine	Flat	
P 266	7.19	1.5	1.5	Fine	Flat	
P 267	4.91	18.5	9.3	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 259	Unknown	Portland Creek	15.8	20.53	14.90	0.31	0.13	Riffle	Fine	BT
P 267	Unknown	Sop's Arm River (Main River)	6.0	26.75	15.20	0.09	0.04	Riffle	Medium	AS, BT

^a names were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 259



P 267



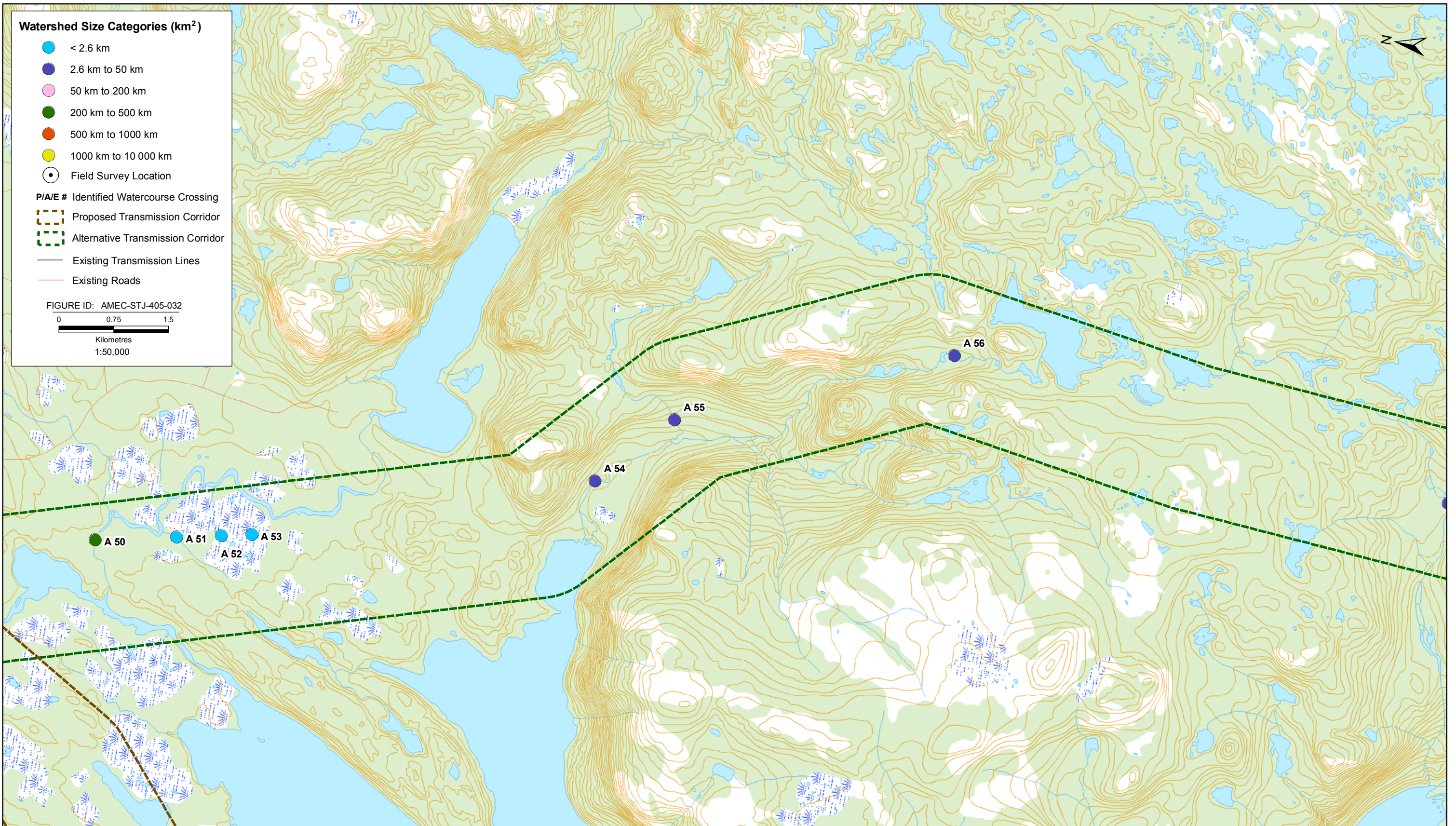


FIGURE 32



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
A 50	1.00	10.3	10.3	Fine	Flat	
A 51	0.99	6.7	6.7	Fine	Flat	
A 52	0.48	4.9	4.9	Fine	Flat	
A 53	0.34	8.8	8.8	Fine	Flat	
A 54	1.36	24.5	19.5	Coarse	Rapid	
A 55	9.27	22.8	19.4	Coarse	Riffle	
A 56	6.07	16.7	12.7	Coarse	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

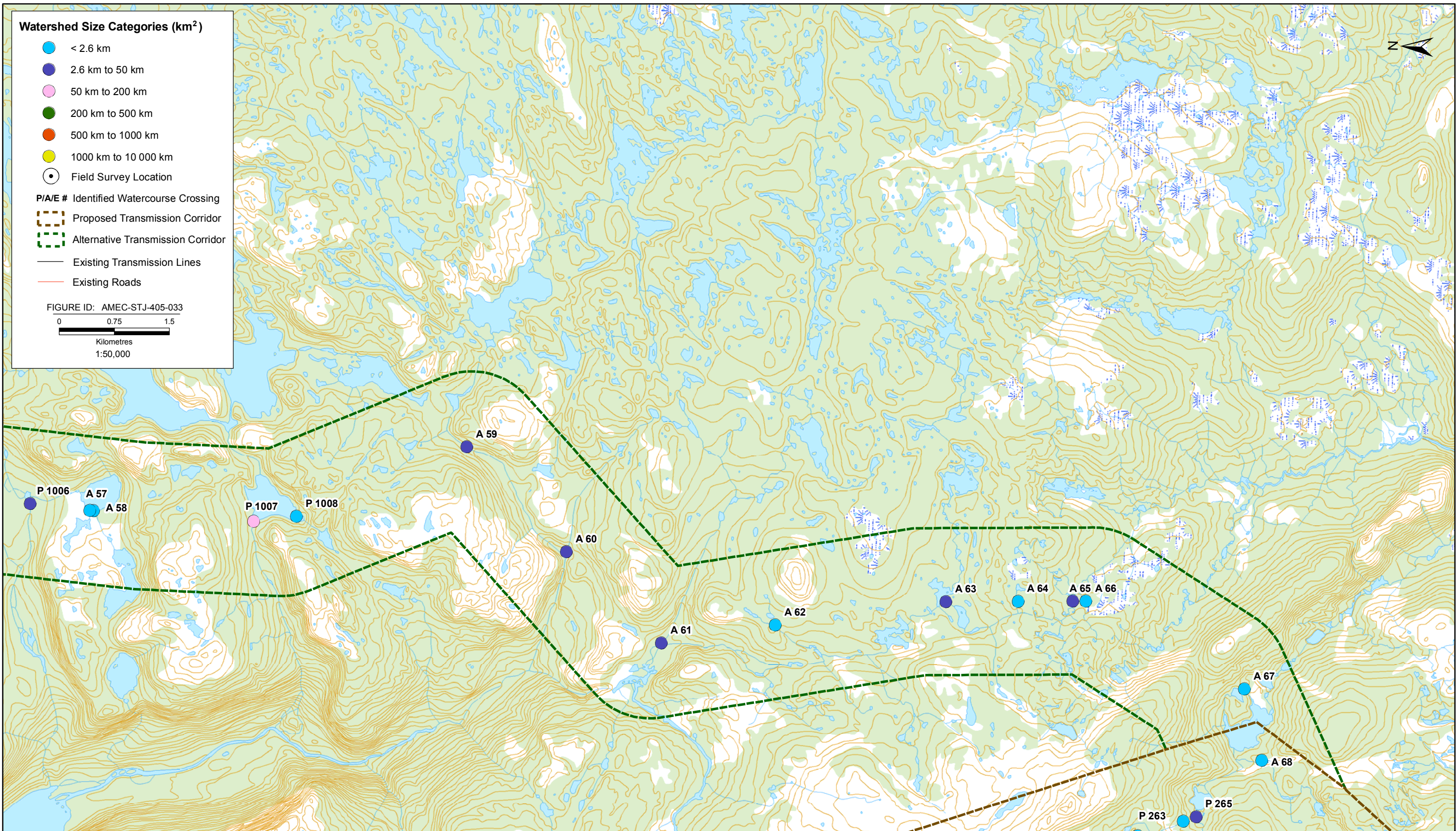


FIGURE 33



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P1006	4.36	18.7	11.2	Coarse	Riffle	
A 57	2.33	6.7	6.7	Fine	Flat	
A 58	3.85	3.5	3.5	Fine	Flat	
P1007	5.74	19.0	9.7	Coarse	Riffle	
P1008	5.00	-	-	-	-	No visible stream, on shoreline of a pond
A 59	2.07	17.9	9.3	Coarse	Rapid	
A 60	7.20	30.4	23.3	Coarse	Rapid	
A 61	5.01	27.4	21.9	Fine	Riffle	
A 62	4.87	8.3	8.3	Coarse	Riffle	
A 63	2.06	17.9	13.2	Fine	Flat	
A 64	4.55	5.0	5.0	Fine	Flat	
A 65	2.93	4.8	4.8	Fine	Discontinuous	
A 66	2.61	3.5	3.5	Fine	Discontinuous	
A 67	9.25	2.3	2.3	Coarse	Riffle	
A 68	4.09	4.2	4.2	Fine	Flat	
P 265	6.29	3.6	1.2	Coarse	Riffle	
P 264	9.27	10.6	4.8	Coarse	Rapid	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

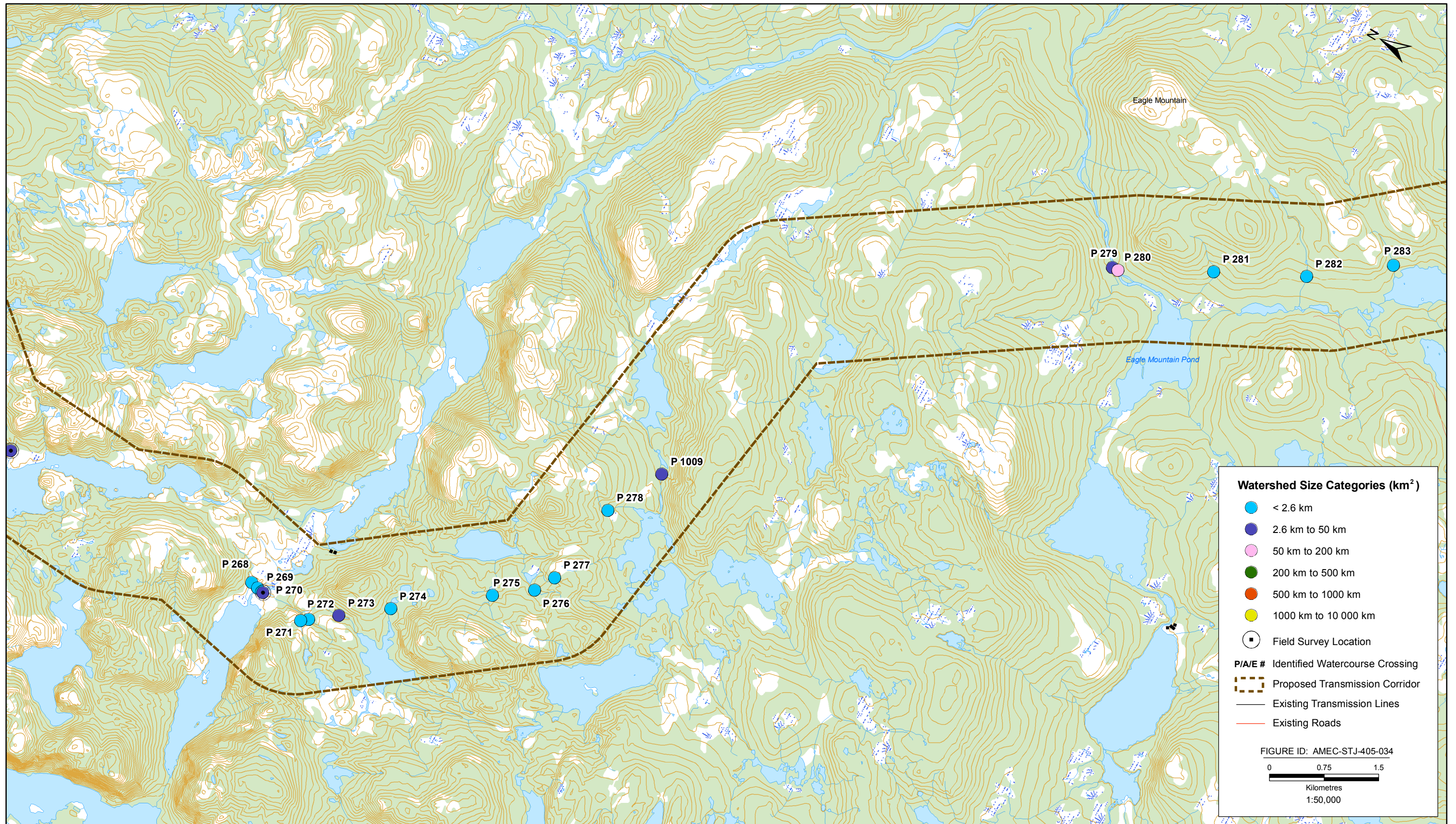


FIGURE 34



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 267	4.91	18.5	9.3	Coarse	Riffle	
P 268	4.59	8.5	8.5	Fine	Flat	
P 269	1.86	4.3	1.3	Fine	Riffle	
P 270	4.07	31.7	13.5	Coarse	Riffle	
P 271	9.49	8.2	8.2	Coarse	Rapid	
P 272	9.26	3.8	3.8	Coarse	Riffle	
P 273	4.89	22.1	22.1	Coarse	Riffle	
P 274	2.55	5.3	5.3	Fine	Riffle	
P 275	7.66	-	-	-	-	No visible stream
P 276	6.21	2.5	-	-	Discontinuous	
P 277	7.30	1.0	1.0	Coarse	Riffle	
P 278	7.77	1.8	1.8	Coarse	Riffle	
P1009	3.63	34.4	9.3	Coarse	Riffle	
P 279	3.44	27.7	21.7	Coarse	Riffle	
P 280	0.90	42.1	29.3	Coarse	Rapid	
P 281	6.35	3.1	3.1	Fine	Riffle	
P 282	5.53	1.2	1.2	Coarse	Riffle	
P 283	4.46	2.3	2.3	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 267	Unknown	Sop's Arm River (Main River)	6.0	26.75	15.2	0.09	0.04	Riffle	Medium	AS, BT
P 270	Pond River	Sop's Arm River (Main River)	7.5	21.60	17.00	0.05	0.07	Riffle	Medium	None

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 267



P 270



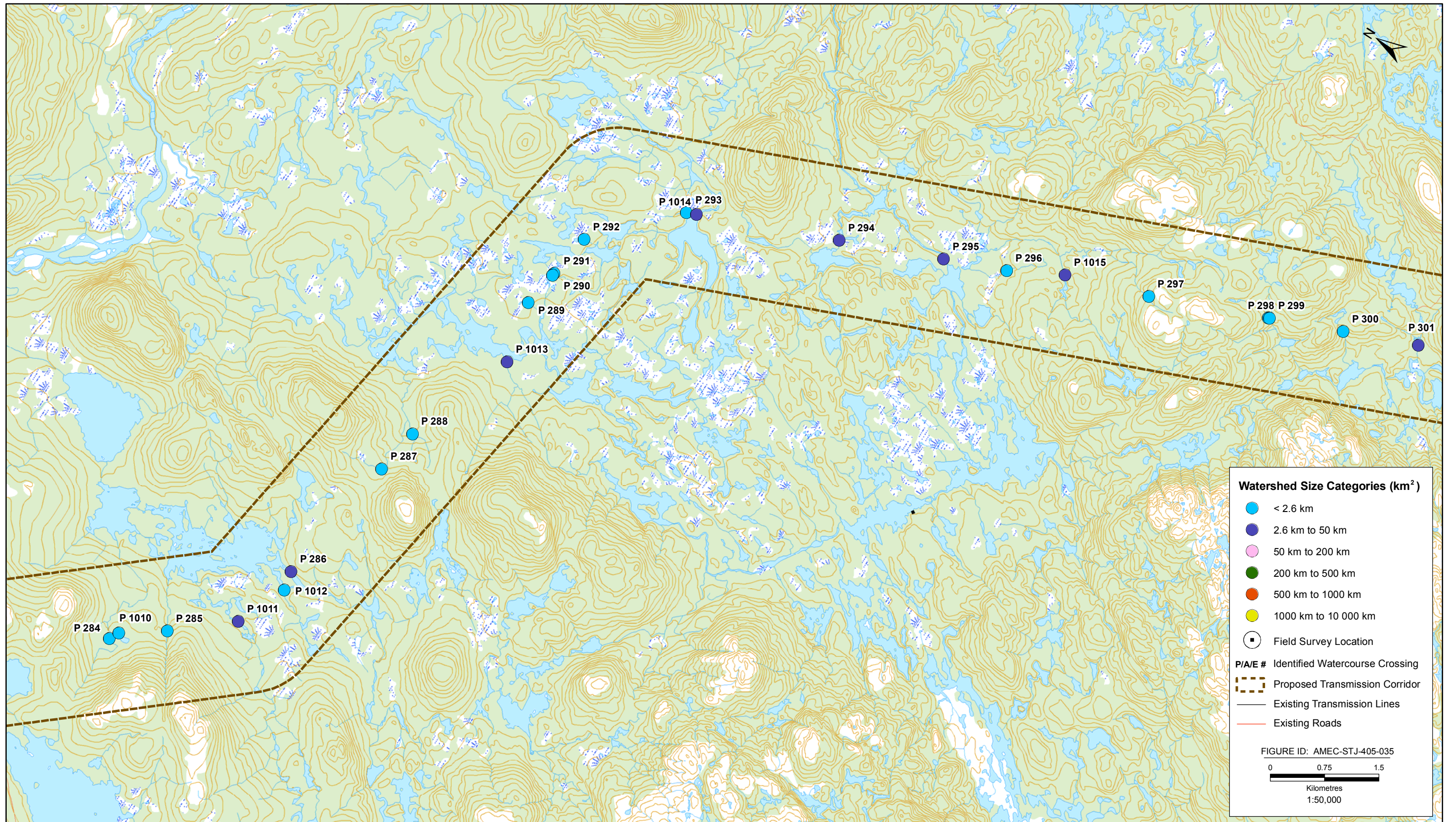


FIGURE 35



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 284	4.79	2.7	2.7	Fine	Flat	
P1010	2.71	16.6	6.4	Fine	Flat	
P 285	9.14	1.5	1.5	Coarse	Rapid	
P1011	3.60	14.9	9.8	Coarse	Flat	
P1012	1.49	29.9	13.0	Coarse	Flat	
P 286	6.97	2	2	Fine	Flat	
P 287	4.41	2	2	Fine	Flat	
P 288	2.08	3.7	3.7	Fine	Flat	
P1013	1.24	11.3	7.3	Fine	Flat	
P 289	2.24	2.9	2.9	Fine	Flat	
P 290	0.00	1.9	1.9	Fine	Flat	
P 291	0.00	1.9	1.9	Fine	Flat	
P 292	9.70	-	-	Fine	-	No visible stream
P1014	5.15	21.7	9.1	Fine	Flat	
P 293	3.41	-	-	Fine	-	No visible stream
P 294	0.55	2.1	2.1	Fine	Flat	
P 295	1.08	3	3	Fine	Flat	
P 296	2.70	2.3	2.3	Fine	Flat	
P1015	1.17	5.6	5.6	Fine	Flat	
P 297	7.31	2.1	2.1	Coarse	Riffle	
P 298	6.36	2.1	2.1	Coarse	Riffle	
P 299	6.49	2.1	2.1	Coarse	Riffle	
P 300	7.57	-	-	Coarse	Riffle	
P 301	2.30	4.3	4.3	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

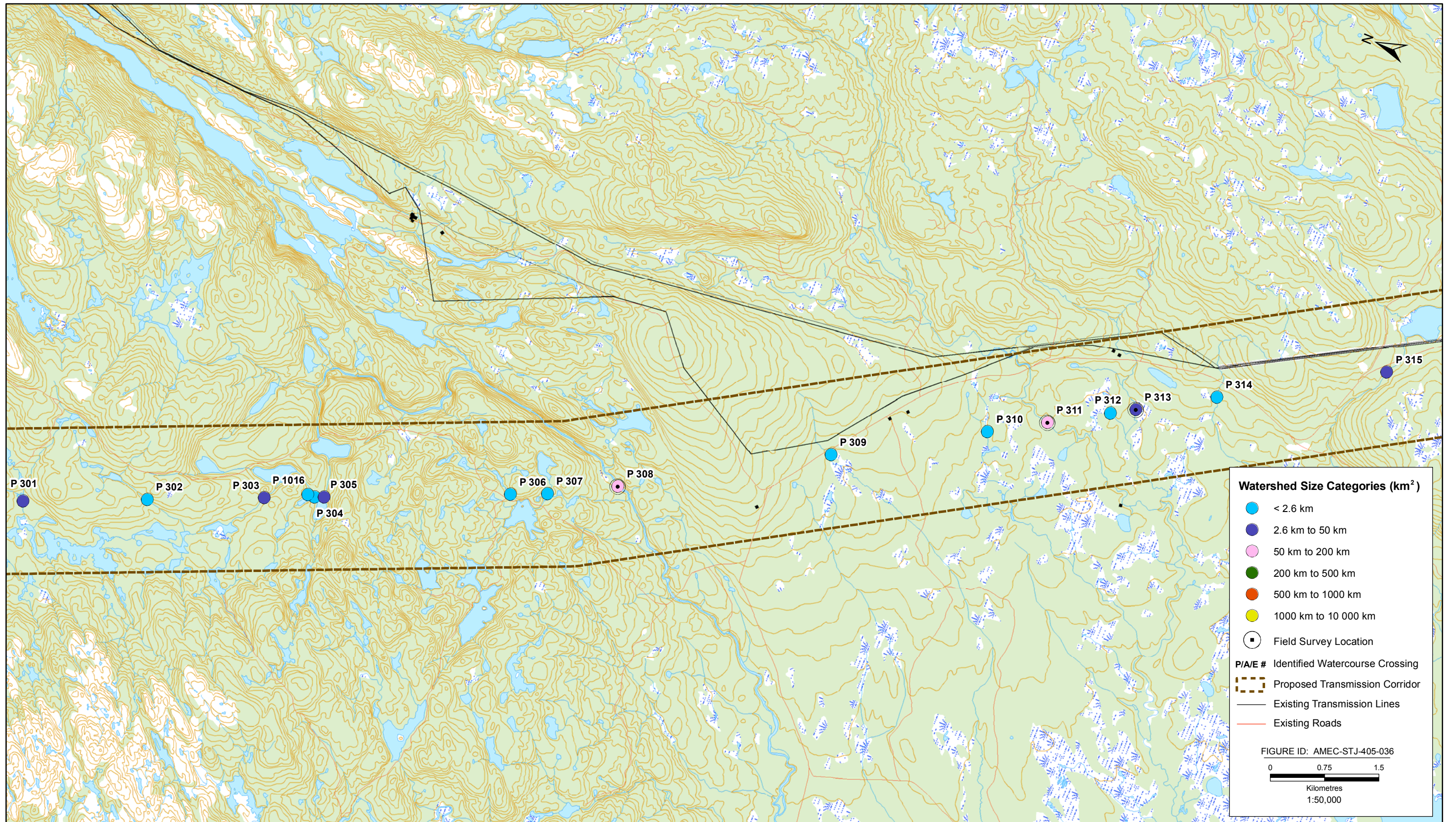


FIGURE 36



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
 Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 301	2.30	4.3	4.3	Fine	Flat	
P 302	4.16	-	-	-	-	No visible stream
P 303	1.82	-	-	-	-	No visible stream
P1016	2.20	9.8	9.8	Fine	Flat	
P 304	2.06	-	-	-	-	No visible stream
P 305	1.22	-	-	-	-	No visible stream
P 306	7.50	50.4	26.8	Coarse	Riffle	
P 307	4.24	-	-	-	-	No visible stream
P 308	1.84	21.1	13.4	Fine	Riffle	
P 309	3.07	-	-	-	-	No visible stream
P 310	1.27	-	-	-	-	No visible stream
P 311	1.30	22.9	17.6	Coarse	Riffle	
P 312	2.09	-	-	-	-	No visible stream
P 313	1.38	-	-	-	-	No visible stream
P 314	3.40	8.7	8.1	Fine	Riffle	
P 315	2.98	21.9	12.5	Fine	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 308	Taylor's Brook	Humber River	52.1	24.60	17.00	0.23*	0.47*	Run	Coarse	BT
P 311	Gales Brook	Humber River	57.0	33.10	7.30	0.17	0.46	Riffle	Medium	BT, AS
P 313	Gales Brook	Hampden River	12.0	7.65	2.90	0.19	0.17	Run	Medium	BT, AS, 3SB

^anames were taken from 1:50000 topographic map

* Velocities and depths across a complete transect could not be measured due to size of stream.

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 308



P 311



P 313



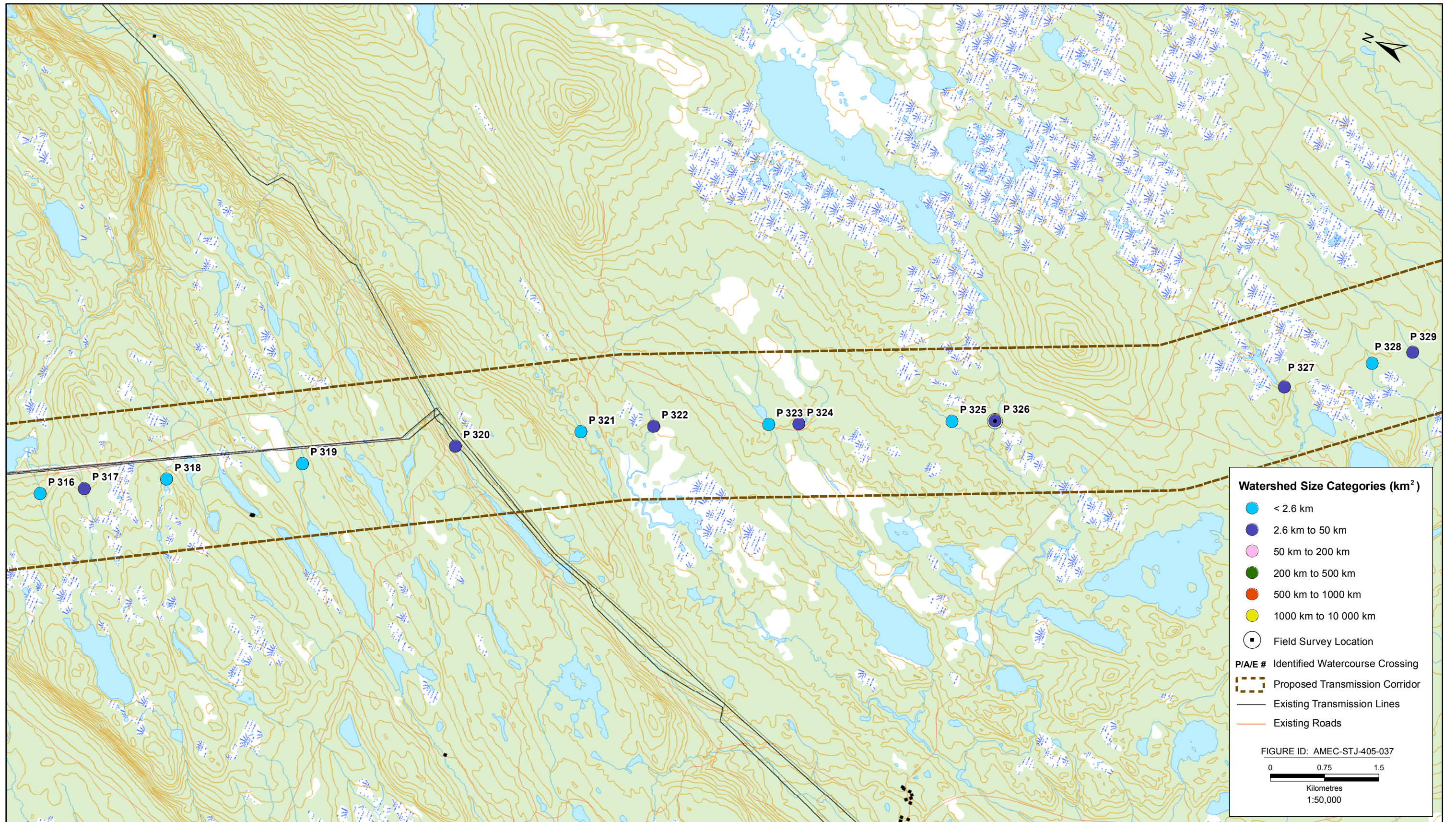


FIGURE 37



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 316	3.84	-	-	-	-	Pond
P 317	2.87	-	-	-	-	Pond
P 318	3.38	1.6	1.6	Fine	Riffle	
P 319	1.21	1.7	1.7	Coarse	Discontinuous	
P 320	0.91	1.7	1.7	Coarse	Riffle	
P 321	0.88	2.1	2.1	Fine	Riffle	
P 322	1.44	2.2	2.2	Coarse	Riffle	
P 323	2.30	1.2	1.2	Fine	Flat	
P 324	1.87	1.9	1.9	Coarse	Riffle	
P 325	1.84	2.1	2.1	Coarse	Riffle	
P 326	2.50	3.8	3.8	Coarse	Riffle	
P 327	1.96	3.7	3.7	Coarse	Riffle	
P 328	1.42	1.0	1.0	Fine	Riffle	
P 329	1.63	1.0	1.0	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 326	Main Brook	Grand Lake System	14.6	24.12	10.80	0.16	0.08	Steady	Coarse	BT

^a names were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 326



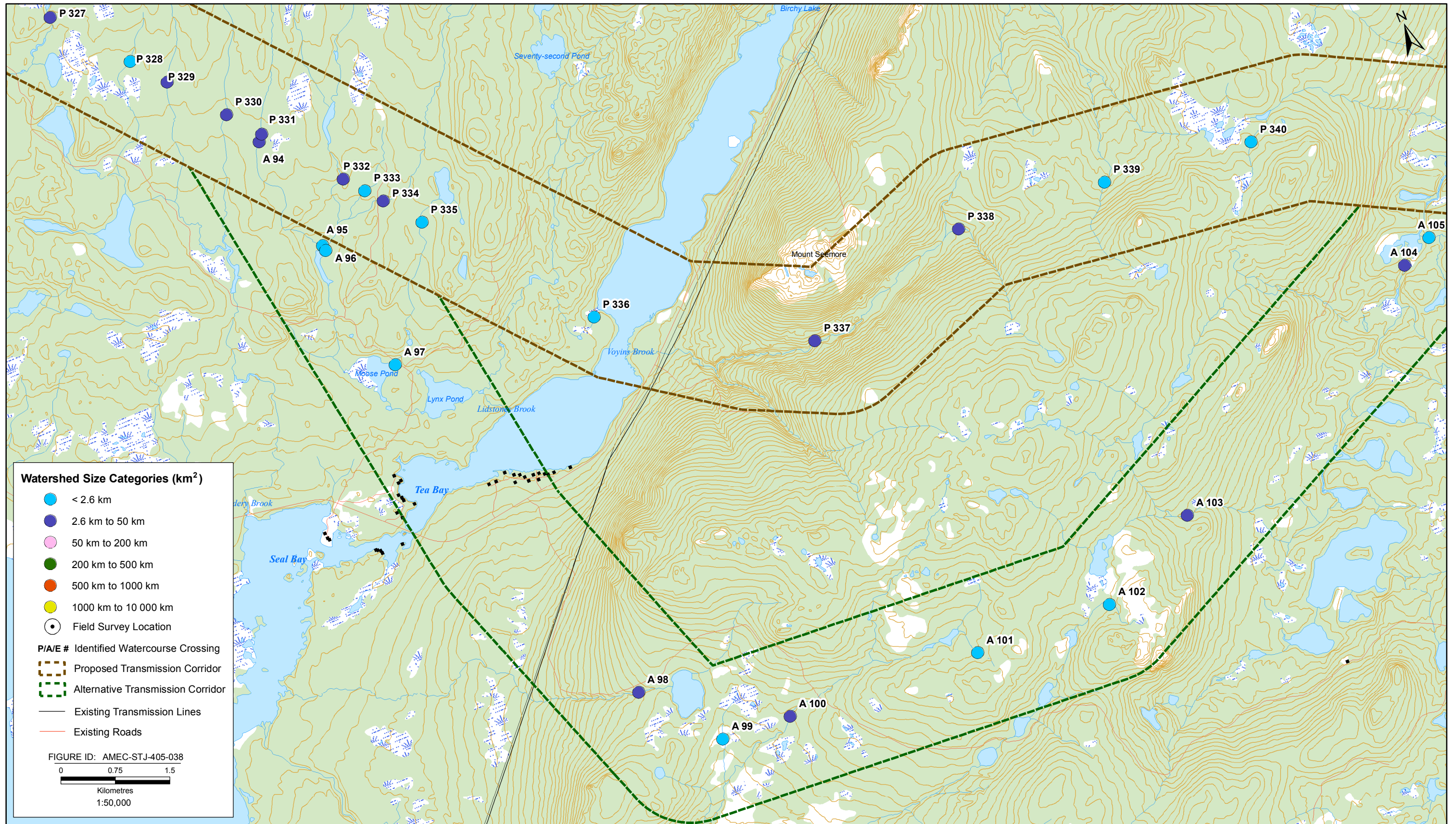


FIGURE 38

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 327	1.96	3.7	3.7	Coarse	Riffle	
P 328	1.42	1.0	1.0	Fine	Riffle	
P 329	1.63	1.0	1.0	Fine	Flat	
P 330	1.24	2.6	2.6	Fine	Riffle	
P 331	1.64	1.0	1.0	Fine	Riffle	
P 332	2.44	3.8	3.8	Fine	Riffle	
P 333	1.72	2.0	2.0	Coarse	Riffle	
P 334	2.04	1.0	1.0	-	Riffle	
P 335	2.12	2.8	2.8	Fine	Riffle	
P 336	3.14	0.9	0.9	Fine	Riffle	
P 337	3.60	3.1	3.1	Coarse	Riffle	
P 338	10.32	1.0	1.0	Coarse	Riffle	
P 339	6.61	0.8	0.8	Fine	Riffle	
P 340	3.10	2.2	1.6	Fine	Flat	
A 94	1.64	-	-	-	-	Missing Photo
A 95	0.00	2.9	2.9	Fine	Flat	
A 96	1.35	5.1	4.5	Fine	Flat	
A 97	5.62	1.0	1.0	Fine	Discontinuous	
A 98	7.49	-	-	-	-	Missing Photo
A 99	3.02	-	-	-	-	Missing Photo
A 100	2.97	-	-	-	-	Missing Photo
A 101	3.85	-	-	-	-	Missing Photo
A 102	3.88	-	-	-	-	Missing Photo
A 103	5.54	-	-	-	-	Missing Photo
A 104	2.86	-	-	-	-	Missing Photo
A 105	2.71	-	-	-	-	Missing Photo

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

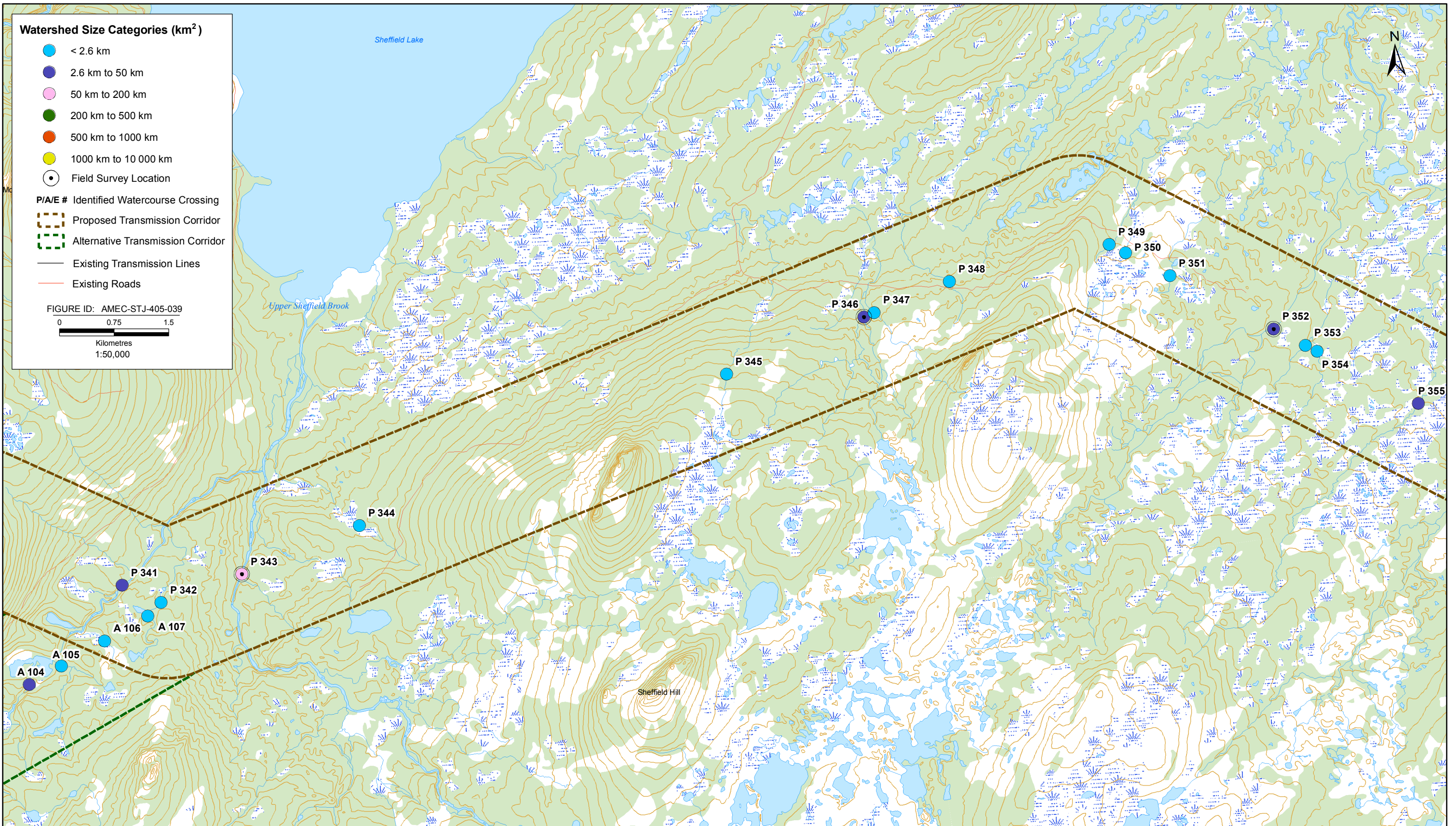


FIGURE 39



Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
A 106	2.86	-	-	-	-	Missing Photo
A 107	2.18	54.9	54.9	Coarse	Rapid	
P 341	2.87	11.5	11.5	Coarse	Rapid	
P 342	2.65	1.0	1.0	Fine	Riffle	
P 343	2.01	0.9	1.3	Coarse	Riffle	
P 344	3.14	2.1	2.1	Fine	Riffle	
P 345	4.76	0.5	0.5	Fine	Riffle	
P 346	3.80	1.5	1.5	Coarse	Riffle	
P 347	4.45	1.1	1.2	Coarse	Riffle	
P 348	3.61	0.4	0.4	Fine	Riffle	
P 349	2.70	2.8	2.8	Fine	Flat	
P 350	3.76	1.6	1.6	Fine	Riffle	
P 351	2.93	0.8	0.8	Fine	Riffle	
P 352	2.36	8.2	5.5	Coarse	Riffle	
P 353	2.20	2.1	1.8	Fine	Riffle	
P 354	2.25	2.2	2.2	Fine	Riffle	
P 355	1.43	5.1	4.8	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 343	Upper Sheffield Brook	Sheffield Lake	127.2	51.32	23.20	0.36	0.51	Riffle	Coarse	BT
P 346	Unknown	Sheffield Lake	10.8	15.48	4.60	0.2	0.19	Riffle	Coarse	BT
P 352	Burnt Berry Brook	Sheffield Lake	35.0	30.67	9.90	0.19	0.37	Riffle / Run	Coarse	BT

^a names were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 343



P 346



P 352



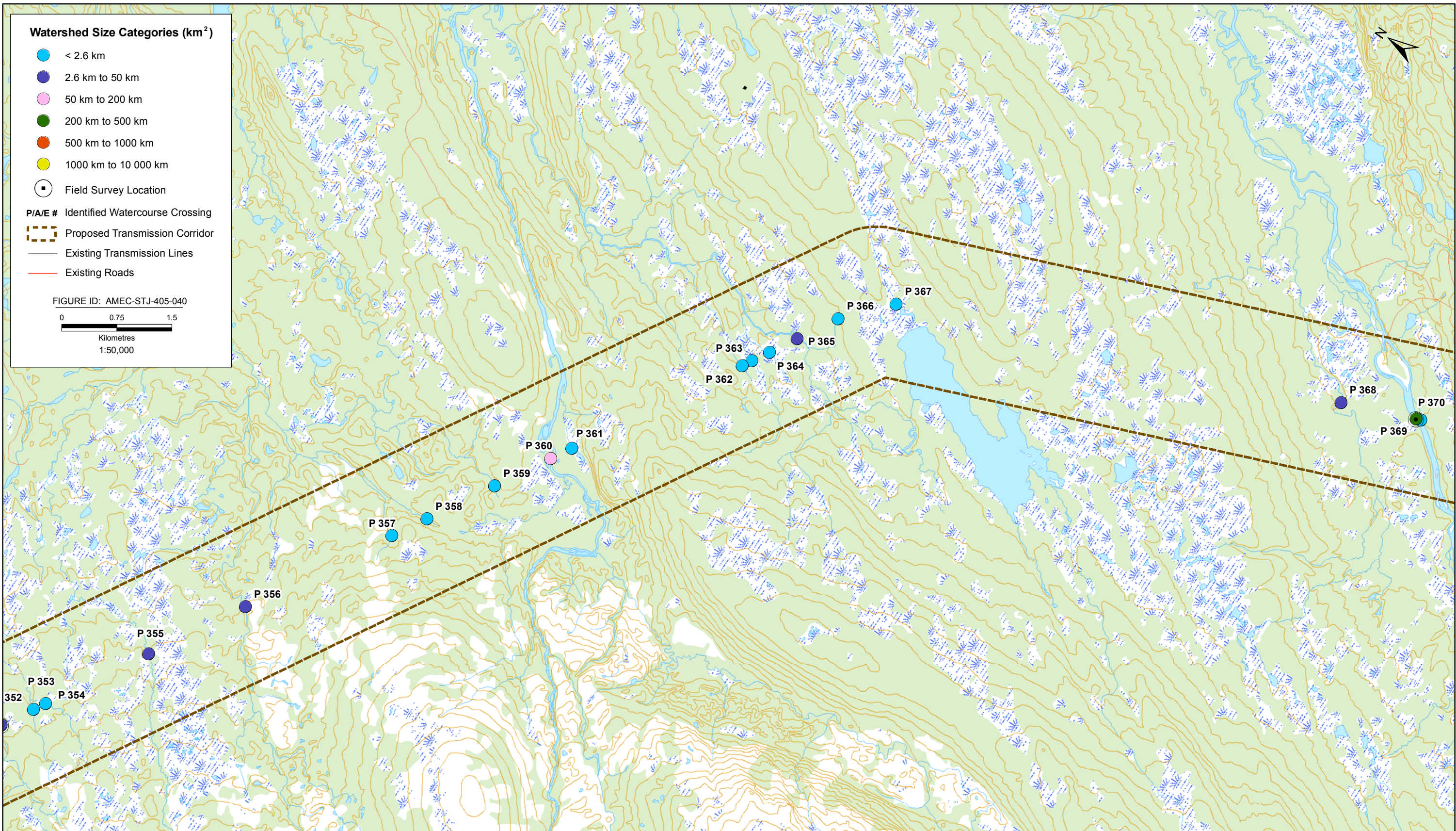


FIGURE 40



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 353	2.20	2.1	1.8	Fine	Riffle	
P 354	2.25	2.2	2.2	Fine	Riffle	
P 355	1.43	5.1	4.8	Coarse	Riffle	
P 356	1.43	3.9	3.9	Coarse	Riffle	
P 357	3.18	1.5	1.5	Fine	Riffle	
P 358	1.51	8.3	6.0	Fine	Flat	
P 359	1.58	1.7	1.7	Fine	Riffle	
P 360	0.21	37.8	25.0	Coarse	Riffle	
P 361	0.46	9.7	8.3	Fine	Flat	
P 362	1.49	3.0	3.0	Fine	Riffle	
P 363	1.74	1.7	1.3	Fine	Riffle	
P 364	1.50	1.4	1.4	Fine	Flat	
P 365	1.07	11.1	8.6	Coarse	Riffle	
P 366	2.00	0.8	0.8	Coarse	Riffle	
P 367	1.17	7.7	4.6	Fine	Flat	
P 368	0.29	12.8	8.9	Coarse	Flat	
P 369	0.35	86.2	53.3	Coarse	Riffle	
P 370	2.01	1.9	1.9	Coarse	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 369	South Brook	South Brook Halls Bay	271.6	57.32	46.00	0.21	0.48	Steady	Medium	None

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 369



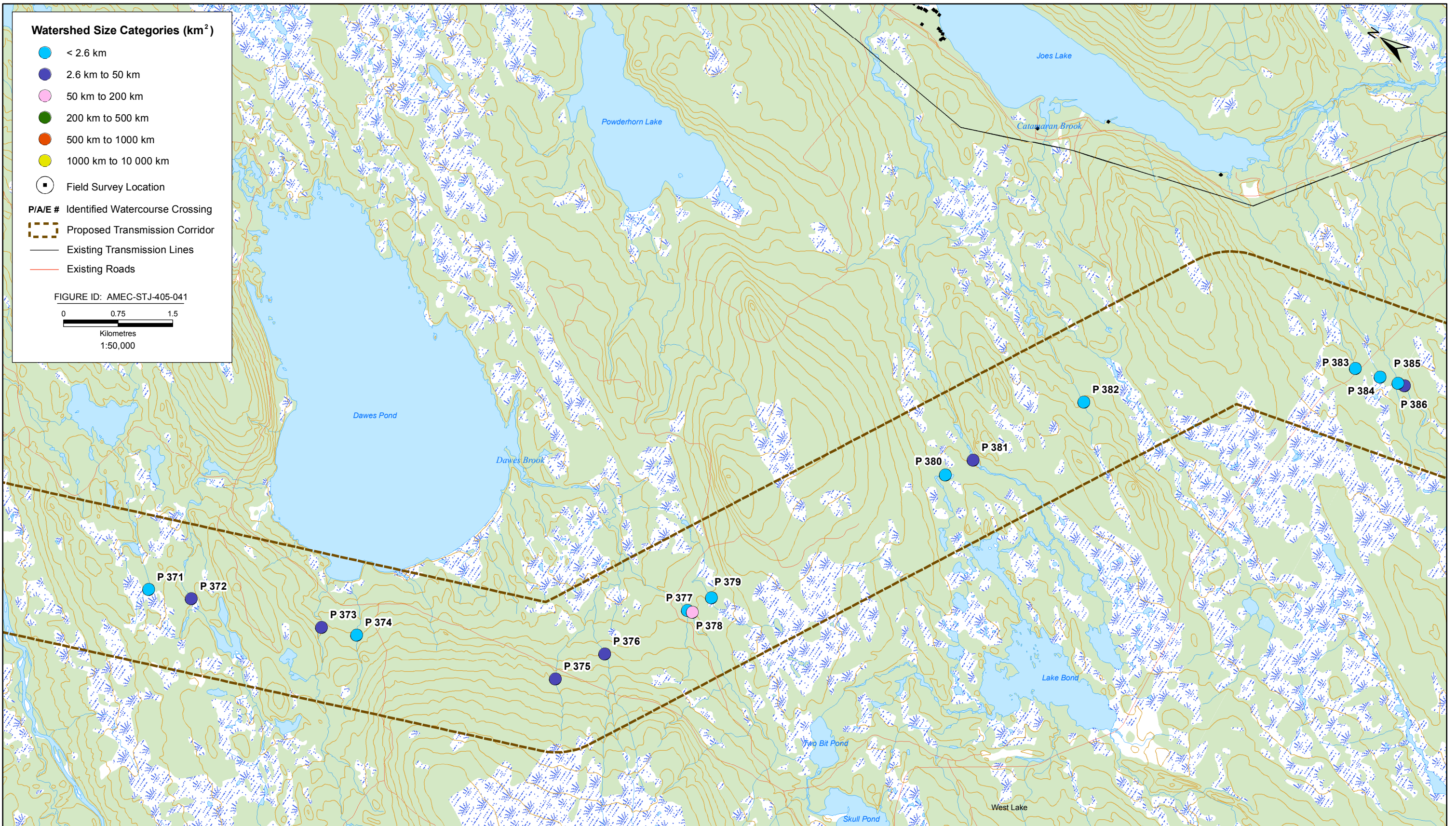


FIGURE 41



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 371	0.98	2.0	0.7	Fine	Riffle	
P 372	0.89	3.0	3.0	Fine	Riffle	
P 373	3.12	2.6	2.6	Coarse	Riffle	
P 374	3.23	23.8	0.7	Fine	Riffle	
P 375	4.26	1.5	1.5	Coarse	Riffle	
P 376	4.13	1.2	1.2	Coarse	Riffle	
P 377	2.76	2.0	2.0	Fine	Riffle	
P 378	1.09	5.4	4.5	Coarse	Riffle	
P 379	1.47	0.9	0.9	Fine	Flat	
P 380	0.00	1.3	1.3	Fine	Flat	
P 381	0.29	68.9	63.6	Coarse	Riffle	
P 382	2.73	1.0	1.0	Fine	Riffle	
P 383	1.28	1.2	1.2	Coarse	Riffle	
P 384	1.26	0.9	0.9	Fine	Flat	
P 385	0.24	1.8	1.8	Fine	Riffle	
P 386	0.84	3.0	1.3	Fine	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

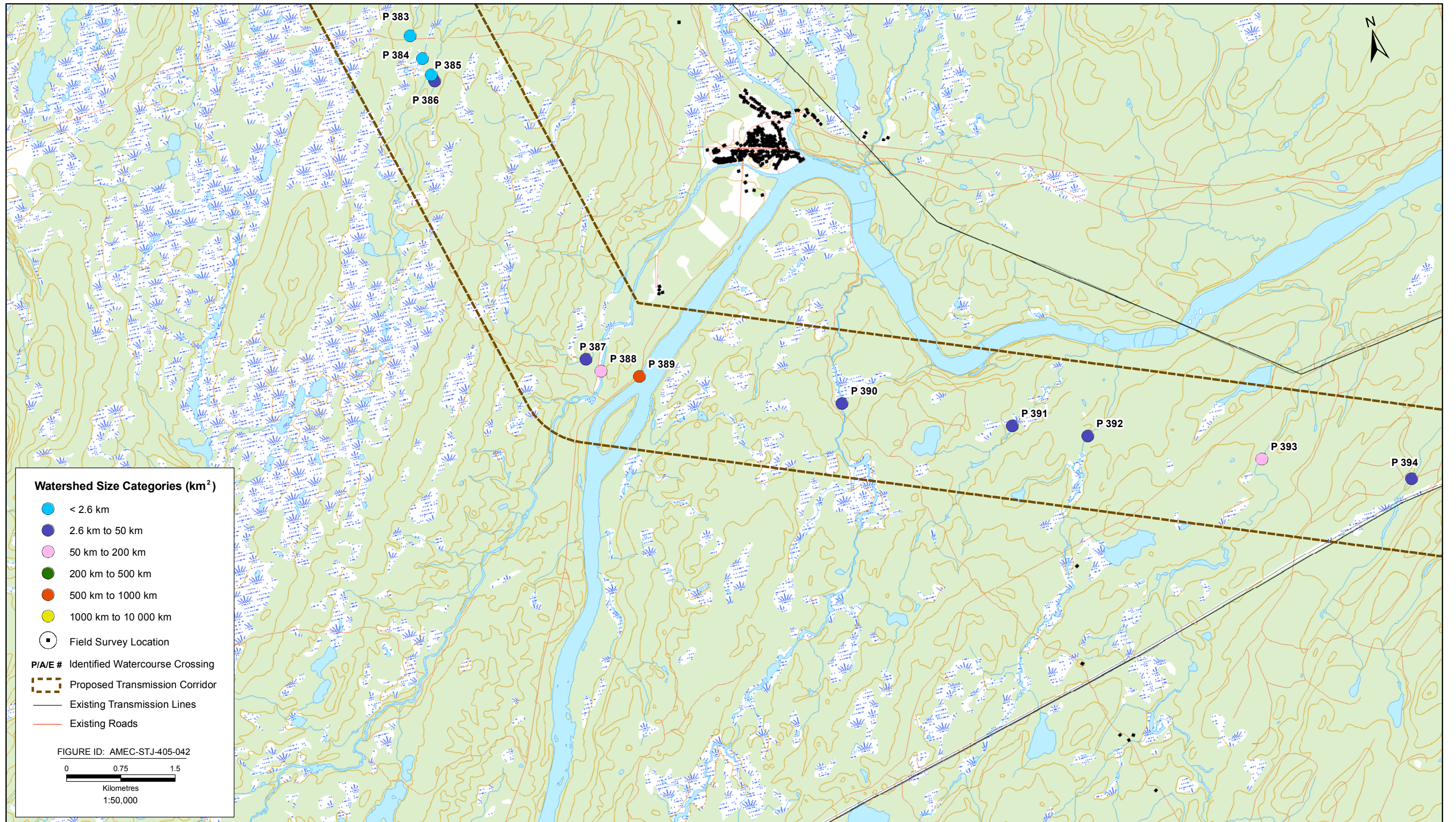


FIGURE 42



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 383	1.28	1.2	1.2	Coarse	Riffle	
P 384	1.26	0.9	0.9	Fine	Flat	
P 385	0.24	1.8	1.8	Fine	Riffle	
P 386	0.84	3.0	1.3	Fine	Riffle	
P 387	2.20	1.1	1.1	Fine	Riffle	
P 388	0.51	32.1	29.1	Coarse	Riffle	
P 389	0.34	294.0	285.1	Coarse	Riffle	
P 390	1.24	10.1	7.1	Coarse	Riffle	
P 391	1.52	1.7	1.7	Fine	Riffle	
P 392	2.37	3.3	3.3	Fine	Riffle	
P 393	0.56	12.7	10.1	Coarse	Riffle	
P 394	0.82	2.1	2.1	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

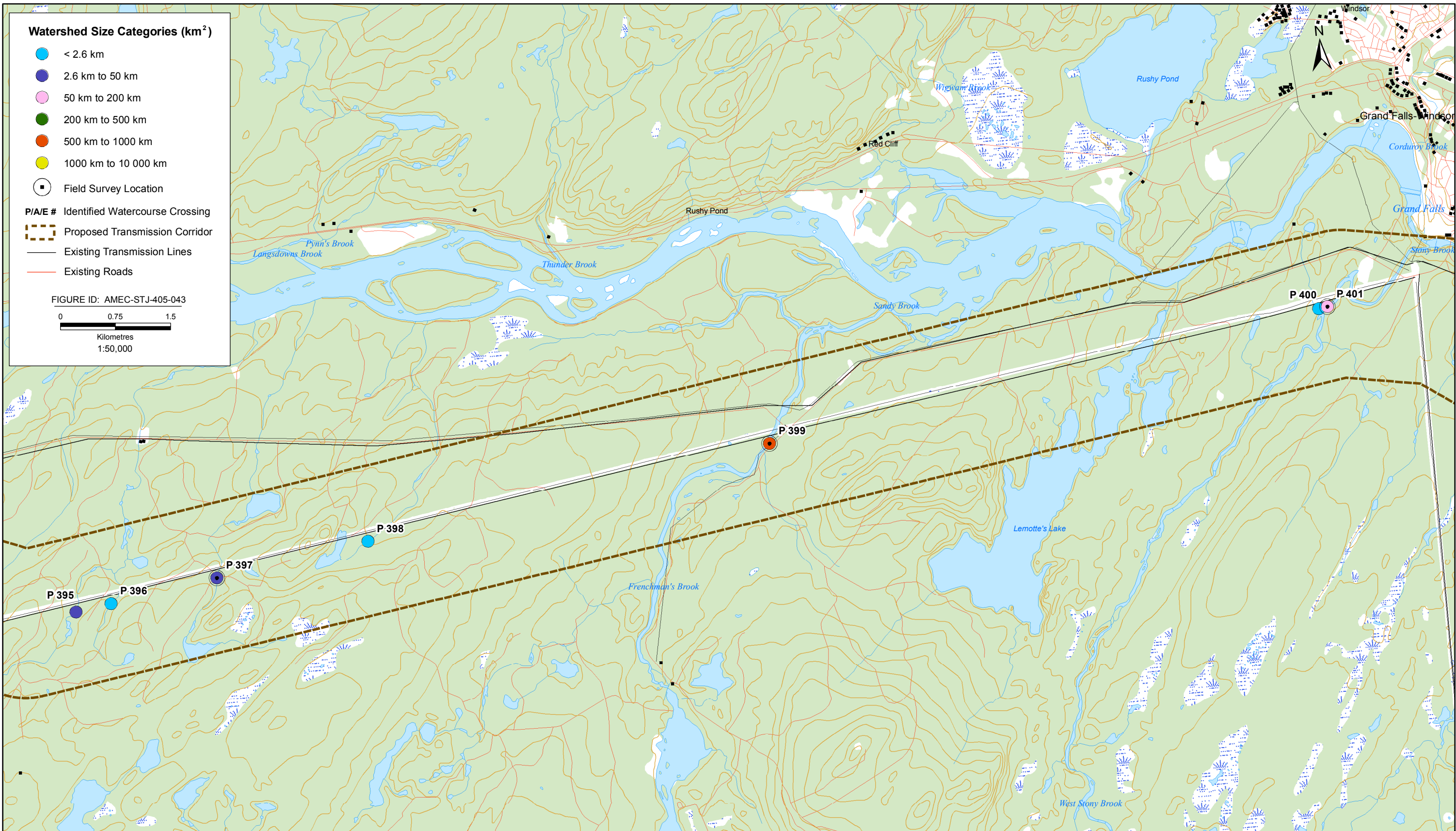


FIGURE 43



Labrador - Island Transmission Link: Strait of Belle Isle to Central Newfoundland
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 395	1.06	13.6	3.1	Coarse	Riffle	
P 396	2.34	5.1	5.1	Fine	Riffle	
P 397	2.80	9.0	5.6	Coarse	Riffle	
P 398	2.25	1.8	1.8	Coarse	Riffle	
P 399	0.35	74.8	59.8	Coarse	Riffle	
P 400	3.10	1.0	1.0	Coarse	Riffle	
P 401	0.53	33.7	27.6	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 397	Unknown	Exploits River	2.6	5.52	2.60	0.14	0.42	Run	Medium	AS, BT
P 399	Sandy Brook	Exploits River	595.3	56.52	45.50	0.28	0.60	Run	Medium	AS, 3SB
P 401	Stoney Brook	Exploits River	172.8	30.22	22.00	0.19*	0.32*	Riffle	Coarse	AS, 3SB

^a names were taken from 1:50000 topographic map

* Velocities and depths across a complete transect could not be measured due to size of stream.

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 397



P 399



P 401



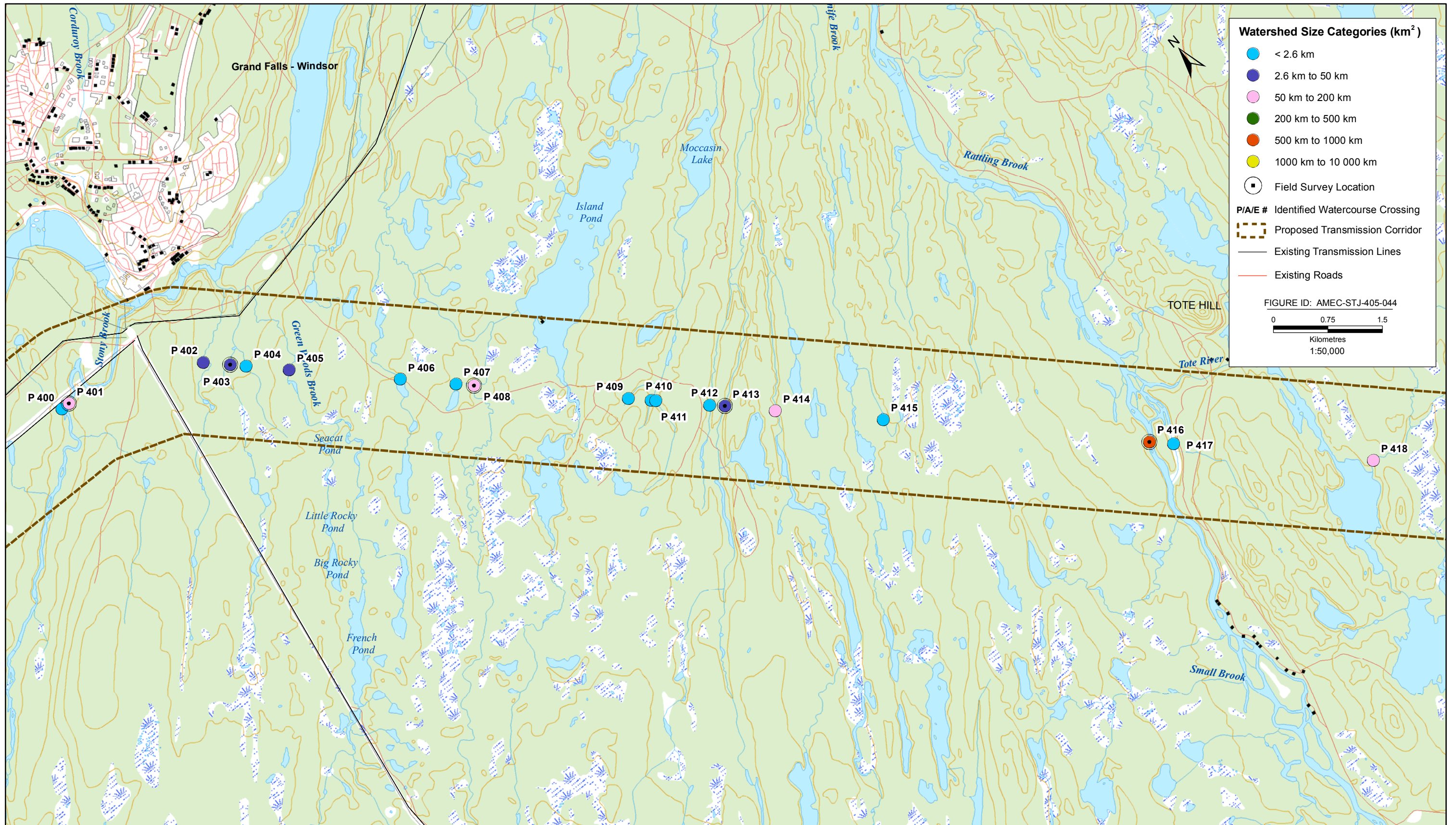


FIGURE 44



Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 400	3.10	1.0	1.0	Coarse	Riffle	
P 401	0.53	33.7	27.6	Coarse	Riffle	
P 402	1.37	19.3	12.6	Fine	Riffle	
P 403	1.63	2.4	2.4	Fine	Riffle	
P 404	1.91	1.8	1.8	Coarse	Riffle	
P 405	2.03	26.0	17.8	Coarse	Riffle	
P 406	0.83	1.0	1.0	Coarse	Riffle	
P 407	0.55	0.9	0.9	Fine	Flat	
P 408	0.17	37.5	28.8	Coarse	Riffle	
P 409	1.45	0.7	0.7	Fine	Riffle	
P 410	1.38	0.5	0.5	Fine	Riffle	
P 411	0.76	10.4	10.4	Coarse	Flat	
P 412	0.79	1.8	1.8	Fine	Riffle	
P 413	0.62	1.0	1.0	Coarse	Riffle	
P 414	0.14	12.2	6.5	Fine	Flat	
P 415	0.68	0.7	0.7	Fine	Riffle	
P 416	0.63	81.8	65.0	Coarse	Riffle	
P 417	0.27	75.9	44.7	Coarse	Rapid	
P 418	1.44	4.8	2.0	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 403	Green Wood Brook	Exploits River	3.8	7.32	2.80	0.15	0.19	Riffle	Medium	AS, BT
P 408	Little Rattling Brook	Exploits River	70.0	10.71	9.00	0.47	0.27	Riffle	Fine	AS, 3SB
P 413	Unknown	Exploits River	21.8	12.97	7.70	0.39	0.13	Riffle	Medium	AS
P 416	Rattling Brook	Rattling Brook	789.0	66.62	53.00	0.39*	0.29*	Run	Fine	AS, 3SB

^a names were taken from 1:50000 topographic map

* Velocities and depths across a complete transect could not be measured due to size of stream.

Brn - Brown Trout

PD - Pearl Dace

BT - Brook Trout

Bur - Burbot

AS - Atlantic Salmon

MS - Mottled Sculpin

3SB - Threespine Stickleback

A. Eel - American Eel

LND - Longnose dace

WS - White Sucker

P 403



P 408



P 413



P 416



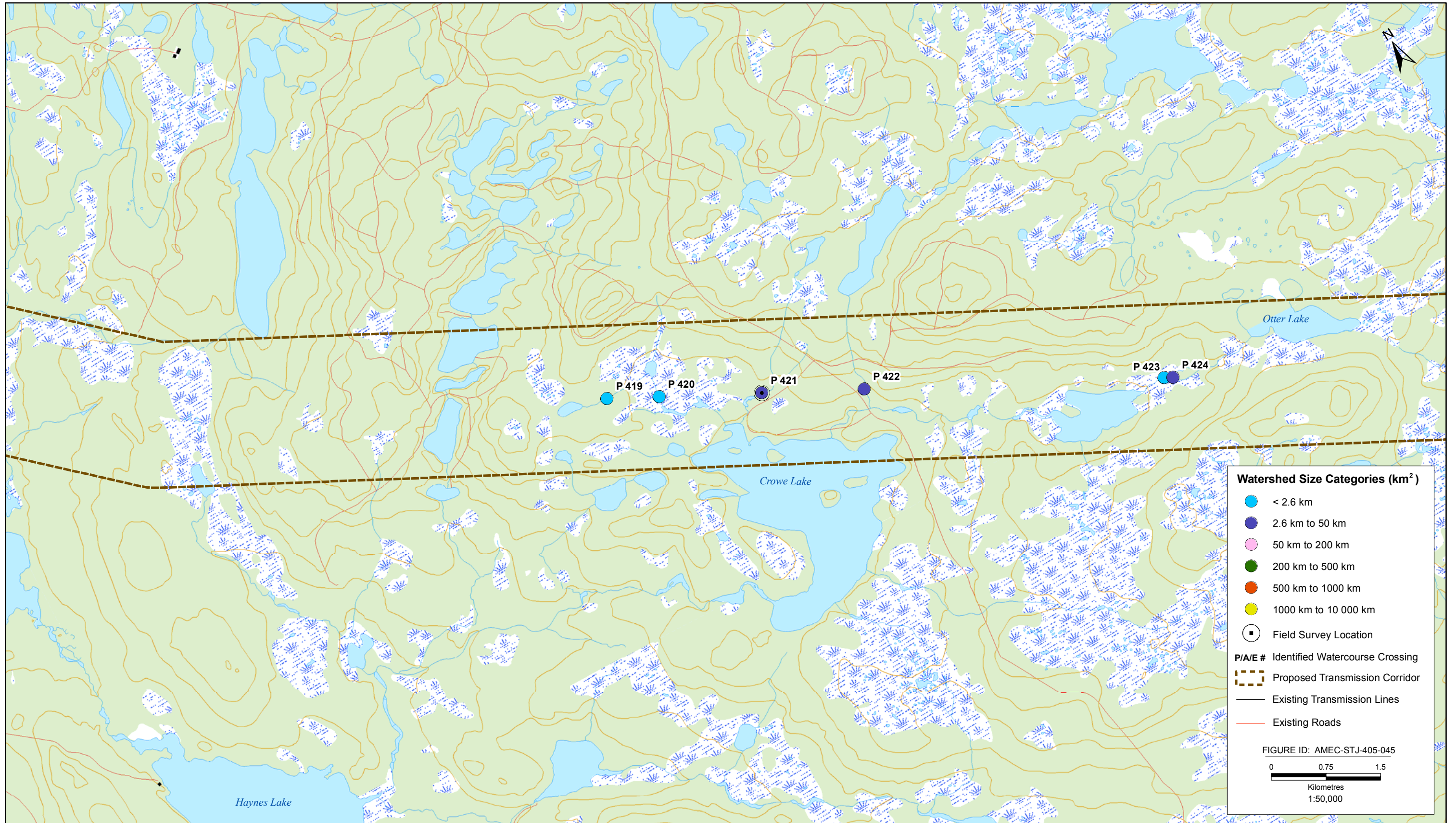


FIGURE 45



Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 419	0.97	2.2	2.2	Fine	Flat	
P 420	1.16	3.3	3.3	Fine	Flat	
P 421	1.76	2.2	2.2	Fine	Riffle	
P 422	4.35	1.4	1.4	Fine	Riffle	
P 423	1.34	2.1	2.1	Fine	Flat	
P 424	1.96	0.4	0.4	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 421	Unknown	Rattling Brook	4.6	13.60	3.80	0.09	0.20	Riffle	Medium	AS, BT

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 421



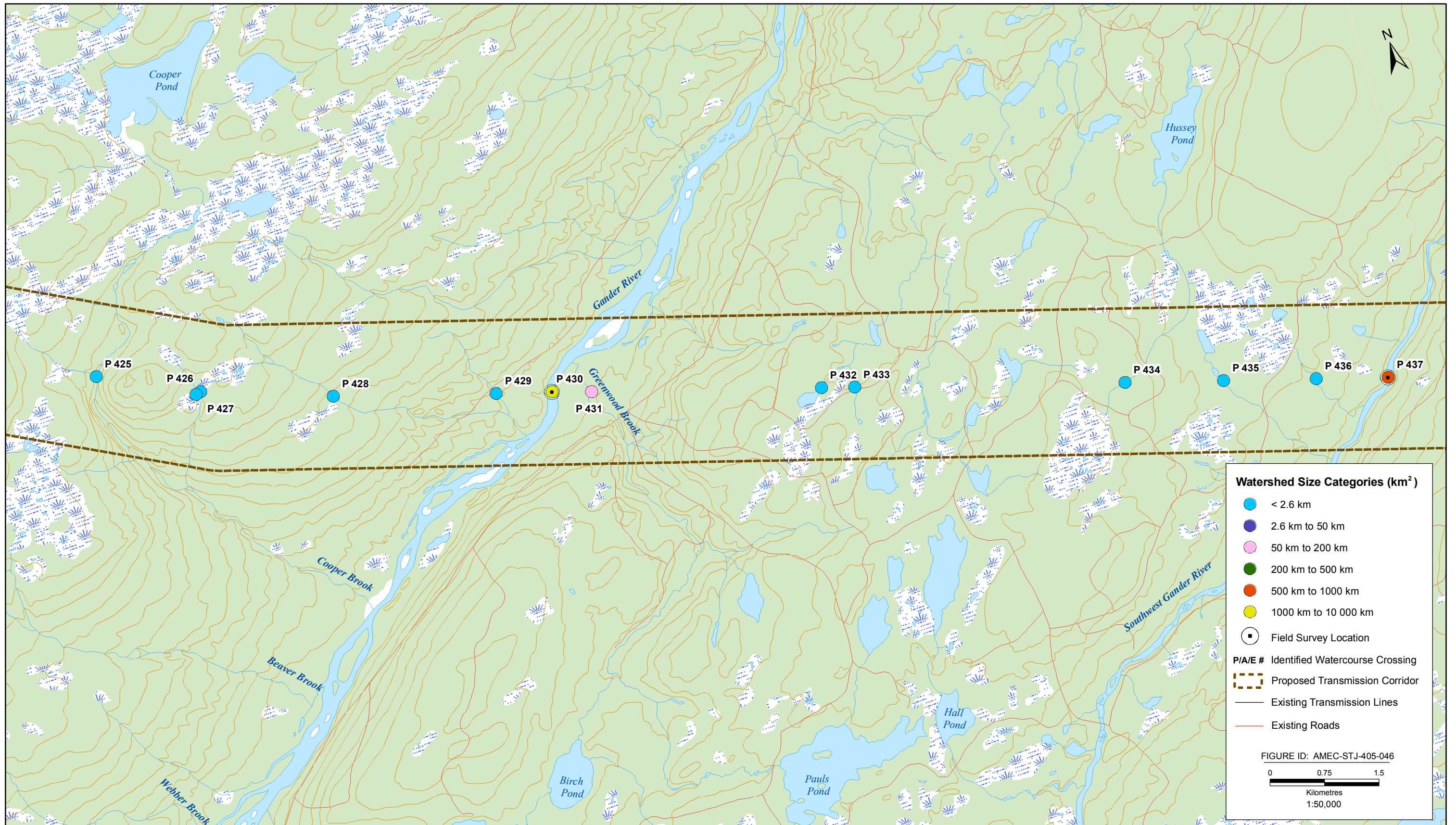


FIGURE 46



Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 425	3.89	13.6	8.2	Coarse	Riffle	
P 426	3.65	0.3	0.3	Fine	Flat	
P 427	3.63	0.7	0.7	Fine	Flat	
P 428	4.44	2.0	2.0	Fine	Riffle	
P 429	5.60	1.9	1.9	Coarse	Riffle	
P 430	0.00	115.5	106.4	Coarse	Riffle	
P 431	1.37	24.5	17.0	Fine	Flat	
P 432	1.58	1.4	1.4	Coarse	Riffle	
P 433	1.27	5.0	1.4	Fine	Riffle	
P 434	1.76	1.3	1.3	Fine	Flat	
P 435	1.75	7.3	2.1	Coarse	Flat	
P 436	2.17	1.0	1.0	Fine	Flat	
P 437	0.56	79.6	77.0	Coarse	Rapid	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 430	Gander River	Gander River	2016.1	33.10	26.00	0.49	0.61	Run	Medium	AS, 3SB
P 437	Southwest Gander River	Gander River	574.4	30.51	24.00	0.36	0.48	Run	Coarse	AS, BT

^a names were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 430



P 437



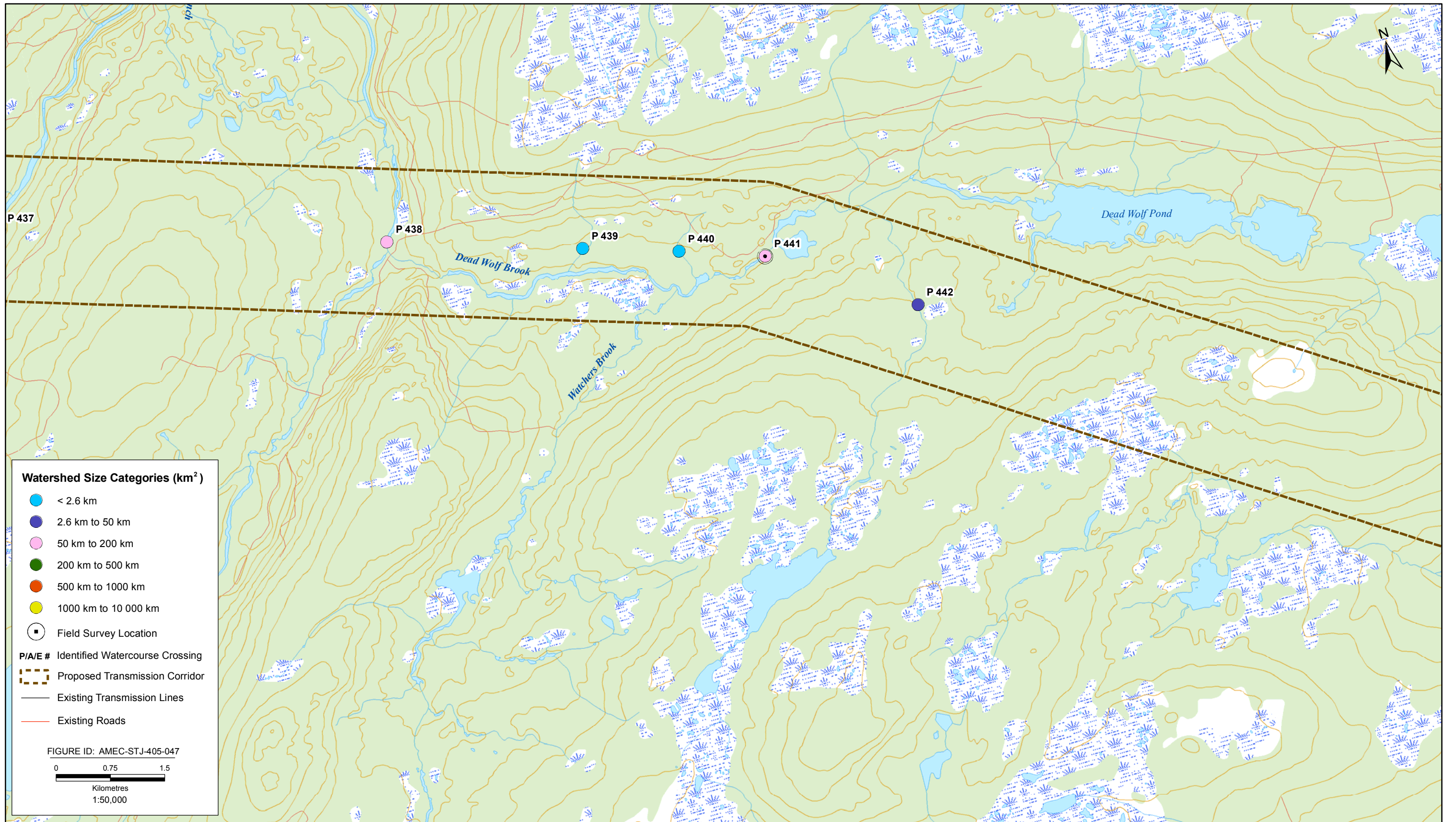


FIGURE 47



**Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey**

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 438	0.94	51.8	46.9	Coarse	Riffle	
P 439	5.31	2.5	2.5	Coarse	Riffle	
P 440	2.10	1.7	1.7	Fine	Riffle	
P 441	1.60	12.0	22.1	Coarse	Riffle	
P 442	1.86	7.8	3.7	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 441	Dead Wolf Brook	Gambo River	52.3	12.76	8.00	0.44	0.01	Steady	Coarse	BT

^a names were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 441



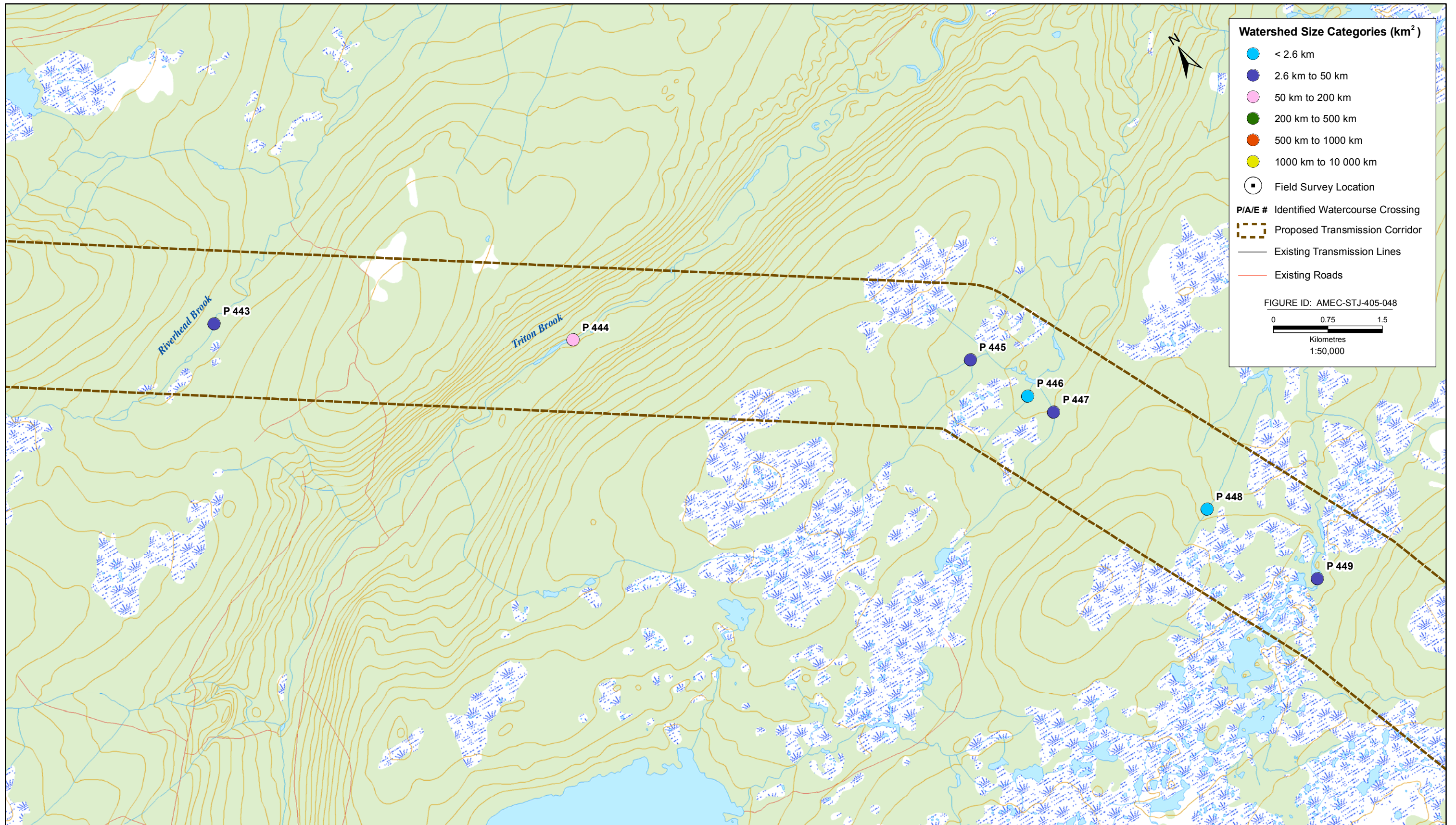


FIGURE 48



Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 443	0.77	13.0	10.1	Coarse	Flat	
P 444	0.39	37.1	17.9	Coarse	Flat	
P 445	1.93	37.1	57.0	Fine	Flat	
P 446	1.81	1.9	1.9	Fine	Flat	
P 447	1.20	20.7	5.7	Coarse	Riffle	
P 448	2.83	8.4	1.4	Fine	Riffle	
P 449	3.37	13.4	7.0	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muc
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black)

⁵Discontinuous = unable to follow entire stream, disappears within vegetator

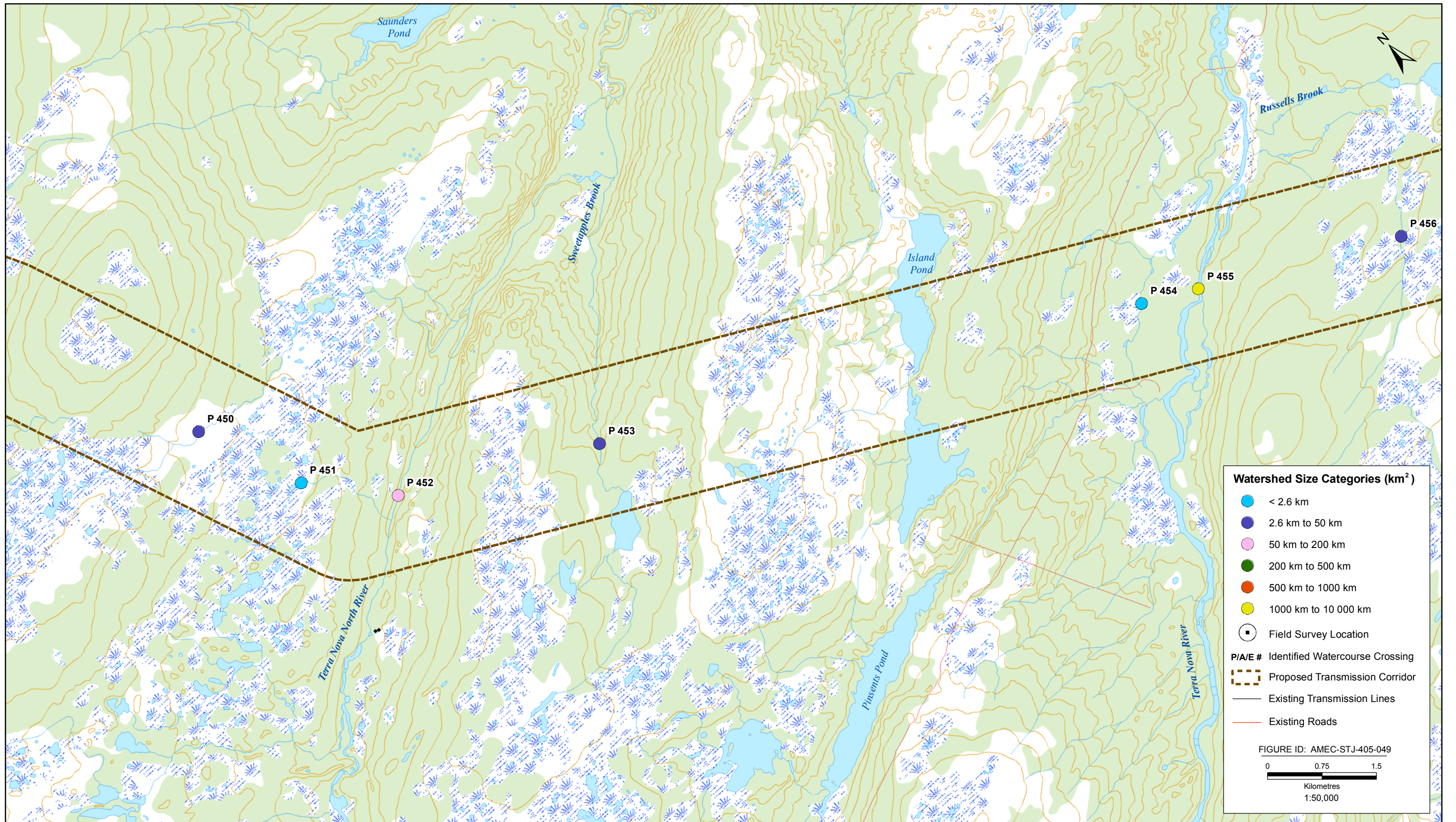


FIGURE 49

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 450	1.63	4.9	1.6	Fine	Flat	
P 451	3.87	2.3	1.2	Fine	Flat	
P 452	1.15	37.1	28.1	Coarse	Riffle	
P 453	2.87	7.3	5.6	Coarse	Riffle	
P 454	0.55	13.5	7.3	Coarse	Riffle	
P 455	0.16	43.3	36.2	Fine	Flat	
P 456	0.68	4.3	1.7	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

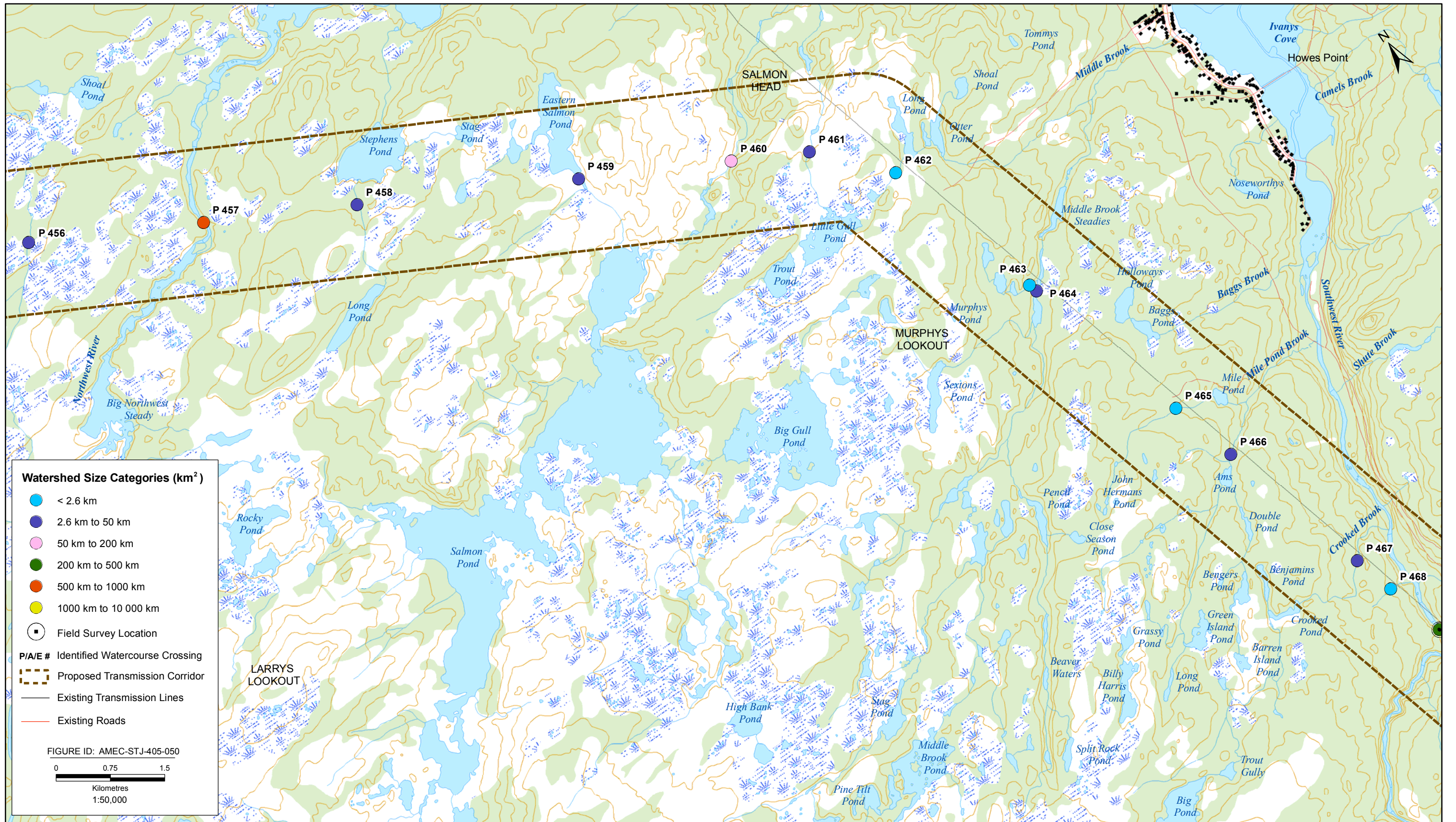


FIGURE 50



**Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey**

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 456	0.68	4.3	1.7	Fine	Flat	
P 457	0.36	28.3	28.3	Coarse	Rapid	
P 458	1.94	1.9	1.9	Fine	Flat	
P 459	5.38	4.9	1.4	Fine	Flat	
P 460	1.88	36.5	19.7	Coarse	Rapid	
P 461	1.62	1.1	1.1	Fine	Riffle	
P 462	2.63	1.0	1.0	Coarse	Riffle	
P 463	4.30	1.0	1.0	Fine	Riffle	
P 464	0.40	90.8	43.3	Coarse	Riffle	
P 465	2.27	1.0	1.0	Fine	Flat	
P 466	2.87	0.7	0.7	Fine	Riffle	
P 467	3.98	1.6	1.6	Fine	Flat	
P 468	7.96	1.9	1.9	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

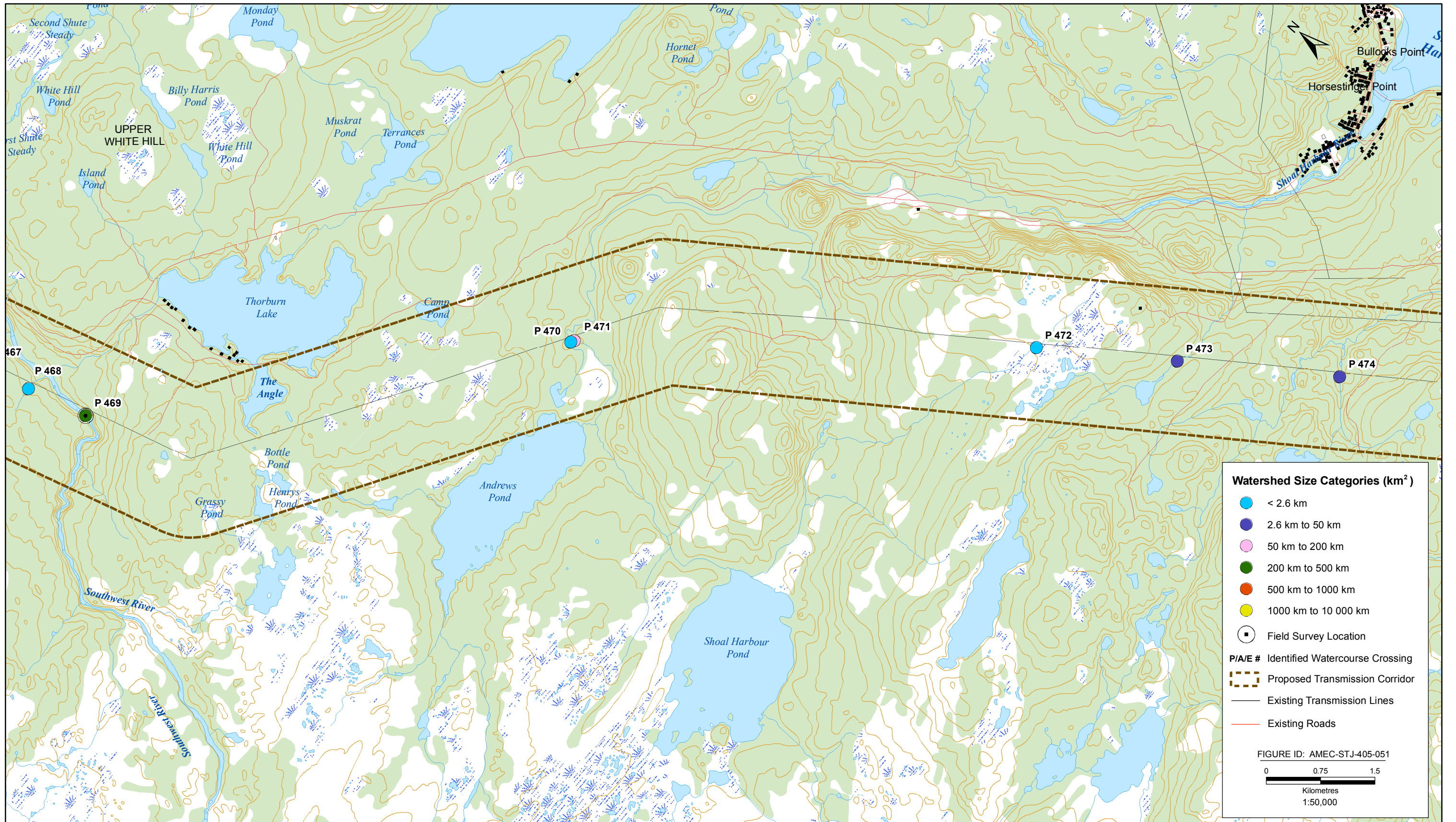


FIGURE 51



**Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey**

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 468	7.96	1.9	1.9	Coarse	Riffle	
P 469	1.78	29.2	26.4	Coarse	Riffle	
P 470	3.08	4.8	4.8	Fine	Riffle	
P 471	0.98	29.5	15.1	Coarse	Riffle	
P 472	2.64	0.8	0.8	Fine	Flat	
P 473	6.52	1.7	1.7	Coarse	Riffle	
P 474	3.68	1.6	1.6	Fine	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 469	Southwest River	Southwest Brook Port Blandford	404.9	45.10	31.00	0.33	0.42	Riffle	Coarse	AS

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 469



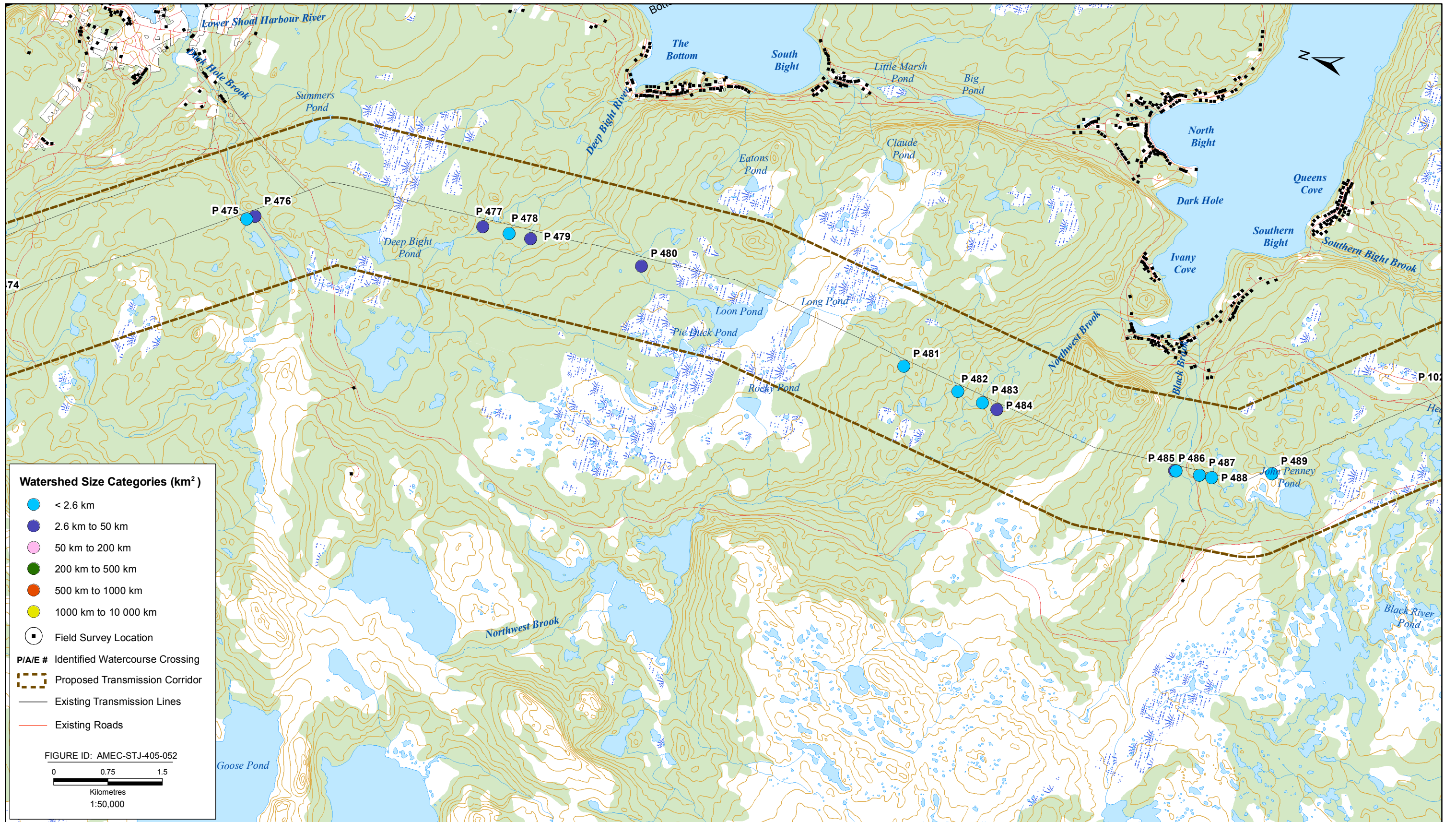


FIGURE 52



**Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey**

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 475	3.75	5.3	3.1	Coarse	Riffle	
P 476	18.67	4.0	4.0	Coarse	Riffle	
P 477	3.55	4.9	4.9	Coarse	Riffle	
P 478	5.37	1.0	1.0	Fine	Discontinuous	
P 479	5.23	1.0	1.0	Fine	Discontinuous	
P 480	2.89	1.7	1.7	Coarse	Discontinuous	
P 481	5.26	10.4	8.3	Fine	Riffle	
P 482	8.17	11.3	6.7	Fine	Rapid	
P 483	0.45	5.7	3.6	Fine	Riffle	
P 484	0.45	18.2	16.1	Coarse	Riffle	
P 485	0.00	11.7	8.2	Fine	Flat	
P 486	0.89	3.9	1.8	Fine	Flat	
P 487	4.44	1.0	1.0	Fine	Discontinuous	
P 488	7.10	3.1	3.1	Coarse	Riffle	
P 489	7.49	1.0	1.0	Fine	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

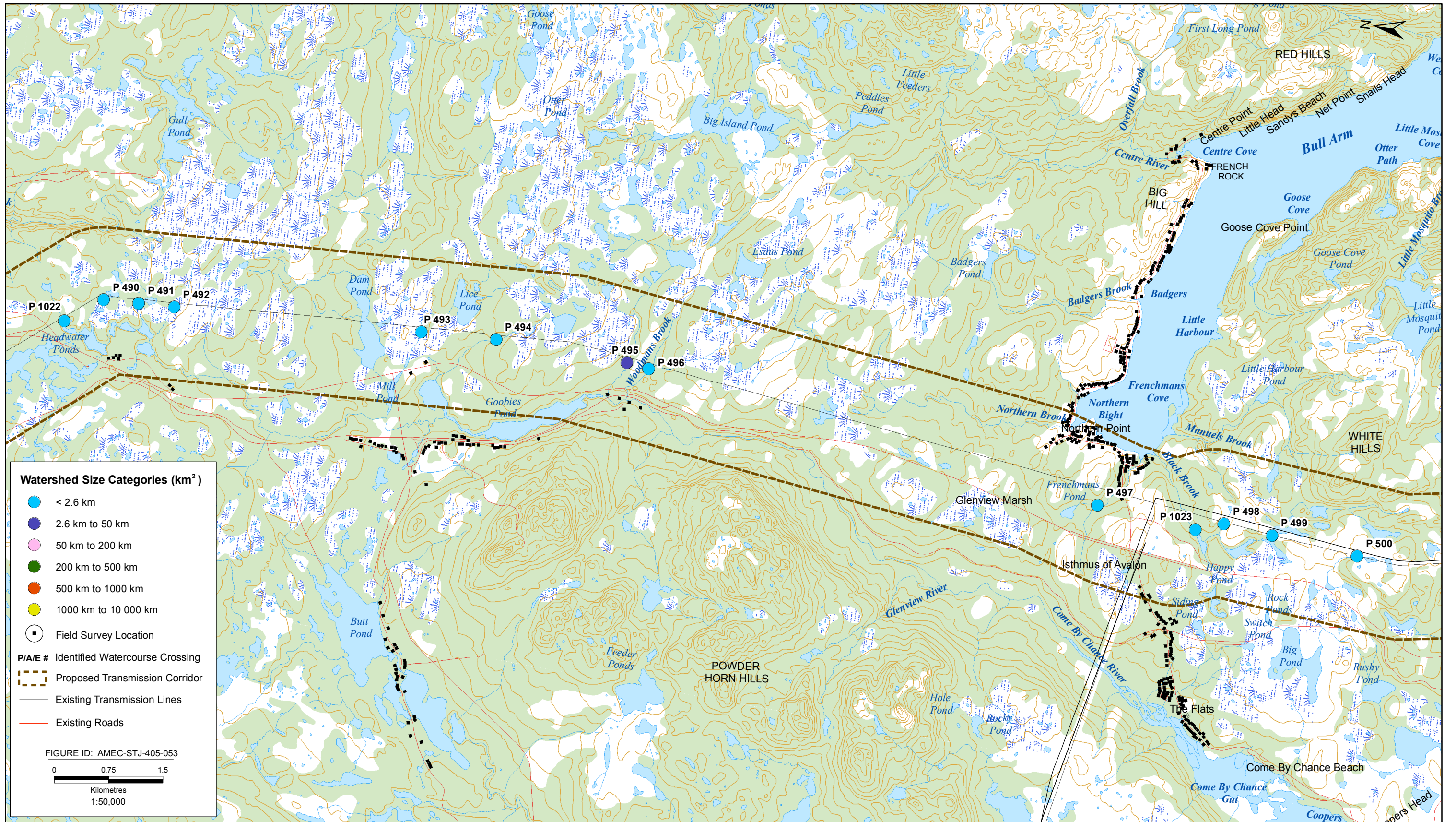


FIGURE 53

Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey



Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 1022	4.33	1.7	1.7	Fine	Flat	
P 490	3.01	1.0	0.5	Coarse	Riffle	
P 491	1.73	0.7	0.7	Fine	Riffle	
P 492	2.08	11.5	11.5	Fine	Riffle	
P 493	1.08	3.5	3.5	Fine	Flat	
P 494	3.54	1.0	1.0	Coarse	Riffle	
P 495	2.84	2.3	2.3	Coarse	Rapid	
P 496	4.06	2.7	2.3	Coarse	Riffle	
P 497	2.90	2.5	2.5	Coarse	Riffle	
P 1023	3.49	9.7	5.9	Coarse	Flat	
P 498	3.28	2.2	1.0	Fine	Flat	
P 499	6.53	8.8	4.5	Fine	Riffle	
P 500	5.60	55.1	1.0	Fine	Discontinuous	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation



FIGURE 54



Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 501	1.01	13.8	10.1	Coarse	Riffle	
P 502	2.70	9.8	4.6	Fine	Flat	
P 503	4.51	1.0	0.9	Fine	Flat	
P 504	1.65	3.0	3.0	Fine	Riffle	
P 505	3.77	1.0	1.0	Coarse	Riffle	
P 1001	5.50	3.4	3.4	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation



FIGURE 55



**Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey**

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 1001	5.50	3.4	3.4	Fine	Flat	
P 506	1.84	2.7	2.7	Coarse	Riffle	
P 507	5.04	1.0	1.0	Coarse	Flat	
P 1000	2.34	3.3	3.3	Fine	Flat	
P 508	3.60	1.0	1.0	Coarse	Riffle	
P 509	3.81	3.5	3.5	Coarse	Riffle	
P 510	4.43	1.0	1.0	Fine	Riffle	
P 511	2.81	3.3	3.3	Coarse	Riffle	
P 512	2.05	3.0	3.0	Coarse	Riffle	
P 513	4.01	2.0	2.0	Fine	Riffle	
P 514	3.40	2.8	2.8	Fine	Riffle	
P 515	2.97	5.2	5.2	Coarse	Riffle	
P 516	2.61	3.3	3.3	Fine	Riffle	
P 517	3.77	2.9	2.9	Fine	Riffle	
P 518	1.12	2.3	2.3	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

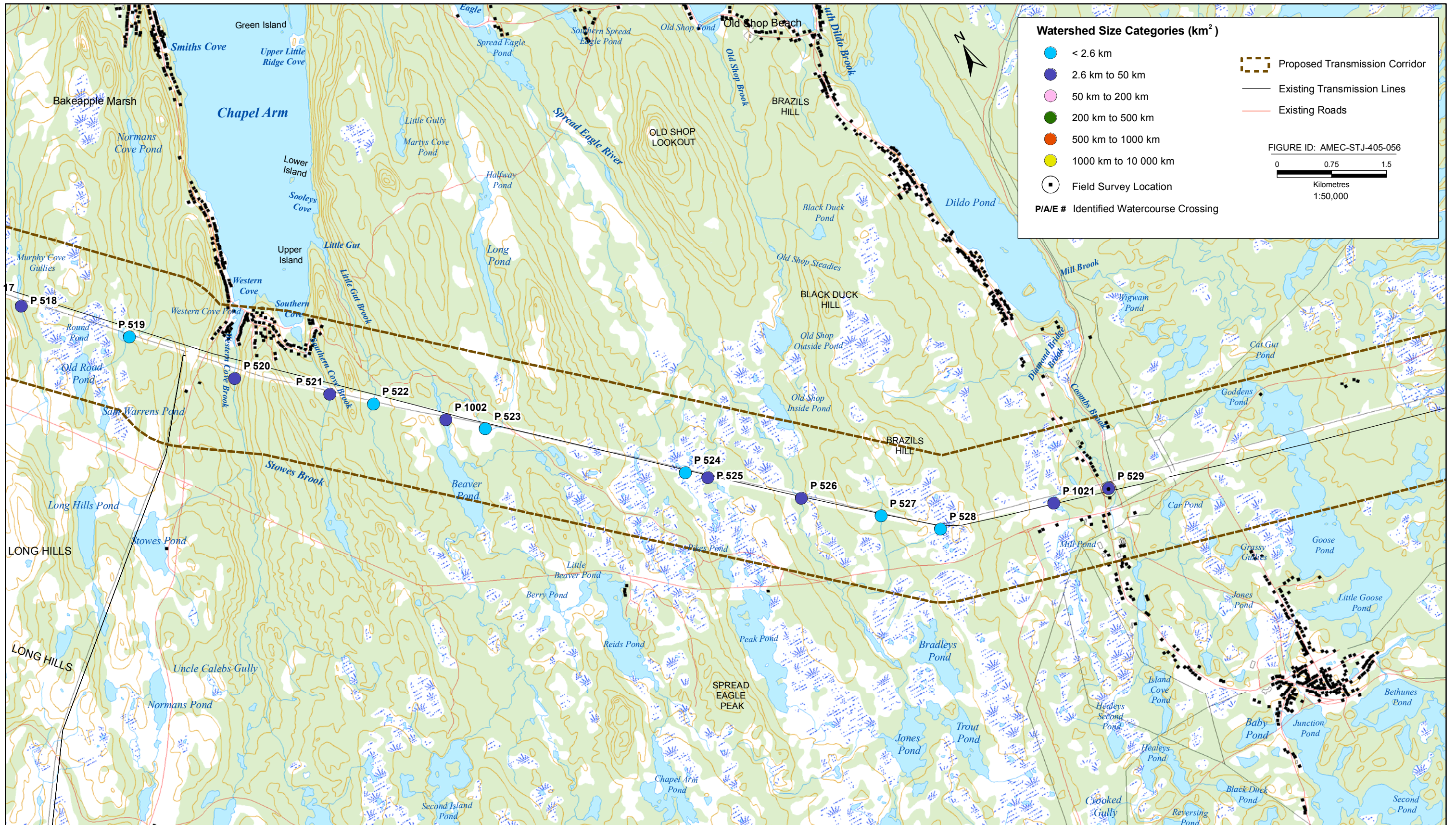


FIGURE 56



Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
 Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 518	1.12	2.3	2.3	Coarse	Riffle	
P 519	3.92	2.5	2.5	Fine	Riffle	
P 520	1.77	9.6	8.8	Coarse	Riffle	
P 521	0.71	4.1	4.1	Fine	Riffle	
P 522	0.57	3.3	3.3	Coarse	Riffle	
P1002	3.99	24.5	13.2	Fine	Flat	
P 523	1.66	7.6	7.6	Fine	Flat	
P 524	0.73	3.7	3.7	Fine	Riffle	
P 525	0.89	4.3	4.3	Fine	Flat	
P 526	0.30	14.9	9.4	Fine	Flat	
P 527	2.28	4.2	4.2	Coarse	Riffle	
P 528	1.98	2.0	2.0	Fine	Flat	
P1021	0.56	29.9	22.5	Fine	Flat	
P 529	0.64	9.2	7.2	Fine	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 529	Unknown	Spread Eagle River	11.2	8.20	3.10	0.28	0.18	Riffle	Medium	AS, BT, Brn

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 529



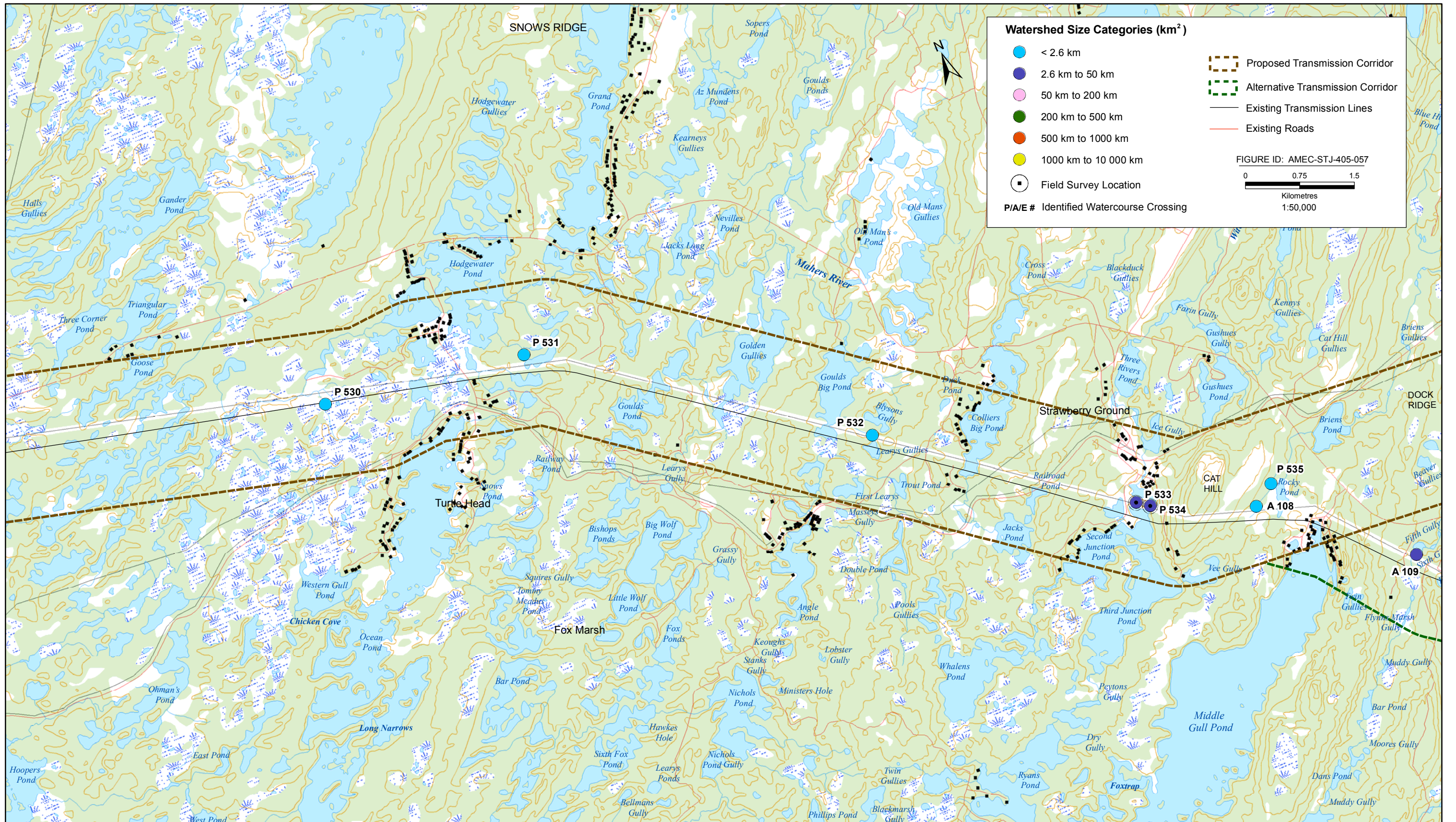


FIGURE 57

Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey



Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 530	1.27	1.0	1.0	Fine	Flat	
P 531	2.26	2.5	2.5	Fine	Riffle	
P 532	0.80	2.8	2.8	Fine	Riffle	
P 533	4.38	3.5	3.5	Fine	Riffle	
P 534	4.87	3.3	3.3	Fine	Riffle	
P 535	1.25	4.0	4.0	Fine	Flat	
A 108	1.25	7.5	3.4	Fine	Riffle	
A 109	13.29	40.6	11.6	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
P 533	Unknown	Witch Hazel Brook	25.4	3.00	2.50	0.10	0.49	Run	Medium	AS, BT, 3SB
P 534	Unknown	Witch Hazel Brook	24.7	6.25	4.65	0.12	0.45	Run	Medium	AS, BT, 3SB

^a names were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

P 533



P 534



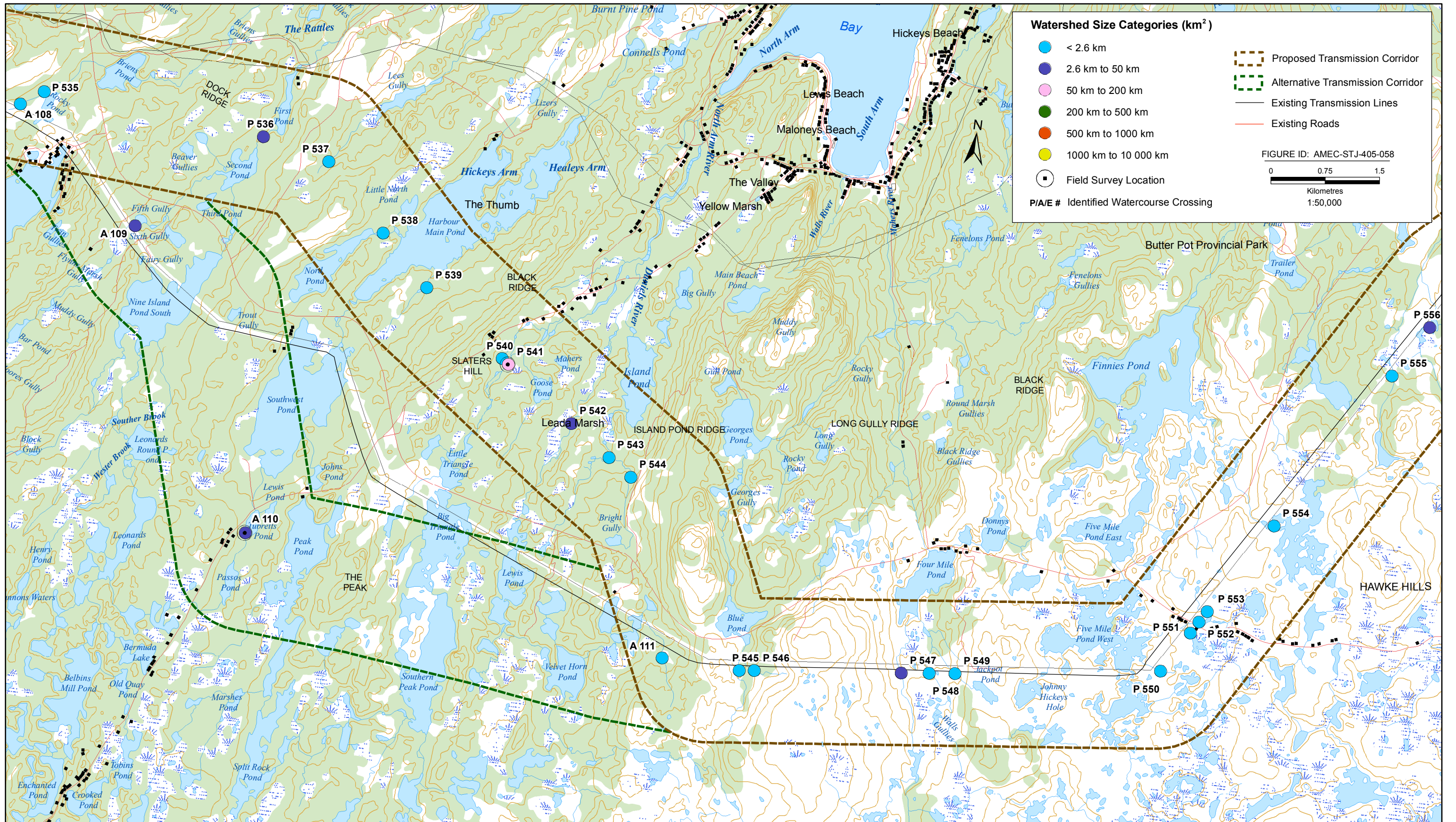


FIGURE 58



Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
 Freshwater Air Photo Interpretation/Field Survey

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 535	1.25	4.0	4.0	Fine	Flat	
P 536	1.64	12.8	9.5	Coarse	Riffle	
P 537	2.57	5.6	5.6	Fine	Riffle	
P 538	2.76	3.0	3.0	Fine	Riffle	
P 539	2.61	1.3	1.3	Fine	Riffle	
P 540	3.31	4.2	4.2	Fine	Riffle	
P 541	2.30	7.8	7.8	Coarse	Riffle	
P 542	0.73	9.0	8.1	Coarse	Riffle	
P 543	1.78	1.1	1.1	Fine	Riffle	
P 544	3.06	1.1	1.1	Fine	Riffle	
P 545	3.54	2.0	2.0	Fine	Riffle	
P 546	5.77	1.8	1.8	Fine	Riffle	
P 547	1.86	2.1	2.1	Fine	Flat	
P 548	4.19	1.1	1.1	Fine	Riffle	
P 549	6.91	1.4	1.4	Fine	Riffle	
P 550	4.03	0.8	0.8	Fine	Riffle	
P 551	3.06	1.7	1.7	Fine	Flat	
P 552	1.73	2.6	2.6	Fine	Riffle	
P 553	4.35	1.0	1.0	Fine	Riffle	
P 554	13.95	15.0	15.0	Fine	Flat	
P 555	3.46	1.1	1.1	Fine	Riffle	
P 556	5.67	6.5	4.9	Coarse	Riffle	
A 108	1.25	7.5	3.4	Fine	Riffle	
A 109	13.29	40.6	11.6	Fine	Flat	
A 110	5.28	234.0	234.0	Fine	Flat	
A 111	6.10	1.0	1.0	Fine	Flat	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck

Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation

Field Survey

Stream ID	Stream Name ^a	Watershed Name	Measured Watershed Size (km ²)	Channel Width (m)	Wetted Width (m)	Average Measured Depth (m)	Average Measured Velocity (m/s)	Habitat Type	Dominant Substrate	Species Captured
A 110	Unknown	Northern Arm River	15.2	1.50	1.50	0.10	0.30	Run	Fine	AS, BT, Brn
P 541	Daniels River	Northern Arm River	51.0	5.80	5.20	0.28	0.11	Run	Medium	AS, 3SB

^anames were taken from 1:50000 topographic map

Brn - Brown Trout

BT - Brook Trout

AS - Atlantic Salmon

3SB - Threespine Stickleback

LND - Longnose dace

PD - Pearl Dace

Bur - Burbot

MS - Mottled Sculpin

A. Eel - American Eel

WS - White Sucker

A 110



P 541



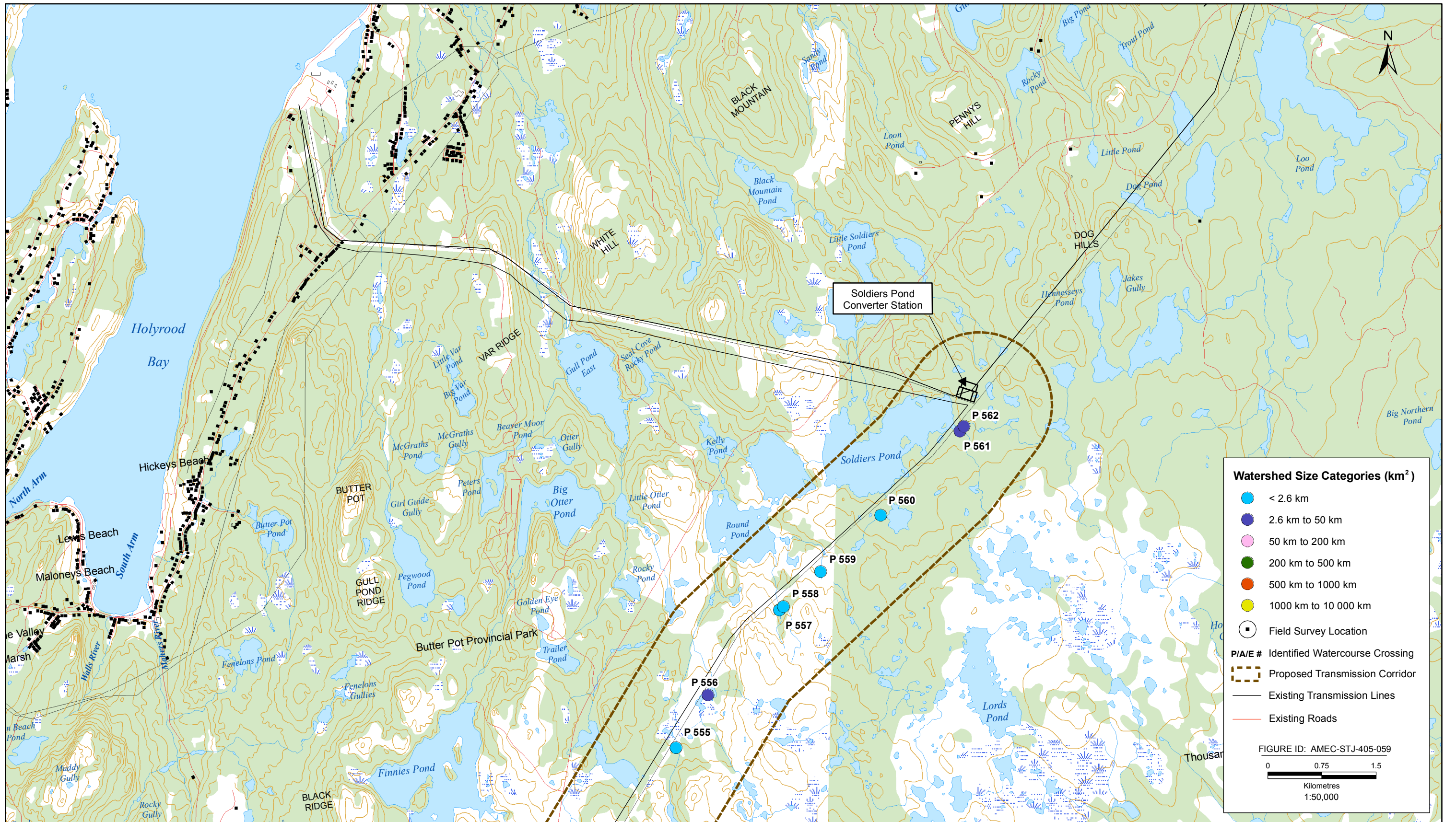


FIGURE 59



**Labrador - Island Transmission Link: Central Newfoundland to Soldiers Pond
Freshwater Air Photo Interpretation/Field Survey**

Air Photo Interpretation

Stream ID	Slope ¹ (%)	Channel Width ² (m)	Wetted Width ³ (m)	Dominant Substrate ⁴	Flow Morphology ⁵	Observations
P 555	3.46	1.1	1.1	Fine	Riffle	
P 556	5.67	6.5	4.9	Coarse	Riffle	
P 557	6.43	2.0	2.0	Fine	Riffle	
P 558	4.78	2.0	2.0	Fine	Riffle	
P 559	3.53	4.8	4.8	Fine	Riffle	
P 560	2.19	2.2	2.2	Fine	Flat	
P 561	2.11	2.1	2.1	Coarse	Riffle	
P 562	2.93	3.9	3.9	Coarse	Riffle	

¹change in elevation of the water's surface over a given length

²width of a channel bank to bank

³width where water is present

⁴Coarse = substrate composition > 50% boulder/bedrock, Medium = substrate composition > 50% rubble/cobble, Fine = substrate composition > 50% gravel/sand/silt/muck
Rapid = large amount of white water, Riffle = white water is visible with little areas of white mixed with black (calmer water), Flat = no white water (black),

⁵Discontinuous = unable to follow entire stream, disappears within vegetation