4.0 Plant Field Studies

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4.0 PLANT FIELD STUDIES

4.1 INTRODUCTION

The main objectives of vegetation field studies were to provide expanded baseline information in support of the Floodway Expansion Project environmental impact statement. The field studies obtained sufficient information to outline data deficiencies to assist in the ongoing definition of the Project and to assess environmental impacts. This involved conducting field investigations to evaluate plant communities within the Floodway right-of way (ROW) and West Dyke. The results of these investigations are discussed in Sections 6 and 7 of the environmental impact statement and outlined in detail in this Supplemental Documentation. The data contained in this report supplements the preliminary information found in Appendix 7B of the environmental impact statement. This supplemental documentation contains an updated and more comprehensive species list, as well as another round of surveys, which provides details on the extent of mowing operations and on the ongoing recovery of the vegetation found on the Floodway Base. This report also contains information on *Amorpha fruticosa*, a provincially rare species found on the Floodway Lower Slope.

The new information in this supplemental document has been reviewed by the environmental assessment team and does not change the assessment reported in the EIS.

4.2 METHODS

4.2.1 HELICOPTER OVER-FLIGHT

To assist in the vegetation fieldwork planning, a helicopter flight occurred in September 2003 over the Floodway Channel, 100 metre (m) upstream and downstream of the Seine River Siphon and 1 km upstream and 2 km downstream of the outlet channel on the Red River. Global Positioning System (GPS) video obtained from the flight was used to develop aquatic and terrestrial maps that, in the Floodway Outlet, Floodway Channel and Seine River Syphon area, were further refined by ground-based surveys. Detailed Geographic Information System (GIS) maps of the Floodway Channel aided in the selection of representative sites for additional ground-based characterization studies.

4.2.2 VEGETATION SURVEY

4.2.2.1 Sampling Areas

<u>Floodway</u>

Sampling of plant communities was conducted in five major sections of the Floodway. Sample locations (Figure 4.2-1) were chosen for each section during an overview of the entire Floodway that took place on May 6, 2004, and included:

- Location 1: the southwest area near the Seine River Siphon (Site 1 and 2).
- Location 2: the vicinity of the Trans-Canada Highway Bridge (Site 3 and 4);
- Location 3: near Gunn Road between the Canadian Pacific Railway (CPR) Keewatin Bridge and the Manitoba Hydro transmission line (Site 5 and 6);
- Location 4: the vicinity of Dunning Crossing (Site 7 and 8); and
- Location 5: an area just south of the Floodway Outlet structure at the northern end of the Floodway near a large wind turbine (Site 9 and 10);

Vegetation analysis took place on both sides of the Floodway Channel at each of the five sample locations. This resulted in a total of ten Sample Sites (5 locations x 2 sides). Three transects were sampled at each site in the first survey and two transects were sampled at each site in the second survey.

West Dyke

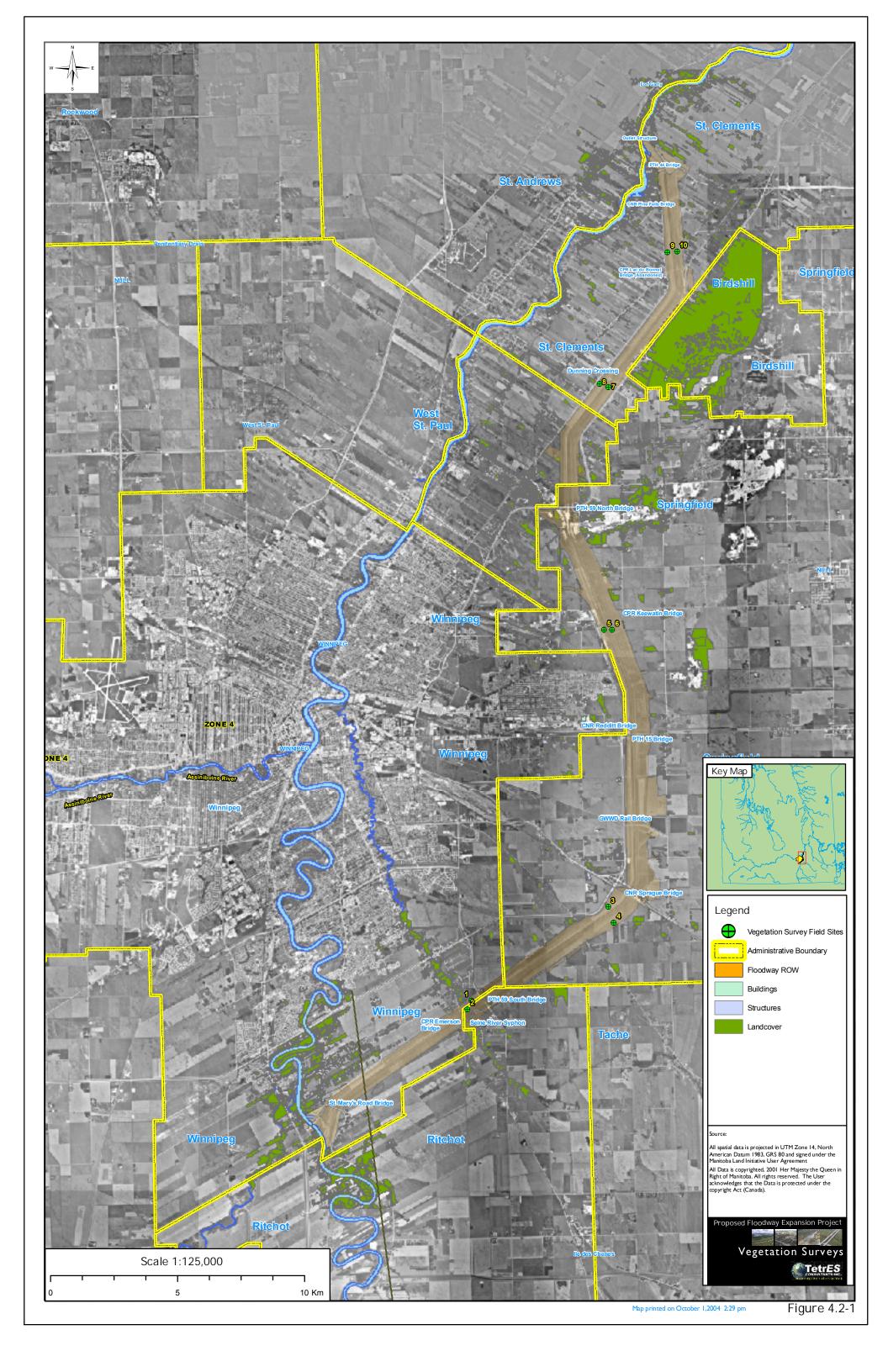
Sampling of plant communities was conducted at 18 sites situated at regular intervals along the entire West Dyke Right-of-Way (ROW) (Figure 4.2-2).

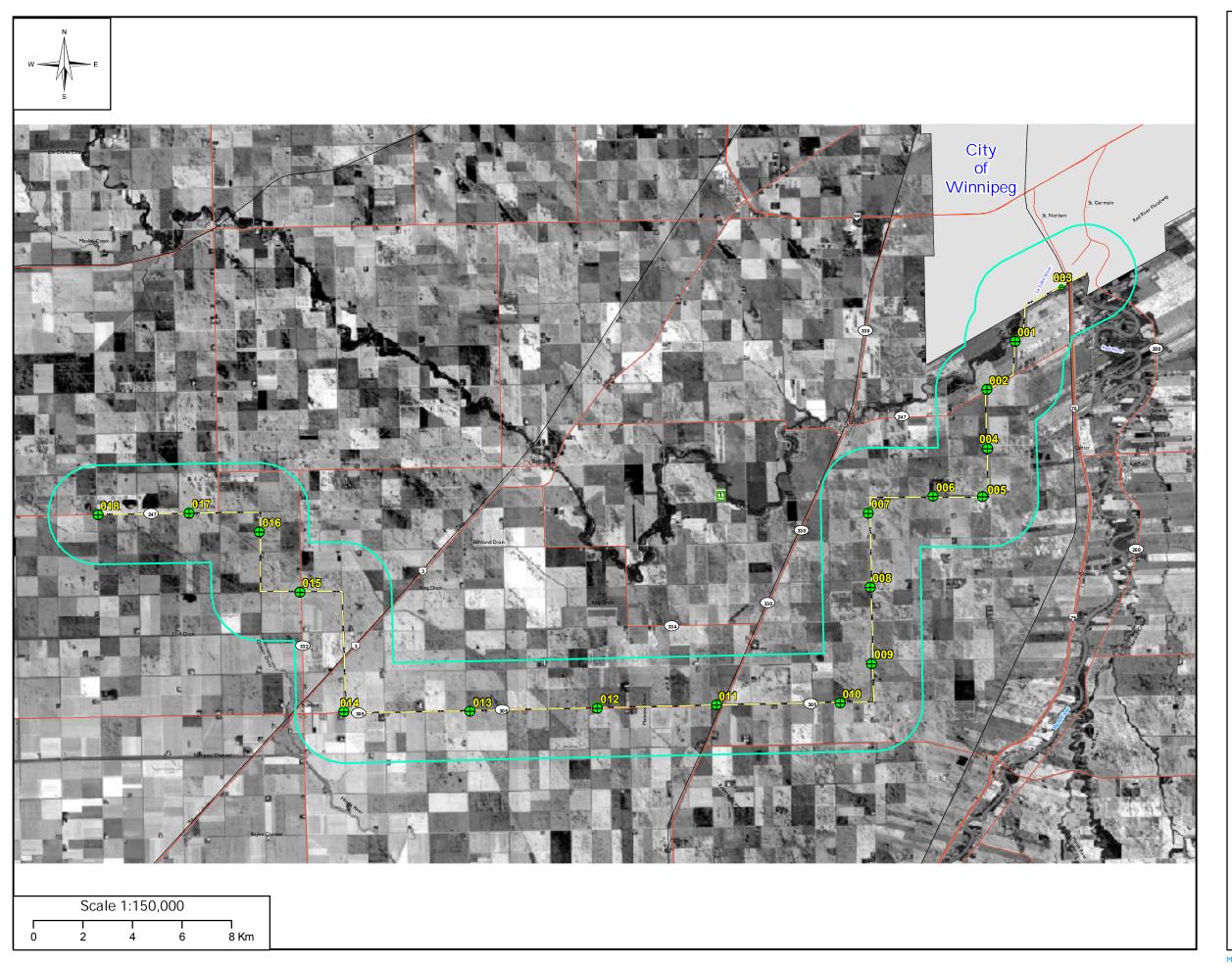
4.2.2.2 Sampling Methods

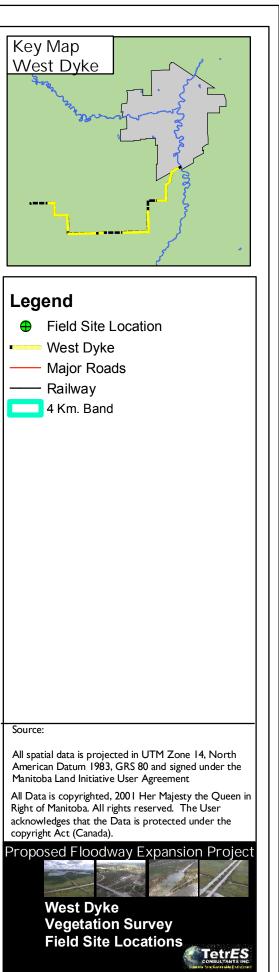
Floodway Slopes and Base

The first vegetation survey occurred June 28-July 12, 2004, and the second survey was carried out August 23-25, 2004. At each location, stratified random sampling was conducted within three definable zones (three moisture regimes):

- the Floodway Base up to the edge of the Low Flow Channel;
- the Lower Floodway slope (closest to the Floodway Base); and
- the Upper Floodway slope (where present).







Sampling was carried out using a line transect method (Smith 1996). Transects were located using the following procedure:

- 1. The starting point for each Sample Site on the top of the Floodway Slope was located using a GPS. From this point, a 100-m baseline transect ran parallel to the Low Flow Channel. Three line transects were then randomly located perpendicular to this baseline transect from the Upper Slope to the Low-Flow Channel.
- 2. For each of the two or three transects, within each of the three strata, five or six randomly-chosen 1-m transect intervals (Tables 4.2-1 and 4.2-2) were marked and the following tasks were completed:
 - a. A species list of plants both within transect intervals and in the vicinity of the line transect were compiled and confirmed by University of Manitoba herbarium staff.
 - b. Plant cover for each species within the transect interval was calculated as the total length of the 1-m transect interval intercepted by plants of each species. This included both basal cover (i.e.,

Table 4.2-1 Floodway Vegetation Survey Transect Locations (June 29–July12, 2004)

S	P (m)	Easting	Northing	S	P (m)	Easting	Northing	S	P (m)	Easting	Northing
1	BASE	640757	5517439								
1-4	U0	640761	5517444	1-35	U0	640788	5517460	1-49	U0	640800	5517473
1-4	U68/L0	640795	5517383	1-35	U68/L0	640824	5517402	1-49	U68/L0	640831	5517414
1-4	L42/B0	640817	5517344	1-35	L42/B0	640846	5517370	1-49	L42/B0	640860	5517378
1-4	B71	640860	5517290	1-35	B71	640884	5517309	1-49	B71	640905	5517322
2	BASE	640950	5517108								
2-18	U0	640969	5517121	2-51	U0	640990	5517141	2-62	U0	641004	5517152
2-18	U72/L0	640929	5517184	2-51	U72/L0	640954	5517199	2-62	U72/L0	640969	5517212
2-18	L42/B0	640907	5517212	2-51	L39/B0	640927	5517238	2-62	L38/B0	640945	5517245
2-18	B69	640845	5517257	2-51	B63	640903	5517239	2-62	B72	640901	5517292
3	BASE	646117	5521122								
3-47	U0	646165	5521143	3-61	U0	646180	5521152	3-73	U0	646188	5521158
3-47	U55/B0	646192	5521098	3-61	U56/B0	646208	5521102	3-73	U58/B0	646215	552113
3-47	B73	646235	5521039	3-61	B72	646254	5521054	3-73	B72	646255	5521055
4	BASE	646347	5520580								
4-47	U0	646389	5520876	4-78	U0	646414	5520895	4-96	U0	646435	5520907
4-47	U65/L0	646351	5520930	4-78	U65/L0	646381	5520948	4-96	U66/L0	646392	5520963
4-47	L57/B0	646317	5520987	4-78	L58/B0	646339	5521003	4-96	L65/B0	646358	5521016
4-47	B75	646645	5521043	4-78	B72	646301	5521037	4-96	B69	646325	5521071
5	BASE	645958	5531836								
5-22	U0	645957	5531856	5-56	U0	645943	5531887	5-85	U0	645929	5531917
5-22	U65/B0	646015	5531874	5-56	U65/B0	646004	5531911	5-85	U65/B0	645989	5531944
5-22	B71	646082	5531905	5-56	B74	646072	5531944	5-85	B63	646065	5531965
6	BASE	646278	5532038		110		55000/4	(10			5500001
6-16	U0	646279	5532057	6-20	U0	646269	5532061	6-40	U0	646264	5532081
6-16	U72/L0	646209	5532038	6-20	U70/L0	646197	5532045	6-40	U70/L0	646195	5532053
6-16	L67/B0	646142	5532013	6-20	L70/B0	646138	5532020	6-40	L70/B0	646133	5532036
6-16	B72	646076	5532002	6-20	B62	646081	5532006	6-40	B71	646060	5532021
7	BASE	646130	5541577	7.2/	110	/ // 155	FF 41 (O O	7.01	110	/ // 170	FF 41 / 4F
7-16 7-16	U0 U72/L0	646142 646084	5541592	7-36 7-36	U0 U72/L0	646155	5541608 5541653	7-81 7-81	U0 U73/L0	646179 646123	5541645 5541689
7-16	L48/B0	646049	5541635 5541667	7-36	L48/B0	646100	5541684	7-81	L45/B0	646086	5541718
7-16	B43	646013	5541690	7-36	B43	646057 646021	5541708	7-81	B49	646046	5541716
8	BASE	645779	5541699	7-30	D43	040021	3341700	7-01	D4 7	040040	3341742
8-14	U0	645786	5541711	8-26	U0	645749	5541726	8-34	UO	645807	5541729
8-14	U72/L0	645845	5541664	8-26	U70/L0	645859	5541685	8-34	U72/L0	645861	5541689
8-14	L48/B0	645885	5541637	8-26	L49/B0	645896	5541653	8-34	L45/B0	645895	5541660
8-14	B36	645915	5541619	8-26	B53	645930	5541625	8-34	B52	645933	5541629
9	BASE	648458	5546891	0 20	500	010700	0011020	0 0 1	502	010700	0011027
9-7	U0	648457	5546899	9-56	U0	648452	5546940	9-70	UO	648448	5546960
9-7	U75/L0	648533	5546913	9-56	U75/L0	648524	5546945	9-70	U80/L0	648522	5546961
9-7	L50/B0	648578	5546918	9-56	L50/B0	648575	5546948	9-70	L50/B0	648578	5546977
9-7	B50	648626	5546916	9-56	B52	648627	5546956	9-70	B52	648629	5546973
10	BASE	648827	5546914		-	-		-			
10-95	U0	648812	5547000	10-97	U0	648821	5547011	10-98	U0	648815	5547003
10-95	U79/L0	648730	5546986	10-97	U78/L0	648729	5546991	10-98	U72/L0	648740	5546994
10-95	L44/B0	648696	5546982	10-97	L47/B0	648693	5546990	10-98	L44/B0	648690	5546995
10-95	B57	648639	5546974	10-97	B51	648641	5546991	10-98	B52	648637	5546995

Notes: S = Site number with distance from baseline starting point, in metres P = Position along transect, in metres

Table 4.2-2 Floodway Vegetation Survey Transect Locations (August 23-25, 2004)

S	P(m)	Easting	Northing	S	P(m)	Easting	Northing
1	BASE	640757	5517439				
1-44	U	640790	5517465	1-80	U	640823	5517482
1-44	U70/LO	640833	5517402	1-80	U66/LO	640861	5517414
1-44	L35/BO	640851	5517376	1-80	L35/B0	640873	5517390
1-44	B78	640896	5517307	1-80	B80	640917	5517325
2	BASE	640950	5517108				
2-46	U	640984	5517139	2-80	U	641007	5517154
2-46	U70/LO	640944	5517201	2-80	U72/LO	640968	5517213
2-46	L38/BO	640930	551727	2-80	L36/BO	640949	5517247
2-46	B74	640881	5517303	2-80	B73	640905	5517308
3	BASE	646117	5521122				
3-22	U	mowed		3-64	U	mowed	
3-22	ВО	646167	5521081	3-64	ВО	646204	5521103
3-22	B75	646216	5521023	3-64	B74	646250	5521040
4	BASE	646347	5520580				
4-26	U	mowed		4-94	U	mowed	
4-26	LO	646323	5520925	4-94	LO	646372	5520958
4-26	L50/BO	646306	5520958	4-94	L52/BO	646346	5521001
4-26	B76	646249	5521025	4-94	B80	646278	5521041
5	BASE	645958	5531836		1	0.0270	0021011
5-37	IJ	645951	5531872	5-63	U	645945	5531848
5-37	U61/BO	646014	5531892	5-63	U62/BO	646002	5531922
5-37	B77	646083	5531923	5-63	B73	646071	5531947
				0 00	3,0	0.007.	
6 6-09	BASE U	646278	5532038	6-39	U	mowed	
		mowed	FF22020				FF22042
6-09 6-09	LO L63/BO	646206 646144	5532039 5532014	6-39 6-39	LO L63/BO	646136	5532042
6-09	B70	646086	5531994	6-39	B80	646191	5532064
				0-37	1000		
7 10	BASE	646130	5541577	7.74			
7-18 7-18	U	mowed		7-74 7-74	U	mowed	
7-18	L BO	mowed 646051	5541665	7-74	L BO	mowed 646082	5541704
7-18	B52	646007	5541690	7-74	54	646034	5541732
8	BASE	645779	5541699		1	0.0001	0011702
8-34	U	mowed	3341077	8-88	U	mowed	
8-34	LO	6451685	5541685	8-88	LO	645881	5541724
8-34	L48/B0	645894	5541649	8-88	L45/B0	645919	5541694
8-34	B36	645929	5541620	8-88	B45	645956	5541672
9	BASE	648458	5546891		1	1	
9-30	U	mowed	3340071	9-75	U	mowed	
9-30	LO/L50	648523	5546919	9-75	LO/L45	648526	5546971
9-30	L50/B0	648579	5546925	9-75	L45/B0	648581	5546973
9-30	B52	648632	5546929	9-75	B57	648630	5546976
10	BASE	648827	5546914			1	
10-24	U	mowed	3370714	10-56	U	mowed	
10-24	LO	648745	5546925	10-56	LO	648742	5546956
10-24	L44/B0	648701	5546925	10-56	L45/B0	648698	5546949
	B55	648646	5546921	10-56	B55	648644	5546943

Notes: S = Site number with distance from baseline starting point, in metres; P = Position along transect, in metres

- those plants rooted in each interval), and aerial cover (i.e., those plants whose aerial foliage overlies the transect). Note that the total may be greater than 100%.
- c. Specimens of all unknown species were collected for identification by University of Manitoba herbarium staff.
- 3. If a Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Manitoba Endangered Species Act (MESA) listed species was observed in vicinity of transect, the following actions were taken:
 - a. GPS location was recorded;
 - b. Population size and range was estimated; and
 - c. Plant habitat was described.

Species cover and frequency values were obtained from the transect data. Plant cover was defined as the total length of the transect interval intercepted by plants of each species, including those rooted at each interval and those whose aerial foliage overlay the transect. Since the basal and aerial coverage distances of various individual plants may overlap, the sum of the intercept lengths may be greater than the total transect length (Barbour *et al.* 1987; Smith 1996). Species frequency was estimated by dividing the number of transect intervals containing a particular species by the total number of transect intervals. The percentage of relative cover of each species was estimated as the proportion of the total transect length intercepted by each species, divided by the total cover of all species, multiplied by 100. Relative frequency was determined in a similar fashion (Barbour *et al.* 1987; Smith 1996).

The Upper Slope of 14 transects, and the Lower Slope of 2 transects were not sampled in the second survey due to having been mowed and harvested for hay.

Floodway Low Flow Channel

The Low Flow Channel was examined at the five locations used in the terrestrial vegetation survey and at one additional location situated at the Floodway Inlet. At each location, a 100-m segment of the Low-Flow Channel (LFC) was visually examined for aquatic plants and was sampled using a rake every 10 m within the 100-m segment. A species list was compiled and presence/absence was noted at each survey site.

West Dyke

An overview survey of plant communities was conducted at selected sites along the West Dyke (Figure 4.2-2). This coincided with botanical sampling of the Floodway. A list of vascular plant species was compiled and any COSEWIC/MESA-listed and rare plant species noted as described above. A DAFOR (Dominant, Abundant, Frequent, Occasional, Rare) dominance rating was assigned to each species noted at survey sites.

Proposed Floodway Expansion Project Vegetation Survey July 2004

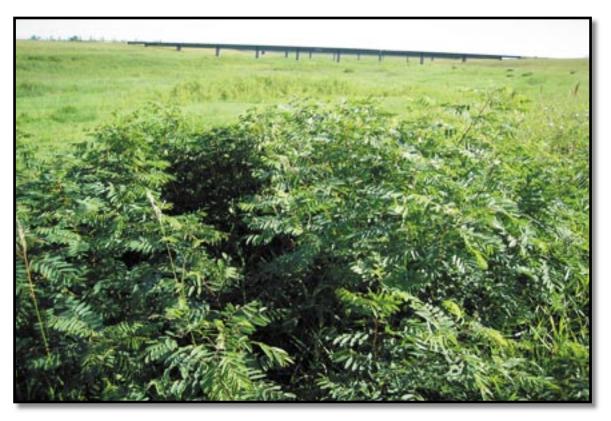


Figure 4.3-1 The shrub Amorpha fruticosa, SIS2 species in Manitoba.



Figure 4.3-2 Grasslands on the floodway slopes.

4.3 RESULTS

4.3.1 Floodway Right-of-Way

Approximately 105 species were identified in the Floodway Upper Slope, Lower Slope, and Base (Table 4.3-1). This was far less than the 150 prairie species that have been found in the similar, but much smaller (12 ha) habitat of the Living Prairie Museum in Winnipeg (Museum staff, *pers. comm.* 2004).

One provincially rare species was found. This was the shrub *Amorpha fruticosa* (Figure 4.3-1). It was observed intermittently on the Lower Slope of the Floodway at Site 4 and 5 (Tables 4.2-1 and 4.2-2), and on the North shore of the Floodway Inlet. It is listed as S1/S2 both in Manitoba and Ontario, but is not a COSEWIC/MESA listed species (COSEWIC, 2003). Hence, there are no regulatory requirements to mitigate the loss of this species (CDC, *pers. comm.* Jason Greenall). The *Amorpha fruticosa* plants cannot be savied, since they are too large (2-5 m tall; Looman and Best 1987), to remain in the Floodway Channel due to hydraulic considerations, and they are too difficult to move because of a deep tap root and their specific habitat requirements. However, attempts could be made to preserve the genetic stock through the collection of seeds. These could be stored at a local nursery and made available for future revegetation efforts.

The Upper and Lower slopes of the Floodway were largely grasslands (Figure 4.3-2) dominated by smooth brome and bluegrass (Table 4.3-2), both of which were found in over 85% of the transect intervals on the Upper and Lower Slope. These two species accounted for 53-60% of the relative cover and 58-59% of the relative frequency on the Upper and Lower Floodway slopes (Tables 4.3-2 and 4.3-3). The amount of smooth brome was much the same in both the first survey and the second survey. In contrast, bluegrass continued to increase in cover over the summer (Table 4.3-2).

Another common species found on the Upper and Lower slopes was alfalfa, which in the first survey had a cover of over 10% (Table 4.3-2) and a frequency of almost 40% (Table 4.3-3). This was reduced slightly in the second survey, most likely because of the mowed Upper Slope sites, which tended to have higher amounts of alfalfa. Other species were rarer, often being found in only one or two transect intervals (see Tables 4.3-1, and 4.3-4 for a complete list).

Overall, diversity was low in the Floodway Upper and Lower Slopes during the first survey, with only a few species found on any given site (Table 4.3-4). The exceptions to this were the areas near Birds Hill Park (Dunning Crossing), which had the highest number of species per site (Table 4.3-4). Seed rain from the Provincial Park may be considerable in this area. Diversity was noticeably higher during the second survey (Table 4.3-5) but still less than what would be observed at sites such as the Living Prairie Museum.

Plant cover on the Floodway Slopes was also low, with an overall mean plant cover of 40-65% in the first survey and slightly higher than that in the second survey (Table 4.3-2). This compares to cover values

Table 4.3-1 Identified and Verified Species in the Floodway Channel

Scientific Name	Common Name	Symbol	Scientific Name	Common Name	Symbol
Acer negundo	Manitoba Maple	AN	Plantago major	Common Plantain	PM
Achillea millefolium	Yarrow	AM	Poa pratensis	Bluegrass	PP
Alisma triviale	Water Plantain	AIT	Polygonum lapathifolium	Pale Persicaria	PoL
Amelanchier alnifolia	Saskatoon	AA	Populus balsamifera	Balsam Poplar	PB
Amorpha fruticosa	False Indigo	AF	Populus deltoides	Cottonwood	PD
Agropyron repens	Couch Grass	AR	Populus tremuloides	Trembling Aspen	PT
Ambrosia trifida	Ragweed	AmT	Potamogeton pectinatus	Sago Pondweed	PoP
Anemone canadensis	Canada Anemone	AC	Potentilla anserina	Silverweed	PoA
Antennaria sp.	Pussytoes	A?	Potentilla norvegica	Rough cinquefoil	PN
Apocynum cannabinum	Indian-hemp	ApC	Rhus radicans	Poison Ivy	RR
Arabis glabra	Tower Mustard	AG	Rorippa islandica	Marsh Yellow Cress	RI
Arctium tomentosum	Cotton Burdock	AT	Rosa spp.	Wild Rose	R?
Artemisia biennis	Biennial Wormwood	AB	Rudbeckia hirta	Brown-eyed Susan	RH
Artemisia ludoviciana	Prairie Sage	AL	Rumex crispus	Dock	RC
Aster laevis	Smooth Aster	AsL	Sagittaria cuneata	Arrowhead	SaC
Aster lateriflorus	Wood Aster	AstL	Salix exigua	Sandbar Willow	SE
Aster pansus	Many-flowered Aster	AP	Salix lutea	Yellow Willow	SL
Asclepias speciosa	Showy Milkweed	AS	Scirpus fluviatilis	River Bulrush	SF
Asclepias verticillata	Whorled Milkweed	AV	Scirpus validus	Great Bulrush	SV
Astragalus goniatus	Ascending Purple Milk Vetch	AG	Sisyrinchium montanum	Blue-eyed Grass	SM
Bidens frondosa	Common Beggarticks	BF	Sium sauve	Water-parsnip	SiS
Brassica kaber	Wild Mustard	BK	Solidago gigantea	Giant Goldenrod	SoG
Bromus inermis	Smooth Brome	BI	Solidago canadensis	Canada Goldenrod	SC
Carex aquatilis	Water Sedge	CaA	Solidago rigida	Rigid Goldenrod	SR
Cirsium arvense	Canada Thistle	CA	Sonchus arvensis	Perennial Sow Thistle	SA
Cirsium flodmanii	Flodman's thistle	CF	Spartina pectinata	Prairie Cord Grass	SP

Table 4.3-1 (cont'd)

Scientific Name	Common Name	Symbol	Scientific Name	Common Name	Symbol
Convolvulus sepium	Hege Bindweed	CS	Stachys palustris	Marsh Hedge-nettle	StP
Echinocystis lobata	Wild Cucumber	EL	Taraxacum officinale	Dandelion	TO
Eleocharis erythropoda	Spike Rush	EE	Thalictrum venulosum	Veiny Meadow Rue	TV
Equisetum arvense	Common Horsetail	EA	Thlapsi arvense	Stinkweed	TA
Equisetum fluviatile	Swamp Horsetail	EF	Tragopogon dubius	Goatsbeard	TD
Erigeron asper	Rough Fleabane	ErA	Trifolium hybridum	Alsike Clover	Tsp
Erisymum cheiranthoides	Wormseed Mustard	EC	Trifolium pratense	Red Clover	Tsp
Fraxinus pennsylvanica	Green Ash	FP	Trifolium repens	White Clover	Tsp
Geranium bicknellii	Bicknell's Geranium	GB	Typha latifolia	Cattail	TL
Glycyrrhiza lepidota	Wild Licorice	GL	Vicia americana	Wild Vetch	VA
Grindelia squarrosa	Curly-cup Gumweed	GS	Vicia cracca	Tufted Vetch	VC
Helianthus maximiliani	Narrow-leaved Sunflower	Hm	Xanthium strumarium	Cocklebur	XS
Hordeum jubatum	Foxtail Barley	HJ	Zizia aptera	Heart-leaved Alexander	ZA
Lactuca pulchella	Blue Lettuce	LP	Species noted in the 2003 fall survey		
Lathyrus ochroleucus	Cream-colored Vetchling	LO	Atriplex patula	Orache	AP
Leucanthemum vulgare	Oxeye Daisy	LV	Bidens cernua	Beggarticks	BC
Linum lewisii	Wild Blue Flax	LL	Lactuca serriola	Prickly Lettuce	LS
Lotus corniculatus	Bird's Foot Trefoil	LC	Phragmites australis	Common Reed Grass	PhA
Lysimachia ciliata	Fringed Loosestrife	LyC	Polygonum coccineum	Marsh Smartweed	PC
Medicago lupulina	Black Medick	ML	Scirpus cyperinus	Bulrush	ScC
Medicago sativa	Alfalfa	MS	Senecio vulgaris	Common Groundsel	SV
Melilotus alba	White Sweet Clover	MA	Sisymbrium loesellii	Tall Hedge Mustard	SiL
Melilotus officinalis	Yellow Sweet Clover	MO	Smilacina stellata	False Solomon's Seal	SS
Oenothera biennis	Yellow Evening Primrose	OB	Sonchus asper	Annual Sow Thistle	SoA
Phalaris arundinacea	Reed Canary Grass	PA	Spartina gracilis	Alkali Cord Grass	SG
Phleum pratense	Timothy	PhP	Tanacetum vulgare	Common Tansy	TaV
Physostegia parviflora	False Dragonhead	PhyP			

approaching 100% in the Living Prairie Museum, which is similar in habitat to the Floodway Slopes (Museum staff *per. comm.* 2004).

The dominant plant species on the Floodway Base was sandbar willow (Figure 4.3-3), which was found growing in extensive thickets over the length of the Floodway. It had a frequency of 24-27% (Table 4.3-3) on the Base, with an estimated cover of 15-20% (Table 4.3-2). This latter value is misleading, however, since the distribution of sandbar willow is not random, as it tends to form dense thickets with 100% cover. The most well-developed willow thickets were approximately 3-4 m in height (personal observation). Other notable species found on the Floodway Base included reed canary grass, couch grass, and fringed loosestrife. The diversity on the Floodway Base was generally higher than on the Floodway Slopes (Tables 4.3-4 and 4.3-5).

The Floodway Base was inundated between June 13 and June 28, 2004. The only species still green when the waters receded were two willow species (*Salix exigua* and *Salix lutea*) and the forb, fringed loosestrife (*Lysimachia ciliata*) (Figure 4.3-4). Initiation of plant growth was rapid; although there were considerably more plants in evidence by the end of two weeks; none covered extensive areas of the Floodway Base and all were stunted in their growth (Figure 4.3-5, Table 4.3-4). After eight weeks, the vegetation on the Base had expanded considerably. Plant cover increased from 37% to 94%, with reed canary grass and couch grass being predominant (Tables 4.3-2 and 4.3-3). Vegetation was also robust and green (Figure 4.3-6), perhaps in response to the natural fertilizer that had been applied during the flood event (personal observation).

One striking feature on the Floodway Base was the almost complete lack of plant litter, presumably as a response to flooding. On the slopes there was a thick layer of dead plant material, but on the Floodway Base this layer was gone – the bare ground was exposed and made up the most prevalent 'cover' in many areas (Table 4.3-2). Eight weeks later, there was still almost no plant litter on the Base, but the amount of Bare Ground had decreased due to an increase in vegetation as the recovery continued (Table 4.3-2).

The loss of vegetation and plant litter in response to flooding is of concern for two reasons:

- first, subsequent use of the Floodway in the summer has the potential for eroding the Floodway Base, and
- second, the exposed Base is the perfect habitat for the germination of willow seeds, which require bare mud and direct sun for germination (Karrenberg *et al.*, 2002).

4.3.2 Floodway Low Flow Channel

There were almost no submerged aquatic plants in the low flow channel (Figure 4.3-7, Table 4.3-6). Also notable was the almost complete absence of an emergent aquatic community. The only location with even small amounts of aquatic plants was at the Floodway Inlet where there were a few clumps of *Potamogeton pectinatus* with *Sagittaria cuneata* and *Alisma triviale* growing on the shores. The lack of aquatic vegetation may have been due to the persistent and ongoing high water levels coupled with low water transparency, or it could be a regular feature of the Floodway Low Flow Channel.



Figure 4.3-3 Sandbar willow thicket on the floodway base.



Figure 4.3-4 Dead vegetation on floodway base after flooding.

Table 4.3-2
Cover Values (Percent ± Standard Deviation) for the Most
Common Species in the Floodway

Species			Cover		Relativ	e Cover
Common Name	DATE	U	L	В	U/L	В
Plant Litter	J	40.8 ± 27.5	49.6 ± 31.2	14.4 ± 23.9		
Platit Litter	Α	37.9 ± 23.7	26.8 ± 26.3	<1		
Bare Ground	J	0	10.1 ± 24.5	63.8 ± 31.6		
bare Ground	Α	0	5.3 ± 18.7	22.2 ± 27.6		
Smooth Brome	J	20.4 ± 14.7	14.9 ± 13.2	4.6 ± 8.5	33.2	12.4
Smooth brome	Α	22.9 ± 20.6	17.9 ± 12.2	5.0 ± 15.6	28.6	5.3
Pluograce	J	11.6 ± 7.8	9.5 ± 8.9	<1	19.6	<1
Bluegrass	А	24.2 ± 12.3	19.3 ± 17.5	1.2 ± 6.2	30.6	1.2
N 15- 15-	J	16.8 ± 25.0	7.2 ± 17.0	0	23.1	0
Alfalfa	Α	5.6 ± 11.8	10.1 ± 19.5	0	12.8	0
Dandallan	J	4.8 ± 10.5	<1	0	5.0	0
Dandelion	Α	0	<1	<1	<1	<1
Ossa da Thiballa	J	2.7 ± 8.1	1.5 ± 5.0	0	4.1	0
Canada Thistle	Α	5.5 ± 10.0	4.4 ± 8.0	<1	7.0	1.0
Yellow Sweet Clover	J	2.1 ± 8.3	<1	0	3.0	0
Yellow Sweet Clovel	Α	3.3 ±12.2	2.0 ± 6.8	0	3.5	0
Couch Grass	J	<1	<1	<1	<1	<1
Coucii Grass	Α	0	<1	13.9 ± 28.5	<1	14.8
Sandbar Willow	J	0	<1	15.7 ± 33.0	<1	43.7
Sandbai Willow	А	0	<1	19.6 ± 36.6	<1	20.8
Reed Canary Grass	J	0	<1	4.6 ± 11.0	0	12.7
Recursionally Grass	Α	0	2.0 ± 8.7	18.9 ± 31.4	2.9	20.1
Fringed Loosestrife	J	0	<1	3.0 ± 14.0	<1	8.1
Tringed Loosestille	Α	0	0	2.9 ± 15.0	0	3.1
Transect	J	64.1 ± 32.8	40.0 ± 27.1	37.3 ± 35.6		
Transcot	А	64.9 ± 32.4	66.8 ± 29.6	94.5 ± 39.4		

U = Upper Slope of Floodway U/L = Upper and Lower Slope of Floodway

L = Lower Slope of Floodway B = Base of Floodway

J = First survey (June/July), A = Second survey (August)

Transect values do not include Plant Litter or Bare Ground

---- = Value not calculated

Table 4.3-3
Species Frequency (%) for the Most
Common Species in the Floodway

Species		Frequ	ency	Relative F	requency
Common Name	DATE	U/L	В	U/L	В
Smooth Brome	J	95	34	31	27
Sillootti Broille	Α	100	13	31	5.2
Dhiograss	J	89	<1	28	<1
Bluegrass	А	89	6.7	28	2.6
Alfalfa	J	38	0	12	0
Alialia	Α	31	0	10	0
Dandelion	J	14	0	4.4	0
Dandellon	Α	<1	<1	<1	<1
Canada Thistle	J	17	0	5.4	0
Canada mistie	Α	31	6.7	10	2.6
Yellow Sweet	J	7.4	0	2.5	0
Clover	Α	12	0	3.6	0
Couch Grass	J	7.4	1.3	2.5	1.0
Coucii Grass	А	<1	25	<1	10
Sandbar	J	<1	24	<1	19
Willow	А	<1	27	<1	10
Reed Canary	J	<1	24	<1	18
Grass	А	<1	34	<1	13
Fringed	J	0	6.7	0	5.3
Loosestrife	А	0	4.2	0	1.6

U/L = Upper and Lower Slope of Floodway

B = Base of Floodway

J = First survey (June/July), A = Second survey (August)

---- = Value not calculated



Figure 4.3-5 Vegetation recovery on the floodway base two weeks after flooding.



Figure 4.3-6 Robust revegetation on the floodway base eight weeks after flooding.

Table 4.3-4 - June/July 2004 Survey of Terrestrial Floodway Vegetation Raw Data

Date			Position														<u> </u>					getatio			· Butt														
Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	AG	PhP	TD	AsL	MS	CA	MO	ТО	SA	ML	LC	SC	AP			PB	AS	PM	EA	SE	PoA	PA	RC	EE	PN	TL	SL	LvC	CaA	AstL
29-Jun-04	1	1-4	U0	20	0	10	20	0	0	0	0	0	0	40	27	0	0	0	0	0	0	0	0	0						- 011									
29-Jun-04	1	1-4	U24	20	0	45	30	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0												\vdash	$\overline{}$	\vdash	
29-Jun-04	1	1-4	U31	59	0	19	20	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0												\vdash	$\overline{}$	\vdash	
29-Jun-04	1	1-4	U35	50	0	40	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												 	$\overline{}$		
29-Jun-04	1	1-4	U54	67	0	29	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												 	$\overline{}$		
29-Jun-04	1	1-4	L5	80	0	22	2	0	0		V	V	v	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	1-4	L7	75	0	10	10	0	0					0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						$\overline{}$		
29-Jun-04	1	1-4	L17	70	0	13	20	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	1-4	L32	75	0	8	10	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	1-4	L36	95	0	5	2	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						\Box		
4-Jul-04	1	1-4	B1	70	30	5	0	0	0						-				-								0	0	0	0	0	0	0	0	0	0	0	0	0
4-Jul-04	1	1-4	В9	70	30	5	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
4-Jul-04	1	1-4	B39	0	80	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	20	0
4-Jul-04	1	1-4	B42	0	70	0	0	0	0																		0	0	0	5	0	0	0	0	0	0	0	30	0
4-Jul-04	1	1-4	B68	0	70	0	0	0	0																		0	5	30	0	0	0	0	0	0	0	0	40	0
29-Jun-04	1	1-35	U5	60	0	12	25	0	0	0	0	0	0	10	0	9	0	0	0	0	0	0	0	0												1			
29-Jun-04	1	1-35	U6	20	0	16	25	0	0	0	0	0	0	80	0	0	0	0	0	0	0	0	0	0												1			
29-Jun-04	1	1-35	U14	30	0	8	20	0	0	0	0	0	0	40	5	0	0	0	0	0	0	0	0	0												1			
29-Jun-04	1	1-35	U23	25	0	9	10	0	0	0	0	0	0	60	5	0	0	0	0	0	0	0	0	0															
29-Jun-04	1	1-35	U46	60	0	37	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
29-Jun-04	1	1-35	L14	75	0	11	5	0	0					0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							1	
29-Jun-04	1	1-35	L15	75	0	7	5	0	0					23	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							1	
29-Jun-04	1	1-35	L19	80	0	9	10	0	0					0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	1-35	L30	85	0	5	10	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	1-35	L38	0	100	0	5	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
4-Jul-04	1	1-35	B11	40	95	5	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
4-Jul-04	1	1-35	B22	50	95	5	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
4-Jul-04	1	1-35	B37	10	80	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	15	20
4-Jul-04	1	1-35	B41	20	90	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	40	0
4-Jul-04	1	1-35	B52	50	25	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	50	0
29-Jun-04	1	1-49	U8	40	0	10	30	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0															
29-Jun-04	1	1-49	U19	45	0	12	40	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0															
29-Jun-04	1	1-49	U43	60	0	41	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												<u> </u>	<u> </u>	l	
29-Jun-04	1	1-49	U48	80	0	13	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												<u> </u>	<u> </u>	l	
29-Jun-04	1	1-49	U62	80	0	15	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												<u> </u>	<u> </u>	l	
29-Jun-04	1	1-49	L8	85	0	12	5	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					<u> </u>	<u> </u>	l	
29-Jun-04	1	1-49	L19	85	0	5	10		0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					oxdot		Ш	
29-Jun-04	1	1-49	L26	70	0	0	13		0					0	8	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					oxdot		Ш	
29-Jun-04	1	1-49	L33	75	0	6	15	0	0					0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					oxdot		oxdot]
29-Jun-04	1	1-49	L41	100	0	0	0	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
4-Jul-04	1	1-49	B19	10	90	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	5
4-Jul-04	1	1-49	B46	30	70	0	0	0	0																		0	5	0	0	0	0	0	0	0	0	0	30	0
4-Jul-04	1	1-49	B47	10	90	0	0	0	0																		0	0	15	0	0	0	0	0	0	0	0	5	0
4-Jul-04	1	1-49	B60	10	90	0	0	0	0																		0	0	63	0	0	0	0	0	0	0	0	0	0
4-Jul-04	1	1-49	B71	50	50	0	0	0	0																		0	0	60	0	0	0	0	0	0	0	0	0	0
29-Jun-04	1	2-18	U10	80	0	7	10	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0												igsqcut		Ш	
29-Jun-04	1	2-18	U18	85	0	11	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												igsquare	'	ш	
29-Jun-04	1	2-18	U24	85	0	8	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0														ш	

Table 4.3-4 - June/July 2004 Survey of Terrestrial Floodway Vegetation Raw Data

Date	_	1	Position																		Ve	getatio	n Spec	ies ²															
Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	AG	PhP	TD	AsL	MS	CA	МО	ТО	SA	ML	LC	SC				PB	AS	PM	EA	SE	PoA	PA	RC	EE	PN	TL	SL	LvC	CaA	AstL
29-Jun-04	1	2-18	U40	80	0	7	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															\blacksquare
29-Jun-04	1	2-18	U70	72	0	5	10	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	10	0															
29-Jun-04	1	2-18	L2	70	0	10	8	0	0					0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-18	L11	50	0	25	15	0	0					0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-18	L17	10	0	5	10	0	0					0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-18	L25	85	0	5	5	0	0					0	0	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-18	L37	100	0	0	0	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
12-Jul-04	1	2-18	В0	30	0	0	30	0	0																		0	0	0	0	40	0	0	0	0	0	0	0	0
12-Jul-04	1	2-18	B23	0	0	10	0	0	0																		0	0	0	0	0	0	0	0	0	30	90	0	0
12-Jul-04	1	2-18	B28	0	5	15	0	0	0																		0	0	0	0	0	0	0	0	0	0	80	0	0
12-Jul-04	1	2-18	B45	0	25	15	0	0	0																		0	0	0	0	0	0	0	0	0	0	60	0	0
12-Jul-04	1	2-18	B69	70	0	10	0	0	0																		0	0	0	0	0	0	0	0	0	0	20	0	0
29-Jun-04	1	2-51	U11	90	0	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
29-Jun-04	1	2-51	U44	42	0	15	10	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0															
29-Jun-04	1	2-51	U48	78	0	10	5	0	0	16	0	0	0	0	0	10	0	0	0	0	0	0	0	0															
29-Jun-04	1	2-51	U56	80	0	6	10	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
29-Jun-04	1	2-51	U68	60	0	18	5	0	0	3	0	0	0	0	15	0	0	0	0	0	0	0	0	0															
29-Jun-04	1	2-51	L1	75	0	12	5	0	0					0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-51	L7	75	0	10	15	0	0					0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-51	L28	45	0	20	40	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-51	L32	85	0	5	15	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-51	L38	30	100	0	0	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
12-Jul-04	1	2-51	B2	0	30	40	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	1	2-51	B12	0	80	0	0	0	0																		0	0	0	0	20	0	0	0	0	0	0	0	0
12-Jul-04	1	2-51	B13	0	80	0	0	0	0																		0	0	0	0	20	0	0	0	0	0	0	0	0
12-Jul-04	1	2-51	B24	0	5	0	0	0	0																		0	0	0	0	0	0	0	0	0	100	20	0	0
12-Jul-04	1	2-51	B48	0	70	0	0	0	0																		0	0	0	0	30	0	0	0	0	0	0	0	0
29-Jun-04	1	2-62	U19	55	0	25	5	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0															
29-Jun-04	1	2-62	U35	40	0	17	15	0	0	0	0	0	0	0	14	13	0	0	0	0	0	0	0	0															
29-Jun-04	1	2-62	U42	65	0	16	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0															
29-Jun-04	1	2-62	U47	65	0	12	10	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0															
29-Jun-04	1	2-62	U68	0	0	20	5	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	4															
29-Jun-04	1	2-62	L3	90	0	4	10	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-62	L7	90	0	5	5	0	0					0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-62	L9	85	0	3	10	0	0					0	6	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-62	L15	85	0	5	10	0	0					0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0								
29-Jun-04	1	2-62	L37	85	0	15	0	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
12-Jul-04	1	2-62	В8	30	5	0	0	0	0																		0	0	0	20	50	0	0	0	0	0	0	0	0
12-Jul-04	1	2-62	B31	0	0	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	100	0	0
12-Jul-04	1	2-62	B36	20	30	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	30	40	0
12-Jul-04	1	2-62	B47	10	0	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	90	0
12-Jul-04	1	2-62	B71	70	0	0	0	0	0																		0	0	0	0	0	0	0	0	0	80	0	0	0
29-Jun-04	2	3-47	UL7	85	0	15	5	0	0	0	0	0	0	3	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	2	3-47	UL27	45	0	15	5	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	2	3-47	UL34	10	0	20	15		0	0	0	0	0	57	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0			İ					
29-Jun-04	2	3-47	UL45	70	0	25	10	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			İ					
29-Jun-04	2	3-47	UL50	80	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			İ					
12-Jul-04	2	3-47	В3	0	55	30	0	0	0																		0	0	0	0	0	0	0	0	0	0	15	0	0

Table 4.3-4 - June/July 2004 Survey of Terrestrial Floodway Vegetation Raw Data

Date			Position																2.5 41	iai rio		getatio																	
Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	AG	PhP	TD	AsL	MS	CA	МО	ТО	SA	ML	LC	SC	AP		VC	PB	AS	PM	EA	SE	PoA	PA	RC	EE	PN	TL	SL	LyC	CaA	AstL
12-Jul-04	2	3-47	B4	0	65	20	0	0	0	110	1	12	1102	1,120	0.12	1.10	10	211	1,12		50		711	, 0	12	110	0	0	0	0	0	0	0	0	0	0	15	0	0
12-Jul-04	2	3-47	B7	0	40	30	10	0	0																		0	0	0	0	0	0	0	0	0	0	20	0	0
12-Jul-04	2	3-47	B11	30	60	10	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	3-47	B25	10	60	30	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
29-Jun-04	2	3-61	UL2	60	0	25	5	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							├	
29-Jun-04	2	3-61	UL5	80	0	13	1	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							1	
29-Jun-04	2	3-61	UL6	0	0	10	0	0	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	2	3-61	UL18	15	0	40	0	0	0	0	0	0	0	38	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	2	3-61	UL24	0	0	30	5	0	0	0	0	0	0	66	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
12-Jul-04	2	3-61	B20	40	50	10	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	3-61	B22	40	50	10	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	3-61	B25	10	75	15	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	3-61	B26	10	70	15	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	7
12-Jul-04	2	3-61	B59	15	80	5	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
29-Jun-04	2	3-73	UL3	65	0	20	5	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	2	3-73	UL5	0	0	50	5	0	0	0	0	0	0	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	2	3-73	UL32	15	0	40	10	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
29-Jun-04	2	3-73	UL48	85	0	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0								
29-Jun-04	2	3-73	UL52	97	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
12-Jul-04	2	3-73	B27	20	60	15	0	0	0																		0	0	0	0	0	7	0	0	0	0	0	0	0
12-Jul-04	2	3-73	B35	10	50	10	0	0	0																		0	10	0	0	0	23	0	0	0	0	0	0	10
12-Jul-04	2	3-73	B54	20	60	20	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	3-73	B61	0	80	10	0	0	0																		0	0	14	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	3-73	B63	0	85	5	0	0	0																		0	0	8	0	0	5	0	0	0	0	0	0	0
30-Jun-04	2	4-47	U7	0	0	0	5	5	0	0	0	0	0	87	0	0	21	0	0	0	0	0	0	0															
30-Jun-04	2	4-47	U14	30	0	25	5	0	0	0	0	0	0	19	0	0	24	0	0	0	0	0	0	0															
30-Jun-04	2	4-47	U32	0	0	0	20	5	0	0	0	0	0	82	0	0	24	0	0	0	0	0	0	0															
30-Jun-04	2	4-47	U39	10	0	0	5	12	0	0	0	0	0	73	0	0	15	0	0	0	0	0	0	0															
30-Jun-04	2	4-47	U56	35	0	5	10	5	0	0	0	0	0	21	0	0	28	0	0	0	0	0	0	0															
30-Jun-04	2	4-47	L1	45	0	25	10	0	0					11	0	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	2	4-47	L6	90	0	12	0	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	2	4-47	L28	75	0	10	10	0	6					0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	2	4-47	L50	70	0	15	10	0	0					0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	2	4-47	L51	85	0	15	5	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0							igsquare	igsquare
12-Jul-04	2	4-47	B8	0	5	10	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	4-47	B43	0	70	10	0	0	0																		0	0	80	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	4-47	B48	0	40	0	0	0	0																		0	0	30	0	30	0	0	0	0	0	0	0	0
12-Jul-04	2	4-47	B64	0	70	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	4-47	B65	0	5	0	0	0	0																		0	0	100	0	10	0	0	0	0	0	0	0	0
30-Jun-04	2	4-78	U9	35	0	15	5	0	0	0	0	0	0	27		0	20	0	0	0	0	0	0	0											<u> </u>			↓ '	igsquare
30-Jun-04	2	4-78	U17	45	0	5	2	2	0	0	0	0	0	8	0	0	44	0	0	0	0	0	0	0											↓ '			<u> </u>	$ldsymbol{oxed}$
30-Jun-04	2	4-78	U46	10	0	5	5	0	0	0	0	0	0	64	0	0	22	0	0	0	0	0	0	0											<u> </u>			↓ '	ldot
30-Jun-04	2	4-78	U49	40	0	10	30	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0											<u> </u>			<u> </u>	igsquare
30-Jun-04	2	4-78	U50	45	0	5	30	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0											<u> </u>			<u> </u>	igsquare
30-Jun-04	2	4-78	L14	90	0	10	5	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				<u> </u>			↓ '	igsquare
30-Jun-04	2	4-78	L15	90	0	10	5	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				<u> </u>			↓ '	igsquare
30-Jun-04	2	4-78	L17	70	0	30	5	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				<u> </u>			↓ '	igsquare
30-Jun-04	2	4-78	L27	65	0	15	10	0	0					11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				<u> </u>				

Table 4.3-4 - June/July 2004 Survey of Terrestrial Floodway Vegetation Raw Data

Date			Position																		Ve	getatio	n Snec	ies ²															
Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	AG	PhP	TD	AsL	MS	CA	МО	ТО	SA	ML	LC	SC	AP	VA	VC	PB	AS	PM	EA	SE	PoA	PA	RC	EE	PN	TL	SL	LvC	CaA	AstL
30-Jun-04	2	4-78	L40	0	0	5	30	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
12-Jul-04	2	4-78	B17	10	30	10	0	0	0					-	0	-	0	- 0	0	0	0	U	- 0	0	U	U	0	0	52	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	4-78	B39	0	15	40	0	0	0																		0	0	60	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	4-78	B45	0	45	30	0	0	0																		0	0	10	0	0	0	0	0	0	0	0	0	15
12-Jul-04	2	4-78	B65	0	60	0	0	0	0																		0	0	30	0	0	0	0	0	0	0	0	0	10
12-Jul-04	2	4-78	B70	0	60	0	0	0	0																		0	0	20	0	0	0	0	0	0	0	0	0	30
30-Jun-04	2	4-98	U14	45	0	15	2	10	0	0	0	0	0	18	0	0	13	0	0	0	0	0	0	0														<u> </u>	
30-Jun-04	2	4-98	U22	0	0	0	10	0	0	0	0	0	0	67	0	0	43	0	0	0	0	0	0	0															
30-Jun-04	2	4-98	U25	0	0	0	5	5	0	0	0	0	0	100	0	0	30	0	0	0	0	0	0	0															
30-Jun-04	2	4-98	U48	15	0	20	30	0	0	0	0	0	0	0	0	0	36	0	0	0	0	0	0	0															
30-Jun-04	2	4-98	U66	25	0	25	15	0	0	0	0	0	0	30	0	0	12	0	0	0	0	0	0	0															
30-Jun-04	2	4-98	L14	90	0	5	5	0	0					5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	2	4-98	L22	90	0	5	10	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	2	4-98	L26	80	0	10	10	0	0					5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	2	4-98	L47	75	0	5	15	0	10					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	2	4-98	L56	50	0	5	40	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
12-Jul-04	2	4-98	B1	30	40	30	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	4-98	B18	10	60	30	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	4-98	B19	60	40	15	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	4-98	B39	60	40	15	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	2	4-98	B61	0	20	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	80
30-Jun-04	3	5-22	UL3	0	0	90	0	0	0	0	0	0	0	53	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	3	5-22	UL14	15	0	40	5	0	0	0	0	0	0	34	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	3	5-22	UL26	15	0	30	20	0	0	0	0	0	0	18	7	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0								
30-Jun-04	3	5-22	UL47	65	0	30	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0						<u> </u>		
30-Jun-04	3	5-22	UL58	70	0	5	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						<u> </u>		
6-Jul-04	3	5-22	B29	0	90	10	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	5-22	B36	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	5-22	B38	0	95	5	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	5-22	B48	30	60	5	0	0	0																		0	0	0	0	5	0	0	0	0	0	0	0	0
6-Jul-04	3	5-22	B59	30	55	0	0	0	0																		0	0	0	0	0	0	0	0	0	21	0	0	0
30-Jun-04	3	5-56	UL10	10	0	15	5	0	0	0	0	0	0	59	4	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0						<u> </u>	Ļ	<u> </u>
30-Jun-04	3	5-56	UL11	0	0	80	0	0	0	0	0	0	0	30	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						<u> </u>	<u> </u>	<u> </u>
30-Jun-04	3	5-56	UL15	0	0	15	5	0	0	0	0	0	11	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						<u> </u>	↓	<u> </u>
30-Jun-04	3	5-56	UL20	0	0	30	5	0	0	0	0	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						<u> </u>	—	Щ.
30-Jun-04	3	5-56	UL54	60	0	10	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0						<u> </u>	<u> </u>	ليل
6-Jul-04	3	5-56	B24	0	85	15	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	5-56	B31	40	55	5	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	5-56	B44	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	5-56	B54	0	95	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	5-56	B62	0	45	0	0	0	0					(0)	10		10										0	0	40	0	0	0	15	0	0	0	0	0	0
30-Jun-04	3	5-85	UL0	0	0	30	5	0	0	0	0	0	0	60	18	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0						—	₩	igwdapprox igwedge
30-Jun-04	3	5-85	UL10	35	0	30	5	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						—	₩	\vdash
30-Jun-04	3	5-85	UL11	5	0	50	5	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						—	₩	\vdash
30-Jun-04	3	5-85	UL15	15	0	30	10	_	0	0	0	0	0	37	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0						—	₩	
30-Jun-04	3	5-85	UL54	40	0	40	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0			_		_		<u> </u>	
6-Jul-04	3	5-85	B14	100	0	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	5-85	B16	90	0	10	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0

Table 4.3-4 - June/July 2004 Survey of Terrestrial Floodway Vegetation Raw Data

Date			Position												<i>J</i>			J1 1 C1				getatio																	
Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	AG	PhP	TD	AsL	MS	CA	МО	ТО	SA	ML	LC	SC	AP		VC	PB	AS	PM	EA	SE	PoA	PA	RC	EE	PN	TL	SL	LvC	CaA	AstL
6-Jul-04	3	5-85	B25	95	0	5	0	0	0	710	1 111	ID	7132	1,10	011	1,10	10	571	IVIL	LC	50		7 2 2	, c	12	110	0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	5-85	B45	95	0	0	0	0	0																		0	0	0	0	0	0	5	0	0	0	0	0	0
6-Jul-04	3	5-85	B59	90	0	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
30-Jun-04	3	6-16	U26	0	0	15	5	0	0	0	0	0	0	0	53	0	30	0	0	0	0	0	0	0					100	Ů								Ť	
30-Jun-04	3	6-16	U44	55	0	10	10	0	14	0	0	0	0	5	0	0	0	6	0	0	0	5	0	0														+	
30-Jun-04	3	6-16	U45	45	0	20	10	0	5	0	0	0	0	0	0	0	0	23	0	0	0	0	0	0														\vdash	\vdash
30-Jun-04	3	6-16	U50	75	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0														†	†
30-Jun-04	3	6-16	U55	10	0	30	30	0	14	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0															
30-Jun-04	3	6-16	L7	65	0	15	10	0	0					2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	3	6-16	L27	45	0	50	0	0	0					8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	3	6-16	L34	25	0	50	0	0	0					20	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	3	6-16	L43	0	0	15	0	0	0					0	0	0	0	7	0	0	0	0	0	90	0	0	0	0	0	0	0								
30-Jun-04	3	6-16	L53	0	0	90	0	0	0					0	20	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0								
6-Jul-04	3	6-16	B10		90	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	6-16	B11		90	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	6-16	B25		90	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	6-16	B33		90	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	6-16	B38		90	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
30-Jun-04	3	6-20	U7	0	0	60	15	0	0	0	0	0	0	0	24	0	46	0	0	0	0	0	0	0															
30-Jun-04	3	6-20	U27	0	0	10	5	0	0	0	0	0	0	0	5	70	15	0	6	0	0	0	0	0															
30-Jun-04	3	6-20	U43	40	0	15	20	0	15	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0															
30-Jun-04	3	6-20	U54	0	0	70	30	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30															
30-Jun-04	3	6-20	U67	40	0	15	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0														<u> </u>	<u> </u>
30-Jun-04	3	6-20	L20	40	0	30	5	0	0					0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							<u> </u>	
30-Jun-04	3	6-20	L21	45	0	25	5	0	0					0	22	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							<u> </u>	<u> </u>
30-Jun-04	3	6-20	L34	50	0	40	0	0	0					0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0							<u> </u>	<u> </u>
30-Jun-04	3	6-20	L37	70	0	30	0	0	0					0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
30-Jun-04	3	6-20	L40	10	0	30	5	0	0					0	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								<u> </u>
6-Jul-04	3	6-20	B13		90	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	6-20	B35		90	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	6-20	B54		90	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	6-20	B60		90	0	0	0	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
6-Jul-04	3	6-20	B62	0	90	0	0	0	0		0		0	4.6	0		2.5	0	0	0				_			0	0	100	0	0	0	0	0	0	0	0	0	0
30-Jun-04		6-40	U5	0	0	30		0					0			0		0			0			0	\vdash						1		-	-		1		₩	
30-Jun-04	3	6-40	U24	10	0	20	15	_	0	0	0	0	0	0	57	0	0	0	0	0	0	0	0	0														—	
30-Jun-04	3	6-40	U38	0	0	15	10		0	0	0	0	0	4	5	0	13	0	5	0	0	0	0	0														—	
30-Jun-04	3	6-40	U63	65 75	0	5	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11														—	
30-Jun-04	3	6-40	U64	75 15	0	5	25		0	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			-				+	
30-Jun-04	3	6-40 6-40	L18 L26	15 80	0	50 15	0	0	0					10	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		-	 		-		+	
30-Jun-04 30-Jun-04	3	6-40	L26	5	0	25	5		0					10 64	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			-				+	
30-Jun-04 30-Jun-04	3	6-40	L54	30	0	25	25		0					0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	<u> </u>		-				+	
30-Jun-04 30-Jun-04	3	6-40	L54 L59	60	0	15	20		13					0	0	0	0	0	0	0	0	0		0	0	0	0	0	8	0	0	<u> </u>		-				+	
6-Jul-04	3	6-40	B0	00	65	15	0	-	0					U	U	U	U	U	U	U	U	U	U	U	U	U	0	0	20	0	0	0	0	0	0	0	0	0	0
6-Jul-04 6-Jul-04	3	6-40	B5		30	10	0	0	0															1			0	0	60	0	0	0	0	0	0	0	0	0	0
6-Jul-04 6-Jul-04	3	6-40	B14		90	0	0	0	0															1			0	0	100	0	0	0	0	0	0	0	0	0	0
6-Jul-04 6-Jul-04	3	6-40	B28		90	0	0	ł — —	0																		0	0	100	0	0	0	0	0	0	0	0	0	0
6-Jul-04 6-Jul-04	3	6-40	B40		90	0	0	0	0																		0	0	100		0	0	0	0	0	0	0	0	
0-Jul-04	3	0-40	D4U		90	U	U	U	U															<u> </u>			U	U	100	U	U	U	U	U	U	U	U	U	U

Table 4.3-4 - June/July 2004 Survey of Terrestrial Floodway Vegetation Raw Data

Date			Position															JI I CI				getatio																	
Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	AG	PhP	TD	AsL	MS	CA	МО	ТО	SA	ML	LC	SC	AP	VA	VC	PB	AS	PM	EA	SE	PoA	PA	RC	EE	PN	TL	SL	LvC	CaA	AstI.
6-Jul-04	4	7-16	U2	45	0	20	5	0	0	0	0	0	0	34	0	0	0	0	0	0	0	0	0	0	1 1 1	110	1 1/1	1271	SE	10/1	171	RC		111	112) DE	Lyc	Carr	TISCE
6-Jul-04	4	7-16	U8	30	0	25	10	0	0	0	0	0	0	54	0	0	11	0	0	0	0	0	0	0														\longrightarrow	-
6-Jul-04	4	7-16	U24	35	0	0	30	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0														\vdash	\neg
6-Jul-04	4	7-16	U45	60	0	10	15	2	7	0	8	0	0	0	0	0	0	0	3	0	0	0	0	0														\vdash	-
6-Jul-04	4	7-16	U54	30	0	15	20	0	37	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0														$\overline{}$	-
6-Jul-04	4	7-16	L4	55	0	10	5	0	0			Ů		21	8	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0							\Box	\neg
6-Jul-04	4	7-16	L9	80	0	10	5	0	0					10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							\Box	=
6-Jul-04	4	7-16	L15	60	0	5	5	0	0					34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
6-Jul-04	4	7-16	L38	40	35	25	15	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							i i	
6-Jul-04	4	7-16	L41	40	35	8	15	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							i i	
6-Jul-04	4	7-16	В7	0	95	5	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	4	7-16	B12	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	4	7-16	B14	0	95	0	0	0	0																		0	0	0	0	10	0	0	0	0	0	0	0	0
6-Jul-04	4	7-16	B22	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	4	7-16	B27	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	4	7-36	U33	5	0	15	10	0	81	0	0	0	0	0	0	0	6	0	5	0	0	0	0	0															
6-Jul-04	4	7-36	U43	70	0	15	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0															
6-Jul-04	4	7-36	U52	35	0	20	10	0	25	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0															
6-Jul-04	4	7-36	U70	55	0	15	15	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	15	0															
6-Jul-04	4	7-36	U71	65	0	10	20	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	6	0															
6-Jul-04	4	7-36	L7	40	30	30	5	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
6-Jul-04	4	7-36	L24	65	0	8	10	0	3					0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0								
6-Jul-04	4	7-36	L27	35	0	5	15	0	0					0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0							ш	
6-Jul-04	4	7-36	L31	55	0	10	15	0	23					0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0							ш	
6-Jul-04	4	7-36	L48	0	75	5	0	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0							igsquare	
6-Jul-04	4	7-36	B10	20	90	5	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	4	7-36	B19	30	0	0	0	0	0																		0	0	70	0	0	0	0	0	0	0	0	0	0
6-Jul-04	4	7-36	B24	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04	4	7-36	B34	0	40	0	0	0	0																		0	0	60	0	5	0	0	0	0	0	0	0	0
6-Jul-04	4	7-36	B35	0	20	0	0	0	0															ļ.,			0	0	0	0	10	0	0	74	0	0	0	0	0
6-Jul-04	4	7-81	U20	5	0	15	20	10	0	0	0	0	0	70	0	0	0	0	0	0	0	0	0	0														\longmapsto	
6-Jul-04	4	7-81	U23	25	0	20	10	15	0	0	0	0	0	26	11	0	0	0	0	0	0	0	0	0														\longmapsto	
6-Jul-04	4	7-81	U37	35	0	30	15		5	0	10	0	0	0	0	0	0	0	0	0	0	0	7	0		-								-				\longmapsto	
6-Jul-04	4	7-81	U40	45	0	20			9			0	0	0	0			0	11	0	0		4			-						<u> </u>						\longmapsto	
6-Jul-04	4	7-81	U52	65	0	10	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0							\longrightarrow	
6-Jul-04	4	7-81	L11	50	30	10	0	0	0					15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							\longrightarrow	
6-Jul-04	4	7-81	L13	95	0	8	5	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							\longmapsto	
6-Jul-04	4	7-81	L25	60	0	10	10	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							\longrightarrow	
6-Jul-04	4	7-81	L31	55	0	15	15		0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							\longrightarrow	
6-Jul-04 6-Jul-04	4	7-81 7-81	L38	45	25	10 5	25	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04 6-Jul-04	4	7-81 7-81	B3 B23	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04 6-Jul-04	4	7-81	B23 B30	0	100 90	0	0	0	10																	1	0	0	0	0	10	0	0	0	0	0	0	0	0
6-Jul-04 6-Jul-04	4	7-81	B35	0	100	0	0	0	0																	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jul-04 6-Jul-04	4	7-81	B36	0	95	0	0	0	0																	1	0	0	0	0	0	0	0	0	0	0	0	0	5
6-Jul-04 6-Jul-04	4	8-14	U18	15	0	60	5	0	0	0	0	0	0	5	18	0	0	0	0	0	0	0	0	0			U	U	U	U	U	U	U	U	U	U	U	U	5
6-Jul-04 6-Jul-04	4	8-14	U48	75	0	15	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0														\longrightarrow	
6-Jul-04	4	8-14	U57	55	0	15	20		0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0														$\vdash \vdash$	
0-341-04	_ →	0-14	037	55	U	13	20		U	U	U	U	U	U	U	11	U	U	U	U	U	U	U	U]	<u> </u>	l	<u> </u>]	<u> </u>	<u> </u>						

Table 4.3-4 - June/July 2004 Survey of Terrestrial Floodway Vegetation Raw Data

Servey Meyor	Date		1	Position																			getatio			W Butt														
Profection 4		Location	Site-T		TH	BG	BI	PP	AR	Tsp	AG	PhP	TD	AsL	MS	CA	МО	ТО	SA	ML	LC		-			PB	AS	PM	EA	SE	PoA	PA	RC	EE	PN	TL	SL	LvC	CaA	AstL
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Sunday S		4						0	1	1					_										_				0		-		0	0	0	0	0	0	0	0
SHIPPA S		4				_		0	0	0																		0	0	0	0	5	0	0	0	0	0	0	0	0
Fig. 1 Fig. 2 Fig. 3 Fig. 4 Fig. 5 F		4			_		0	0	1																			0	0	0	0	<u> </u>	0	0	0	0	0	0	0	5
Saligh S		4			0		0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
Supplied Supplied		4			0	_	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	5
6-Jul-04 4 8-34 U35 45 0 30 20 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4			45		35	15	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0															0
Substitute Sub		4				0		20	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															0
6-Jul-04 4 8-34 U70 60 0 30 S 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4				0	25		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5															11
6-Jul-04 4 8-34 U70 60 0 30 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	I 	4				0		10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															0
6-Jul-04 4 8-34 L12 55 0 10 10 10 0 0 0 15 10 0 0 0 0 0 0 0		4				0		5	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0															0
6-Jul-04 4 8-34 L32 55 0 10 10 10 0 0 0 0 0 0 0 0 0 0 0 0 0	I 	4				0	5	10	0	0				0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
6-Jul-04 4 8-34 L32 5 0 15 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4				0	10		0	0						0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0								
6-Jul-04 4 8-34 L40 0 60 35 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4															-		0			0	0			0			0											
6-Jul-04 4 8-34 B21 30 55 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4			60	0		5	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
6-Jul-04 4 8-34 B21 30 55 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4	-					10	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0								
6-Jul-04 4 8-34 8B2 0 95 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4			30			0	0	0																		0	0	0	0	15	0	0	0	0	0	0	0	0
6-Jul-04 4 8-34 B37 0 95 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4					5	0	0	0																		0	0	0	0	1	0	0	0	0	0	0	0	0
6-Jul-04		4			0		0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	5
6-Jul-04 4 8-34 B51 0 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4			40		0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
8-Jul-04 5 9-7 U0 75 0 15 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4					0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
8-Jul-04 5 9-7 U15 70 0 5 5 0 0 0 0 0 7 0 16 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		5			75		15	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												1			
8-Jul-04 5 9-7 U40 85 0 15 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		5	9-7	U15		0		5	0	0	0	0	7	0	16	0		0	0	0	0	0	0	0	0															
8-Jul-04 5 9-7 U41 85 0 10 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		5	9-7			0	15	5	0	0	0	0	0	0		0	†	2	0	0	0	0	0	0	0															
8-Jul-04 5 9-7 U66 65 0 10 5 0 5 0 0 0 0 0 0 15 0 0 0 0 0 0			9-7						1	1				0	0		-		0	-	0	0												İ						
		5	9-7			0	10	5	0	5	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0															
	8-Jul-04	5	9-7	L15	0	0	5	5	2	0					19	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0							\Box	\Box

Table 4.3-4 - June/July 2004 Survey of Terrestrial Floodway Vegetation Raw Data

Date		1	Position												,		Ţ,	01 101				getatio																	
Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	AG	PhP	TD	AsL	MS	CA	МО	ТО	SA	ML	LC	SC	AP			PB	AS	PM	EA	SE	PoA	PA	RC	EE	PN	TL	SL	LvC	CaA	AstL
8-Jul-04	5	9-7	L34	0	0	30	15	0	0					0	0	0	0	0	0	0	0	0	10	47	0	0	0	0	0	0	0								
8-Jul-04	5	9-7	L43	75	0	20	5	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					 	 	+	$\vdash \vdash \dashv$
8-Jul-04	5	9-7	L44	50	0	15	35	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					 	\vdash	+	$\vdash \vdash \Vdash \Vdash$
8-Jul-04	5	9-7	L45	55	0	15	30	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					 	\vdash	1	$\vdash \vdash \vdash \vdash$
8-Jul-04	5	9-7	B10	30	40	0	0	0	0					Ů	0	0	Ů	U	0		0	U	U	0	U	0	0	0	0	0	15	0	15	0	0	0	0	0	0
8-Jul-04	5	9-7	B12	30	30	0	0	0	0																		0	0	0	0	10	0	30	0	0	0	0	0	0
8-Jul-04	5	9-7	B15	0	70	0	0	0	0																		0	0	0	0	30	0	0	0	0	0	0	0	0
8-Jul-04	5	9-7	B20	0	80	0	0	0	0																		0	0	0	0	5	0	0	0	15	0	0	0	0
8-Jul-04	5	9-7	B33	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
8-Jul-04	5	9-56	U1	70	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						-						m	一	t	
8-Jul-04	5	9-56	U2	70	0	15	15	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0														1	
8-Jul-04	5	9-56	U25	35	0	15	10	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0															
8-Jul-04	5	9-56	U35	45	0	5	5	0	0	0	0	0	0	0	0	0	41	0	0	0	0	0	0	0										l					
8-Jul-04	5	9-56	U46	35	0	10	10	5	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0															
8-Jul-04	5	9-56	L1	5	0	30	25	0	0					75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
8-Jul-04	5	9-56	L5	40	0	20	15	0	0					21	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
8-Jul-04	5	9-56	L19	55	0	10	10	0	0					15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
8-Jul-04	5	9-56	L29	0	0	25	10	0	20					0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0								
8-Jul-04	5	9-56	L33	25	0	30	30	0	0					0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0								
8-Jul-04	5	9-56	B2	0	75	0	0	0	0																		0	0	0	0	25	0	0	0	0	0	0	0	0
8-Jul-04	5	9-56	B15	0	60	0	0	0	0																		0	0	5	0	31	0	0	0	4	0	0	0	0
8-Jul-04	5	9-56	B17	0	55	0	0	0	0																		0	0	0	0	35	0	0	0	0	0	0	0	0
8-Jul-04	5	9-56	B38	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
8-Jul-04	5	9-56	B39	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
8-Jul-04	5	9-70	U29	5	0	30	20	5	0	0	0	0	0	29	17	0	0	0	0	0	0	0	0	0															
8-Jul-04	5	9-70	U35	0	0	25	15	5	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0															
8-Jul-04	5	9-70	U53	5	0	30	15	0	0	0	0	0	0	0	0	36	14	0	0	0	0	0	0	0															
8-Jul-04	5	9-70	U68	20	0	30	10	5	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0															
8-Jul-04	5	9-70	U70	25	0	15	10	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0															
8-Jul-04	5	9-70	L1	10	0	30	10	0	12					38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
8-Jul-04	5	9-70	L17	55	0	25	10	0	0					7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
8-Jul-04	5	9-70	L20	0	0	15	5	0	0					85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
8-Jul-04	5	9-70	L40	30	0	40	30	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
8-Jul-04	5	9-70	L44	80	0	5	15	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					,			
8-Jul-04	5	9-70	B2	0	70	0	0	0	0																		0	0	0	0	30	0	0	0	0	0	0	0	0
8-Jul-04	5	9-70	B4	0	50	0	0	0	0																		0	0	0	0	50	0	0	0	0	0	0	0	0
8-Jul-04	5	9-70	B15	0	70	0	0	0	0																		0	0	0	0	30	0	0	0	0	0	0	0	0
8-Jul-04	5	9-70	B33	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
8-Jul-04	5	9-70	B47	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	5	10-95	U11	30	0	20	15	5	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0															
12-Jul-04	5	10-95	U33	30	0	20	10	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0															
12-Jul-04	5	10-95	U63	40	0	15	10	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	14	0															
12-Jul-04	5	10-95	U69	65	0	10	10	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
12-Jul-04	5	10-95	U77	10	0	30	10	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0															
12-Jul-04	5	10-95	L5	0	75	0	0	0	0					0	0	0	0	0	0	0	20	0	0	0	0	0	0	5	0	0	0								
12-Jul-04	5	10-95	L9	0	75	5	2	0	0					10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0								
12-Jul-04	5	10-95	L28	45	0	10	10	0	0					20	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0								
12-Jul-04	5	10-95	L38	0	65	5	5	0	0					0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	5								

Table 4.3-4 - June/July 2004 Survey of Terrestrial Floodway Vegetation Raw Data

Date	Location	C:4. T1	Position	ТН	P.C																Ve	getatio	n Spec	ies ²															
Surveyed	Location	Site-1	(m)	111	ВС	BI	PP	AR	Tsp	AG	PhP	TD	AsL	MS	CA	MO	TO	SA	ML	LC	SC		VA	VC	PB	AS	PM	EA	SE	PoA	PA	RC	EE	PN	TL	SL	LyC	CaA	AstL
12-Jul-04	5	10-95	L39	0	80	8	5	0	0					0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0								
12-Jul-04	5	10-95	В0	0	75	0	0	10	0																		0	0	0	0	15	0	0	0	0	0	0	0	0
12-Jul-04	5	10-95	B2	0	70	0	0	30	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	5	10-95	B22	0	90	0	0	0	0																		0	0	0	0	5	0	0	0	5	0	0	0	0
12-Jul-04	5	10-95	B26	0	90	0	0	0	0																		0	0	0	0	10	0	0	0	0	0	0	0	0
12-Jul-04	5	10-95	B27	15	70	0	0	0	0																		0	0	0	0	10	0	0	0	5	0	0	0	0
12-Jul-04	5	10-97	U1	70	0	15	10	0	0	0	0	0	0	2	0	0	4	0	0	0	0	0	0	0															
12-Jul-04	5	10-97	U18	15	0	20	10	0	0	0	0	0	0	58	0	0	0	0	0	0	0	0	0	0															
12-Jul-04	5	10-97	U40	40	0	25	10	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0															
12-Jul-04	5	10-97	U42	50	0	20	5	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0															
12-Jul-04	5	10-97	U52	50	0	15	10	0	0	0	0	0	0	12	0	0	13	0	0	0	0	0	0	0															
12-Jul-04	5	10-97	L6	55	0	5	0	0	0					30	0	0	0	0	0	0	0	0	0	0	0	6	0	7	0	0	0							ldot	
12-Jul-04	5	10-97	L10	20	50	10	0	0	0					6	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0								
12-Jul-04	5	10-97	L13	50	0	10	2	0	0					15	0	0	0	0	0	0	0	0	0	0	0	0	8	9	0	0	0								
12-Jul-04	5	10-97	L36	0	45	10	30	0	0					6	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0								
12-Jul-04	5	10-97	L47	0	70	0	0	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30								
12-Jul-04	5	10-97	В3	0	60	0	0	0	0																		0	0	0	0	40	0	0	0	0	0	0	0	0
12-Jul-04	5	10-97	B11	0	25	0	0	0	0																		0	0	0	5	40	0	30	0	0	0	0	0	0
12-Jul-04	5	10-97	B16	0	65	0	0	0	0																		0	0	0	0	10	0	0	0	0	0	0	15	0
12-Jul-04	5	10-97	B21	0	75	0	0	0	0																		0	0	0	0	15	0	0	0	21	0	0	0	0
12-Jul-04	5	10-97	B45	0	100	0	0	0	0																		0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-04	5	10-98	U4	60	0	10	10	0	0	0	0	0	0	15	0	0	7	0	0	0	0	0	0	0														ldot	
12-Jul-04	5	10-98	U33	30	0	40	20	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0															
12-Jul-04	5	10-98	U40	5	0	30	10	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	0	0															
12-Jul-04	5	10-98	U57	60	0	25	10	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0															
12-Jul-04	5	10-98	U60	40	0	15	10	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0															
12-Jul-04	5	10-98	L3	75	0	10	0	0	0					0	0	0	0	0	0	0	0	0	0	13	0	0	0	5	0	0	0								
12-Jul-04	5	10-98	L8	0	90	5	0	0	0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0								
12-Jul-04	5	10-98	L14	55	0	5	5	0	0					40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							Ш	
12-Jul-04	5	10-98	L22	0	0	20	15	0	0					100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
12-Jul-04	5	10-98	L23	55	0	5	5	0	0					15	0	0	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0							igsquare	
12-Jul-04	5	10-98	B11	0	40	0	0	0	0																		0	0	0	20	5	0	0	30	5	0	0	0	0
12-Jul-04	5	10-98	B29	40	30	0	0	0	0																		0	0	0	0	0	0	0	0	30	0	0	0	0
12-Jul-04	5	10-98	B37	0	80	0	0	0	0																		0	0	0	0	20	0	0	0	0	0	0	0	0
12-Jul-04	5	10-98	B39	0	80	0	0	0	0																		0	0	0	0	10	0	0	0	0	0	0	0	0
12-Jul-04	5	10-98	B42	0	100	0	0	0	0																		11	0	0	0	0	0	0	0	0	0	0	0	0

¹For site UTM coordinates, see Table 7B-1

U = Upper Slope; L = Lower Slope; B = Base

Location 1 = Seine River Outlet [Site 1 (Nearside), Site 2 (Farside)]

Location 2 = HWY 1 [Site 3 (Nearside), Site 4 (Farside)]

Location 3 = Gunn Road [Site 5 (Nearside), Site 6 (Farside)]

Location 4 = Dunning Road [Site 7 (Farside), Site 8 (Nearside)]

Location 5 = Turbine [Site 9 (Nearside), Site 10 (Farside)]

²For list of vegetation species see Table 7B-2

Table 4.3-5 - August 2004 Survey of Terrestrial Floodway Vegetation Raw Data

D + C	r	or1	Position	(D) X X	n.c.																		V	egetatio	on Spe	cies ²																	
Date Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	CA	ТО	VC	LP	CF	MS	MO	MA	SA	LC	SC	EA	SE					PM	PoA	RC	EE	TL	SL	LyC	CaA	PoL	ArT	BF	AB	TA	SP	AC	SiS	PhyP
25-Aug-04	1	1-44	U30	65	0	15	20	0	0	0	0	0	0	0	0	0	0	0	0	0																							
25-Aug-04	1	1-44	U37	70	0	10	20	0	0	0	0	0	0	0	0	0	0	0	0	0																						<u> </u>	
25-Aug-04	1	1-44	U43	70	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0																							
25-Aug-04	1	1-44	U46	35	0	20	15	0	0	0	0	0	0	30	0	0	0	0	0	0																						<u> </u>	igsquare
25-Aug-04	1	1-44	U54	55	0	15	30	0	0	0	0	0	0	0	0	0	0	0	0	0																						<u> </u>	igsquare
25-Aug-04	1	1-44	U62	60	0	30	10	0	0	0	0	0	0	0	0	0	0	0	0	0					-	-	-	ļ								ļ						<u> </u>	
25-Aug-04	1	1-44	L3	70	0	25	5	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		
25-Aug-04	1	1-44	L4	80	0	15	5	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		
25-Aug-04	1	1-44	L9	45	0	10	15	0	0	30	0	0			0	0	0	0	0	0	0	0	0	0	0																	 	$\vdash \vdash$
25-Aug-04	1	1-44	L11	65	0	10	15	0	0	10	0	0			0	0	0	0	0	0	0	0	0	0	0																	$\vdash \vdash \vdash$	
25-Aug-04	1	1-44	L17	50	0	5	10	0	0	0	0	0			35	0	0	0	0	0	0	0	0	0	0																	$\vdash \vdash \vdash$	
25-Aug-04	1	1-44 1-44	L19 B56	60	0	5	25	0	0	0	0	0			10	U	U	U	U	U	0	25	0			0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
25-Aug-04 25-Aug-04	1	1-44	B46	0	0	0	0	0	0	0	0	0						-		+	0	0	0	10	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
25-Aug-04 25-Aug-04	1	1-44	B33	0	0	0	0	60	0	0	0	0		}	}	-		1	1	+	0	0	0	20	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0
25-Aug-04 25-Aug-04	1	1-44	B33	0	20	0	0	60	0	0	0	0		1	1	1	1	+	1	+	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0
25-Aug-04 25-Aug-04	1	1-44	B15	0	0	0	0	0	0	0	0	0		1	1	1	1	+	1	+	0	0	100	·	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04 25-Aug-04	1	1-44	B13	0	0	0	0	80	0	0	0	0				1		1		+	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04 25-Aug-04	1	1-80	U15	55	0	10	20	0	0	0	0	0	0	0	15	0	0	0	0	0	0	1	0	30	0	1	0	0	0	U	U	U	U	U	0	0	0	0	U	U	U		$\overline{}$
25-Aug-04	1	1-80	U19	0	0	20	30	0	0	40	0	0	0	0	15	0	0	0	0	0					+	+																$\vdash \vdash \vdash$	$\overline{}$
25-Aug-04	1	1-80	U38	65	0	15	20	0	0	0	0	0	0	0	0	0	0	0	0	0					+	+																$\vdash \vdash \vdash$	$\overline{}$
25-Aug-04	1	1-80	U45	65	0	20	15	0	0	0	0	0	0	0	0	0	0	0	0	0																						H	\Box
25-Aug-04	1	1-80	U61	55	0	40	5	0	0	0	0	0	0	0	0	0	0	0	0	0																							\Box
25-Aug-04	1	1-80	U65	65	0	30	5	0	0	0	0	0	0	0	0	0	0	0	0	0																							\Box
25-Aug-04	1	1-80	L04	70	0	15	15	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		\Box
25-Aug-04	1	1-80	L11	65	0	15	10	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		\Box
25-Aug-04	1	1-80	L13	50	0	15	10	0	0	20	0	0			5	0	0	0	0	0	0	0	0	0	0																		\Box
25-Aug-04	1	1-80	L17	50	0	30	15	0	5	7	0	0			0	0	0	0	0	0	0	0	0	0	0																		\Box
25-Aug-04	1	1-80	L23	15	0	10	60	0	0	0	0	15			0	0	0	0	0	0	0	0	0	0	0																		
25-Aug-04	1	1-80	L24	0	0	15	70	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		\Box
25-Aug-04	1	1-80	B76	0	15	0	0	0	0	0	0	0									0	0	0	45	0	0	0	0	0	0	0	0	0	0	0	30	0	5	5	0	0	0	0
25-Aug-04	1	1-80	B54	0	0	0	0	0	0	0	0	0									40	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0
25-Aug-04	1	1-80	B53	0	0	0	0	40	0	0	0	0									0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	1	1-80	B35	0	0	0	0	0	0	0	0	0									30	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	1	1-80	B31	0	0	0	0	0	0	0	0	0									20	0	80	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	1	1-80	B07	0	0	0	20	40	0	0	0	0									0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	1	2-46	U5	45	0	30	15	0	0	10	0	0	0	0	0	0	0	0	0	0																							
25-Aug-04	1	2-46	U17	60	0	30	10	0	0	0	0	0	0	0	0	0	0	0	0	0																						igsqcup	—⁻
25-Aug-04	1	2-46	U32	60	0	10	30	0	0	0	0	0	0	0	0	0	0	0	0	0		<u> </u>			1																	<u> </u>	<u> </u>
25-Aug-04	1	2-46	U36	60	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0			<u> </u>	1					1													<u> </u>	
25-Aug-04	1	2-46	U52	25	0	15	30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	<u> </u>		1	1	1	ļ		ļ						ļ		<u> </u>				<u> </u>	<u> </u>
25-Aug-04	1	2-46	U69	50	0	20	15	0	0	12	0	0	6	0	0	0	0	0	0	0		1			1	1																<u> </u>	
25-Aug-04	1	2-46	L6	0	0	60	40	0	0	0	0	0			0	0	0	10	0	0	0	0	0	0	0			1							1	1			<u> </u>			<u> </u>	
25-Aug-04	1	2-46	L14	25	0	10	40	0	0	0	0	0			25	0	0	0	0	0	0	0	0	0	0	1			<u> </u>	<u> </u>					<u> </u>		1					↓ ′	<u>'</u>
25-Aug-04	1	2-46	L15	15	0	20	40	0	0	5	0	20		<u> </u>	0	0	0	0	0	0	0	0	0	0	0			1	1	<u> </u>					1	1	<u> </u>	1				↓ '	
25-Aug-04	1	2-46	L19	5	0	10	70	0	0	0	0	15		}	0	0	0	0	0	0	0	0	0	0	0	1	1	 	1	<u> </u>				1	1	 	1		<u> </u>			<u> </u>	'
25-Aug-04	1	2-46	L23	0	0	15	60	0	0	15	0	20		ļ	0	0	0	0	0	0	0	0	0	0	0	1	1	<u> </u>		ļ					1	<u> </u>	1					<u> </u>	
25-Aug-04	1	2-46	L30	15	0	15	60	0	0	0	0	10		}	0	0	0	0	0	0	0	0	0	0	0	-			_					_				-	_			لــــــــا	
25-Aug-04	1	2-46	B51	0	0	0	0	0	0	0	0	10		<u> </u>	<u> </u>			1		1	0	0	90	0	0	0	0	10	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	1	2-46	B49	0	0	0	0	0	0	0	0	10				-		 	<u> </u>	1	0	0	100	_	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
25-Aug-04	1	2-46	B43	0	0	0	0	U	0	0	0	0	<u> </u>]]		l	1	l	1	0	0	90	0	0	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0

Table 4.3-5 - August 2004 Survey of Terrestrial Floodway Vegetation Raw Data

2	·	1	Position		200																		Ve	getatio	on Spec	cies ²																	
Date Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	CA	ТО	VC	LP	CF	MS	МО	MA	SA	LC	SC	EA	SE	PA				PM	PoA	RC	EE	TL	SL	LyC	CaA	PoL	ArT	BF	AB	TA	SP	AC	SiS	PhyP
25-Aug-04	1	2-46	B38	0	0	0	0	0	0	0	0	0									0	0	60	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
25-Aug-04	1	2-46	B19	0	20	0	0	0	0	0	0	0									0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	1	2-46	В8	0	15	80	0	0	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
25-Aug-04	1	2-80	U18	0	0	60	20	0	0	30	0	0	0	0	0	0	0	0	0	0																						1	
25-Aug-04	1	2-80	U26	35	0	15	30	0	0	20	0	0	0	0	0	0	0	0	0	0																						1	
25-Aug-04	1	2-80	U33	10	0	25	40	0	0	5	0	0	0	0	0	20	0	0	0	0							1														1		
25-Aug-04	1	2-80	U48	0	0	10	40	0	0	0	0	0	0	0	0	70	0	0	0	0																					1		
25-Aug-04	1	2-80	U51	40	0	15	30	0	0	0	0	0	0	0	0	15	0	0	0	0																							
25-Aug-04	1	2-80	U61	40	0	25	15	0	0	0	0	10	0	0	0	10	0	0	0	0																					T	1	
25-Aug-04	1	2-80	L4	65	0	20	10	0	0	5	0	0			0	0	0	0	0	0	0	0	0	0	0																T	1	
25-Aug-04	1	2-80	L6	65	0	15	5	0	0	15	0	0			0	0	0	0	0	0	0	0	0	0	0																		
25-Aug-04	1	2-80	L10	70	0	5	5	0	5	0	0	0			0	0	0	0	0	0	15	0	0	0	0																		
25-Aug-04	1	2-80	L18	10	0	10	40	0	20	0	0	10			0	0	0	0	0	0	10	0	0	0	0																		
25-Aug-04	1	2-80	L24	10	0	5	60	0	0	5	0	20			0	0	0	0	0	0	0	0	0	0	0																		
25-Aug-04	1	2-80	L32	30	0	20	30	0	0	0	0	0			0	0	0	0	0	0	0	0	0	10	10																		
25-Aug-04	1	2-80	B73	0	0	0	0	0	0	0	0	0									0	100	0	0	0	0	0	0	0	0	0	0	0	80	0	0	0	0	0	0	0	0	0
25-Aug-04	1	2-80	B63	0	0	0	0	0	0	0	0	0									0	80	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	1	2-80	B37	0	0	0	0	0	0	0	0	0									0	0	60	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	50	0	0	0
25-Aug-04	1	2-80	B33	0	0	0	0	0	0	0	0	0									0	0	70	20	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0
25-Aug-04	1	2-80	B25	0	0	0	0	0	0	0	0	0									0	0	20	0	0	0	0	0	0	0	0	30	100	0	0	0	0	0	0	0	0	0	0
25-Aug-04	1	2-80	B02	0	20	0	0	0	0	0	0	0									0	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	3-22	B72	0	0	0	0	0	0	0	0	0									0	0	0	5	0	0	0	0	0	0	0	0	0	5	5	0	0	90	0	0	0	0	0
25-Aug-04	2	3-22	B70	0	40	0	0	10	10	0	0	0									0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0
25-Aug-04	2	3-22	B58	0	20	0	0	80	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	3-22	B28	0	0	0	0	90	0	0	0	0									0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	3-22	B15	5	0	60	0	20	0	0	0	0									0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	3-22	B13	15	0	30	0	0	0	0	0	0									0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
25-Aug-04	2	3-64	B73	0	0	0	0	0	0	0	0	0									0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	0	0	0
25-Aug-04	2	3-64	B58	0	10	0	0	90	0	0	0	0									0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04 25-Aug-04	2	3-64 3-64	B42 B20	0	0	0	0	90	0	0	0	0									0	0	0	25	10	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04 25-Aug-04	2	3-64	B17	0	0	0	0	80	0	0	0	0									0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
25-Aug-04 25-Aug-04	2	3-64	B7	0	0	20	0	00	0	0	0	0									0	0	0	70	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04 25-Aug-04	2	3-64 4-26	L5	70	0	20 5	15	0	0	7	4	0			0	0	0	0	0	0	0	0	0	0	0	U	0	U	3	0	10	U	U	U	1 0	U	U	0	0	1	+ 0	+ 0	
25-Aug-04 25-Aug-04	2	4-26	L14	55	0	15	30	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	1		1					1	 		+	1				+-	+-	
25-Aug-04 25-Aug-04	2.	4-26	L23	60	0	15	20	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	1	+	1	1	1	1	 	1	 	1	1	1	1	1	+	+	+	
25-Aug-04	2	4-26	L25	55	0	20	10	v	0	15	0	0			0	0	0	0	0	0	0	0	0	0	0						1				1	1	1				+	†	\vdash
25-Aug-04	2	4-26	L28	30	0	20	25		0	0	0	0			0	25	0	0	0	0	0	0	0	0	0	1	+	1		1	1	1	1	1	1	1	1	+	1	+	†	†	
25-Aug-04	2	4-26	L33	0	0		25		15		0	0			0	0	0	35			0	0	0	0	0																T	†	
25-Aug-04	2	4-26	B72	0	0	0	0	0	0	0	0	0							Ť		0	100	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	4-26	B71	0	0	0	0	0	0	0	0	0									0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	4-26	B33	0	0	0	0	80	0	0	0	0						1	1		0	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	4-26	B29	0	0	0	0	80		0	0	0									0	60	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	4-26	B28	0	0	0	0	80	0	0	0	0									0	70	30	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	4-26	B11	0	0	0	10	80	0	0	0	0									0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	4-94	L01	40	0	20	0	0	0	0	40	0			0	0	0	0	0	0	0	0	0	0	0																		
25-Aug-04	2	4-94	L06	75	0	15	5	0	0	0	5	0			0	0	0	0	0	0	0	0	0	0	0																		
25-Aug-04	2	4-94	L29	20	0	10	40	0	30	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		
25-Aug-04	2	4-94	L33	30	0	10	40	0	20	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		
25-Aug-04	2	4-94	L41	5	0	5	10	0	80	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		
25-Aug-04	2	4-94	L52	0	0	5	10	60	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0																<u></u>		<u> </u>

Table 4.3-5 - August 2004 Survey of Terrestrial Floodway Vegetation Raw Data

D		1	Position		n.~																		Ve	getatio	on Spec	cies ²																	
Date Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	CA	ТО	VC	LP	CF	MS	MO	MA	SA	LC	SC	EA	SE	PA				PM	PoA	RC	EE	TL	SL	LyC	CaA	PoL	ArT	BF	AB	TA	SP	AC	SiS	PhyP
25-Aug-04	2	4-94	B76	0	0	0	0	0	0	0	0	0									0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
25-Aug-04	2	4-94	B45	0	0	0	0	30	0	0	0	0									0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	4-94	B35	0	0	0	0	70	0	0	0	0									0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	4-94	B11	0	0	0	0	100	0	0	0	0									0	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	4-94	B5	0	0	0	0	80	0	0	0	0									0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-04	2	4-94	B1	0	0	0	0	70	0	0	0	0									0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	3	5-37	U5	0	0	90	15	0	0	10	0	0	0	0	35	0	0	0	0	0																							!
23-Aug-04	3	5-37	U26	0	0	15	25	0	0	20	0	20	0	0	40	0	0	0	0	0																							
23-Aug-04	3	5-37	U28	40	0	5	40	0	0	15	0	0	0	0	0	0	0	0	0	0																							
23-Aug-04	3	5-37	U40	10	0	10	30	0	0	25	0	0	0	0	25	0	0	0	0	0																							
23-Aug-04	3	5-37	U55	50	0	15	30	0	0	0	0	5	0	0	0	0	0	0	0	0																							
23-Aug-04	3	5-37	U60	40	0	10	50	0	0	0	0	0	0	0	0	0	0	0	0	0																						لــــــا	
23-Aug-04	3	5-37	B64	0	0	0	0	0	20	0	0	0						<u> </u>	<u> </u>	<u> </u>	0	40	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0
23-Aug-04	3	5-37	B54	0	80	0	0	15	0	5	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	3	5-37	B45	0	30	0	0	0	0	0	0	0									0	0	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	3	5-37	B38	0	40	0	0	40	0	0	0	0		<u> </u>			1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
23-Aug-04	3	5-37	B21	0	10	0	0	30	0	0	0	0	-	<u> </u>	-	-	1	 	 	 	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	3	5-37	B18	0	20	100	0	0	0	0	0	0	0	0	40	0	0	0	0		0	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04 23-Aug-04	3	5-63 5-63	U8 U23	25	0	100	40	0	0	0	0	0	0	0	40 15	0	0	0	0	0	1			-	1	1	1	-							-	1	1		-	\vdash			/
I -	3	5-63	U37	45	0	10	40	0	0	0	0	0	0	0	0	5	0	0	0	0																							
23-Aug-04	2	5-63	U41		0		40	0	0	0	0	5	0	0	0	0	0	12	0	0		<u> </u>			1	1											1	1		1			/
23-Aug-04 23-Aug-04	2	5-63	U41	30	0	15 20	40	0	0	0	0	0	0	0	0	0	0	10	0	0		<u> </u>			1	1											1	1		1			/
23-Aug-04 23-Aug-04	2	5-63	U48	10	0	10	30	0	5	10	0	20	0	0	15	0	0	0	0	0	<u> </u>	<u> </u>														<u> </u>		1					/
23-Aug-04 23-Aug-04	3	5-63	B70	0	0	0	0	0	0	0	0	0	U	U	13	U	0	0	U	U	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	30	0	0	0	0	0
23-Aug-04	3	5-63	B64	0	0	0	0	0	0	0	0	0									0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	3	5-63	B28	0	95	0	0	0	0	0	0	0									0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	3	5-63	B22	0	35	30	5	0	0	0	0	0									0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	3	5-63	B20	0	55	10	5	0	0	15	5	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0
23-Aug-04	3	5-63	B13	0	30	70	0	0	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug-04	3	6-09	L1	20	0	10	50	0	0	25	0	0			0	0	0	0	0	0	0	0	0	0	0																	\rightarrow	
27-Aug-04	3	6-09	L5	0	0	10	30	0	0	25	0	0			40	0	0	0	0	0	0	0	0	0	0																	\neg	
27-Aug-04	3	6-09	L11	20	0	30	10	0	0	0	0	0			30	0	0	17	0	0	0	0	0	0	0																	$\neg \neg$	
27-Aug-04	3	6-09	L33	0	0	40	10	0	0	10	0	0			40	0	0	5	0	0	0	0	0	0	0																	$\neg \neg$	
27-Aug-04	3	6-09	L44	0	0	10	15	0	0	10	0	70			0	0	0	0	0	0	0	0	0	0	0																		
27-Aug-04	3	6-09	L45	0	0	15	30	0	0	10	0	50			0	0	0	0	0	0	0	0	0	0	0																		
27-Aug-04	3	6-09	B13	0	80	0	0	0	0	0	0	0									0	100	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug-04	3	6-09	B18	0	90	0	0	0	0	0	0	0									0	100	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug-04	3	6-09	B30	0	80	0	0	0	0	0	0	0									0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
27-Aug-04	3	6-09	B37	0	80	0	0	0	0	0	0	0									0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug-04	3	6-09	B43	0	70	0	0	0	0	0	0	0									0	100	0	20	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0
27-Aug-04	3	6-09	B54	0	80	0	0	0	0	0	0	0									0	100	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug-04	3	6-39	B71	0	20	0	0	0	0	0	0	0					1	1	1	1	0	30	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug-04	3	6-39	B62	0	70	0	0	0	0	0	0	0					1	1	1	1	0	100	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug-04	3	6-39	B46	0	40	0	0	0	0	30	0	0		<u> </u>			1	1			0	100	0	20	0	0	0	0	0	0	0	0	0	0	0	0	10	+	0	0	0	0	0
27-Aug-04	3	6-39	B38	0	60	0	0	0	0	0	0	0					1	ļ	ļ	ļ	0	100	0	30	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0
27-Aug-04	3	6-39	B11	0	10	0	0	0	0	0	0	0					1	ļ	ļ	ļ	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug-04	3	6-39	B00	0	0	0	60	0	0	0	0	0					<u> </u>	1	1	1	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Aug-04	3	6-39	L58	15	0	40	15	0	0	0	0	0			0	10	0	20	_	0	0	0	0	0	0	1											1						
27-Aug-04	3	6-39	L42	10	0	40	20	0	0	30	0	0			20	0	0	0	0	0	0	0	0	0	0	1											1						
27-Aug-04	3	6-39	L33	30	0	40	20	0	0	30	0	0		<u> </u>	10	5	0	0	0	0	0	0	0	0	0			<u> </u>															

Table 4.3-5 - August 2004 Survey of Terrestrial Floodway Vegetation Raw Data

D . G		1	Position		D.C.																		Ve	egetatio	on Spe	cies ²																	
Date Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	CA	ТО	VC	LP	CF	MS	МО	MA	SA	LC	SC	EA	SE	PA				PM	PoA	RC	EE	TL	SL	LyC	CaA	PoL	ArT	BF	AB	TA	SP	AC	SiS	PhyP
27-Aug-04	3	6-39	L27	20	0	60	10	0	0	10	0	0			0	0	0	20	0	0	0	0	0	0	0																		
27-Aug-04	3	6-39	L26	0	0	30	20	0	0	10	0	0			0	5	0	20	0	0	0	0	0	0	0																		
27-Aug-04	3	6-39	L5	0	0	30	60	0	0	0	0	0			0	0	0	0	0	0	0	20	0	0	0																		
23-Aug-04	4	7-18	B43	0	25	0	0	0	6	0	0	0									0	0	44	20	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	4	7-18	B39	0	35	0	0	0	0	0	0	0									0	0	0	47	0	0	0	0	0	5	0	0	0	0	0	0	15	0	0	0	0	0	0
23-Aug-04	4	7-18	B33	0	20	0	0	0	0	0	0	0									0	0	0	20	0	0	0	0	0	0	0	0	0	0	4	0	60	0	0	0	0	0	0
23-Aug-04	4	7-18	B24	0	0	5	0	0	0	0	0	0									0	0	0	58	0	0	10	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0
23-Aug-04	4	7-18	B23	0	60	0	0	20	10	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0
23-Aug-04	4	7-18	В6	0	40	60	0	0	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	4	7-74	B54	0	0	0	0	0	0	0	0	0									20	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0
23-Aug-04	4	7-74	B47	0	55	0	0	0	0	0	0	0									30	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	4	7-74	B39	0	0	0	0	0	0	0	0	0									5	30	10	6	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
23-Aug-04	4	7-74	В9	0	0	0	0	5	0	0	0	0									0	5	50	17	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
23-Aug-04	4	7-74	В3	0	0	60	10	0	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	4	7-74	B1	0	5	70	20	0	0	0	0	0									0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	4	8-34	L39	0	0	20	0	0	0	0	0	0			0	0	0	0	0	0	0	0	25	0	0													1			↓	↓	<u> </u>
23-Aug-04	4	8-34	L25	0	0	15	0	0	0	0	0	0			25	0	0	0	0	0	0	0	15	0	0												1	1			₩	₩	↓ '
23-Aug-04	4	8-34	L22	0	0	15	0	0	0	0	0	0			25	0	0	0	0	0	0	0	15	0	0													1			₩	₩	<u> </u>
23-Aug-04	4	8-34	L19	30	0	15	0	0	0	20	0	0			25	0	0	0	0	0	0	0	10	0	0																_		<u> </u>
23-Aug-04	4	8-34	L5	45	0	25	0	0	0	0	0	0			0	30	0	0	0	0	0	0	20	0	0																↓	↓	<u> </u>
23-Aug-04	4	8-34	L1	35	0	15	0	0	0	0	0	0			0	40	0	0	0	0	0	0	10	0	0																₩	₩	<u> </u>
23-Aug-04	4	8-34	B52	0	40	0	0	0	0	0	0	0									0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
23-Aug-04	4	8-34	B45	0	30	0	0	0	5	0	0	0									0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
23-Aug-04	4	8-34	B27	0	35	0	0	0	0	0	0	0									0	0	10	0	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	4	8-34	B21	0	40	20	0	0	0	0	0	0									0	0	0	7	15	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
23-Aug-04	4	8-34	B14	0	50	0	0	40	0	0	0	0				1					0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	4	8-34	B5	0	70	30	0	10	0	0	0	0			12	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	4	8-88	L9	30	0	15	20	0	0	12	0	0			13	10	0	0	0	0	0	0	0	0	0																₩	₩	<u></u> '
23-Aug-04	4	8-88	L12	0	0	10	15	0	0	0	0	0			90	0	0	0	0	0	0	0	0	0	0	-				1								+			+	+	'
23-Aug-04	4	8-88	L32	10	0	15	20	0	0	0	0	0			35	20	0	0	0	0	0	0	0	0	0	-				1								+			+	+	'
23-Aug-04	4	8-88 8-88	L33 L34	10	0	15	15	0	0		0	0			60	0	0	0	0	0	0	0	0	0	0	1												+			+	+	
23-Aug-04	4	8-88	L34 L40	Ŭ		30	20	0	0	20	0	5				0	0	0	0	0	0	0	0	0	0							-									+	+	
23-Aug-04	4	8-88 8-88	B39	45 0	35	0	0	0	0	0	0	0	1	1	0	U	U	1 0	1	1	0	0	0	0	55	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0
23-Aug-04 23-Aug-04	4	8-88	B39 B30	0	20	0	0	0	0	0	0	0	1	-		-	+	1	1	-	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
23-Aug-04 23-Aug-04	4	8-88	B30 B29	0	40	0	0	0	0	0	0	0				1	+				0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04 23-Aug-04	4	8-88	B16	0	50	15	0	0	0	0	0	0	1	1		+	+	1	1		0	0	0	5	0	0	0	0	5	0	0	0	0	0	5	0	6	15	0	0	0	0	0
23-Aug-04 23-Aug-04	4	8-88	B15		30	0	0	0	0	10	_	0	1	+		+	+	1	1		0	0	0	25	0	0	0	0	6	0	0	0	0	0	0	0	12		0	0	0	0	0
23-Aug-04 23-Aug-04	4	8-88	B10		40	10	0	0	Ť	31		0	1	1		1	+	1	1		0	0	0	20		0	0	0	0	0	0	0	0	0	0	0	0	_	0	v	0	·	0
23-Aug-04 23-Aug-04	5	9-30	L16	60	0	10	10		0	0	0	0			0	0	0	20	0	0	0	0	0	0	0		1	0	0	0		3	J	U			0		0			+	
23-Aug-04 23-Aug-04	5	9-30	L27	30	0	20	20	_	0	0	0	0			30	0	0	0	0	0	0	0	0	0	0	1		1	1	1					 			+			+	+-	\vdash
23-Aug-04	5	9-30	L29	30	0	15	15	0	10	_	0	30			0	0	0	0	0	0	0	0	0	0	0	1		1	1	1					 			+			+	+-	\vdash
23-Aug-04	5	9-30	L35	5	0	15	20	0	5	0	0	30	1	1	0	20	0	0	0	0	0	0	0	0	0	1	1	1								1	1	1	1	1	t	+	
23-Aug-04	5	9-30	L45	20	0	70	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	10	0	1	1	1								1	1	1	1	1	t	+	
23-Aug-04	5	9-30	L49	0	20	10	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	70	0	0	1	1	1	1	†					t	1	1	†	1	1	t	†	\Box
23-Aug-04	5	9-30	B43	0	90	0	0	0	0	0	0	0				Ť		Ť	1	Ť	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0
23-Aug-04	5	9-30	B36	0	95	0	0	0	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	9-30	B8	0	0	0	10	0	0	0	0	0									0	0	50	40	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	9-30	B6	0	10	0	0	0	0	0	0	0				1	1		1	1	0	0	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	9-30	B4	0	20	0	0	0	0	0	0	0									0	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	9-30	В3	0	20	0	0	0	0	0	0	0							1		0	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 4.3-5 - August 2004 Survey of Terrestrial Floodway Vegetation Raw Data

D + C 1		~·1	Position		D.C.																		Ve	getatio	n Spec	cies ²																	
Date Surveyed	Location	Site-T ¹	(m)	TH	BG	BI	PP	AR	Tsp	CA	ТО	VC	LP	CF	MS	MO	MA	SA	LC	SC	EA	SE					PM	PoA	RC	EE	TL	SL	LyC	CaA	PoL	ArT	BF	AB	TA	SP	AC	SiS	PhyP
23-Aug-04	5	9-75	L11	80	0	10	5	0	0	0	0	0			5	0	0	0	0	0	0	0	0	0	0																	$\overline{}$	
23-Aug-04	5	9-75	L12	70	0	15	10	0	0	0	0	0			7	0	0	0	0	0	0	0	0	0	0																		t
23-Aug-04	5	9-75	L17	35	0	20	20	0	0	10	0	0			15	0	0	0	0	0	0	0	0	0	0																		
23-Aug-04	5	9-75	L19	50	0	10	20	0	0	0	0	0			5	0	0	10	0	5	0	0	0	0	0																		
23-Aug-04	5	9-75	L23	0	0	15	20	0	0	0	0	0			20	0	0	0	0	0	0	0	0	0	0																		
23-Aug-04	5	9-75	L33	20	0	30	20	0	0	0	0	30			0	0	0	0	0	0	0	0	0	0	0																		
23-Aug-04	5	9-75	B49	0	80	0	0	0	0	0	0	0									0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	9-75	B38	0	0	0	0	0	15	0	0	0									0	0	10	65	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	9-75	B32	0	25	0	0	0	0	0	0	0									0	0	70	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	9-75	B30	0	30	0	0	0	0	0	0	0									0	0	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	9-75	B18	0	5	0	0	0	0	0	0	0									0	0	70	5	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	9-75	B12	0	20	0	0	0	0	0	0	0									0	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	10-24	L7	0	0	10	5	0	0	7	0	0			6	0	0	0	0	0	0	0	0	0	0																		
23-Aug-04	5	10-24	L8	70	0	15	0	0	0	0	0	0			10	0	0	0	0	0	5	0	0	0	0																		
23-Aug-04	5	10-24	L27	0	0	10	15	0	0	0	0	0			80	0	0	0	0	0	0	0	0	0	0																		
23-Aug-04	5	10-24	L35	0	65	15	10	0	0	0	0	0			0	0	10	0	0	0	0	0	0	0	0																	<u>L</u>	
23-Aug-04	5	10-24	L38	0	75	15	10	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		
23-Aug-04	5	10-24	L39	0	85	10	5	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		
23-Aug-04	5	10-24	B47	0	45	0	0	0	0	0	0	0									0	0	0	15	0	0	0	0	0	0	0	15	0	0	5	0	0	20	0	0	0	0	0
23-Aug-04	5	10-24	B41	0	20	0	0	5	0	0	0	0									0	0	0	60	0	0	0	0	0	0	5	10	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	10-24	B29	0	30	0	0	0	0	0	0	0									0	0	15	40	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	10-24	B23	0	15	0	0	0	0	0	0	0									0	0	25	30	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	10-24	B17	0	30	0	0	0	0	0	0	0									0	0	60	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	10-24	B10	0	15	0	0	0	0	0	0	10									0	0	70	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	10-56	L13	50	0	20	15	0	0	0	0	0			15	0	0	0	0	0	0	0	0	0	0																		
23-Aug-04	5	10-56	L14	40	0	15	5	0	0	0	0	0			30	0	0	0	0	0	10	0	0	0	0																		
23-Aug-04	5	10-56	L21	0	0	30	25	0	0	0	0	10			75	0	0	0	0	0	10	0	0	0	0																		
23-Aug-04	5	10-56	L38	0	80	10	0	0	0	0	0	0			0	0	0	0	10	0	0	0	0	0	0																		
23-Aug-04	5	10-56	L40	0	70	10	0	0	0	0	0	0			0	0	0	0	20	0	0	0	0	0	0																		
23-Aug-04	5	10-56	L44	0	50	15	35	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0																		
23-Aug-04	5	10-56	B55	0	95	0	0	0	0	0	0	0									0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	10-56	B40	0	20	0	0	0	0	6	0	0									0	0	20	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	10-56	B37	0	0	0	0	0	0	0	0	0									0	0	80	10	0	0	0	0	0	0	10	0	0	0	0	0	0	5	0	0	0	0	0
23-Aug-04	5	10-56	B28	0	5	0	0	0	0	5	0	0									0	0	30	0	0	0	0	0	25	0	30	0	0	0	0	0	0	5	0	0	0	0	0
23-Aug-04	5	10-56	B26	0	35	0	0	0	0	7	0	0									0	0	30	10	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
23-Aug-04	5	10-56	B05	0	0	30	0	0	0	0	0	0									0	0	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	-																																										

¹For site UTM coordinates, see Table 7B-1

U = Upper Slope; L = Lower Slope; B = Base

Location 1 = Seine River Outlet [Site 1 (Nearside), Site 2 (Farside)]

Location 2 = HWY 1 [Site 3 (Nearside), Site 4 (Farside)]

Location 3 = Gunn Road [Site 5 (Nearside), Site 6 (Farside)]

Location 4 = Dunning Road [Site 7 (Farside), Site 8 (Nearside)]

Location 5 = Turbine [Site 9 (Nearside), Site 10 (Farside)]

²For list of vegetation species see Table 7B-2



Figure 4.3-7 Aquatic macrophyte sampling along floodway channel.



Figure 4.3-8 West Dyke smooth brome grassland.

Table 4.3-6 - Aquatic Vegetation in the Floodway Low-Flow Channel

	UTM P		8-6 - Aqua	regett		1100411	Speci				
Site	northing	easting	Metres	AlT	LM	SV	CH	EE	PoP	SaC	SF
Inlet	635231	5512967	0	1111	23.72	~ .		#	101	50	#
Inlet			10					#	#	#	
Inlet			20					#	#	#	
Inlet			30					#	#	#	
Inlet Inlet			40 50	#				#	#	#	
Inlet			60	#		#	#	#	#	#	
Inlet			70	#		π	#	#	#	#	
Inlet			80	π			π	#	π	#	
Inlet			90					#		,,	#
Inlet			100					#	#		
1/2	640854	5517277	0		#						
1/2			10		#	#					#
1/2			20		ш						#
1/2			30		#	11					
1/2			40 50			#					ш
1/2			60		#	#					#
1/2			70		#						#
1/2			80		#						-"
1/2			90		1	#					
1/2			100			#					
3/4	646204	5521016	0								
3/4			10								
3/4			20								
3/4			30								
3/4			40								
3/4			50								
3/4			60								
3/4			70								
3/4			80								
3/4			90								
3/4			100								
5/6	646091	5531887	0								
5/6			10			#				- 11	
5/6 5/6			20 30							#	
5/6			40								
5/6			50								
5/6			60			#					
5/6			70								
5/6			80					#			
5/6			90			#					
5/6			100			#					
7/8	646051	5541778	0								
7/8			10								
7/8			20		1						
7/8			30								
7/8			40								
7/8			50								
7/8			60								
7/8			70		<u> </u>						
7/8			80 90								
7/8 7/8			100		1		1		1	1	
9/10	648635	5546907	0								
9/10	040033	3340707	10			 	1		1	1	
9/10			20								<u> </u>
9/10			30		1						
9/10			40								
9/10			50		1						
9/10			60		1						
9/10			70								
9/10			80								
9/10			90		1						
9/10			100								
# = species	r nresence			•			<u> </u>		<u> </u>	<u> </u>	<u> </u>

^{# =} species presence

1 for list of vegetation species, see Table 3

Table 4.3-7 - June 16, 2004 Survey of the West Dyke

UTM Coordinates										Si	tes								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
UTM easting		631942	630798	633870	630842	630634	628629	626018	626082	626145	624853	619853	615047	609887	604788	602992	601355	598505	594820
UTM northing		5509274	5507312	5512017	5504945	5502968	5503009	5502314	5499319	5496224	5494632	5494536	5494422	5494294	5494265	5499118	5501557	5502312	5502252
Species List																			
Common Name Scientific Names		Abundance																	
Alfalfa	Medicago sativa	A	A	A	A	F	F	A	A	#	A	0	R	F					
Smooth Brome	Bromus inermis	D	D	D	D	D	D	D	D	#	D	D	D	D	D	D	D	D	D
Dandelion	Taraxacum officinale	F	A	F	A	F	О	F	О	#		R							О
Canada Thistle	Cirsium arvense	О	O	O	О	O	О	O	О	#	F	R				R			
Bluegrass	Poa pratensis	A	O	F	F	A	A	A	F	#	F	F	F	F	F	F	F	О	F
Clover	Trifolium spp.	О	R		О	О		O	О	#		R							
Purple Milk-Vetch	Astragalus goniatus	R	R			F	О	F	О		R	O		О		О			
Dock	Rumex crispus	О		R		R				#									
Saskatoon	Amelanchier alnifolia	R																	
Wild Rose	Rosa sp.	R								#			О		R	F	О	О	F
Blue-eyed Grass	Sisyrinchium montanum		R			O			R			O							O
Sow Thistle	Sonchus spp.	R	O		R														
Narrow-leaved Sunflower	Helianthus maximiliana		R				R								R		R		
Goats-beard	Tragopogon dubius		R				R												
Common Horsetail	Equisetum arvense				R														
Silverweed	Potentilla anserina			R	R														
Wild Vetch	Vicia americana					R	R		F								R		
Bugleweed	Lycopus americanus					R													
Goldenrod	Solidago sp.					R	R									О	R		R
Showy Milkweed	Asclepias speciosa								R								R		
Yellow Willow	Salix lutea						О												
Canada Anemone	Anemone canadensis						R			#	R						A	F	
Yellow Sweet Clover	Melilotus officinalis			O					A	#	O	O							R
Birds-Foot Trefoil	Lotus corniculatus								О		O			О					
	Thlapsi arvense									#				R			R		
Reed Canary Grass	Phalaris arundinaceum									#									
Northern Bedstraw	Gallium borealis									#							F		
Crested Wheatgrass	Agropyron cristatum										R								
Quack Grass	Agropyron repens			0								A	O						
Water Plantain	Alisma sp. triviale													R					
Snowberry	Symphoricarpos occidentalis																O		
Wild Strawberry	Fragaria glauca						,												F
Meadow Rue	Thalictrum venosum																		R
Prairie Sage	Artemisia ludoviciana																		R

D = Dominant (>50%), A = Abundant (25-50%), F = Frequent (1-25%), O = Occasional (<1%), R = Rare (<<<1%) NV = No Value

Clover includes Trifolium repens, Trifolium pratense, and Trifolium hybridum

Portions of the West Dike in the RM of MacDonald are regularly sprayed with Tordon22k and Vanquish

Table 4.3-8 - July 22-23, 2004 Survey of the West Dyke

			Sites																
UTM Coordinates UTM easting		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		631942	630798	633870	630842	630634	628629	626018	626082	626145	624853	619853	615047	609887	604788	602992	601355	598505	594820
UTM northing		5509274	5507312	5512017	5504945	5502968	5503009	5502314	5499319	5496224	5494632	5494536	5494422	5494294	5494265	5499118	5501557	5502312	5502252
Species		3307271	3307312	3312017	3301713	3302700	2203009	3302311	3177317	3130221	3131032	3131330	3191122	3171271	3 13 1203	3199110	3301337	3302312	3302232
Common Name	Scientific Names									Abun	dance								
	Medicago sativa	#	A	#	A	0	1			0	#	R	l	F	F	T		1	
	Bromus inermis	#	D	#	D	D				D	#	D	D	D	D	D		D	
	Taraxacum officinale	11	0	#	0	F				0	"	0	В	ь	R	ь		ь	
b	Cirsium arvense	#	R	#	R	R				A		R	R		K	R			
	Poa pratensis	#	F	"	A	R				7.1		F	0		0			F	
- E	Trifolium hybridum	,,		#	0	F				F		0	Ü		R			1	
	Trifolium pratense		О		Ü	F				-		0							
	Astragalus goniatus		R		R	•						R	0			0			
	Rumex crispus				10					О			0			Ů		О	
	Amelanchier alnifolia									-									
	Rosa arkansana									О						0		0	
	Sisyrinchium montanum		R							-						-			
	Sonchus arvense	#	R	#											R				
	Helianthus maximiliana				R								R						
	Tragopogon dubius		R	#	R														
	Equisetum arvense																		
	Potentilla anserina																		
	Vicia americana																		
1	Lycopus americanus																		
	Solidago canadensis															0			
Showy Milkweed	Asclepias speciosa		R		R					R									
Yellow Willow	Salix lutea																		
Canada Anemone	Anemone canadensis									R	#							F	
Yellow Sweet Clover	Melilotus officinalis	#		#		О				О	#							R	
White Sweet Clover	Melilotus alba	#				О				О						R			
Birds-Foot Trefoil	Lotus corniculatus		R												R				
Stinkweed	Thlapsi arvense																		
	Phalaris arundinacea					O				R									
	Gallium borealis																	O	
	Agropyron cristatum																		
	Agropyron repens	#		#	R	O						A	О	A		R		F	
Water Plantain	Alisma sp.triviale																		
	Symphoricarpos occidentalis																		
	Fragaria glauca																		
	Thalictrum venulosum																	R	
	Medicago lupulina			#											О				
	Oenothera biennis		R																
	Cirsium floodmannii		R																
	Glycyrrhiza lepidota		R																
l	Hordeum jubatum	#		#	R					O		F	О	О	A				
	Ambrosia trifida				О														
	Lotus purshianus												R			ļ			
	Apocynum cannabinum															F			
	Potentilla norvegica									R						-			
	Phleum pratense										#		_			ļ		O	
	Spartina pectinata												R		R	-			
	Beckmannia syzigachne			ļ										ļ	R	 			
	Achillea millefolium														R	R			
	Plantago major													r	R				
Prairie Sage	Artemisia ludoviciana													<u> </u>		О			

Sites 1, 3, and 10 had recently been mowed so that it was not possible to estimae abundance, though there was enough plant material to compile a species list. Sites 6, 7, and 8 had recently been mowed. There was nothing left with which to compile a species list. Sites 16 and 18 were not accessible due to wet road conditions on the dirt portion of the West Dyke.

4.3.3 West Dyke

The West Dyke is a fairly homogeneous grassland community (Figure 4.3-8). At the Western end it is a substantial structure rising above local roadways, while at the Eastern end it is indistinguishable from the other roads in the area. All of the sites examined in June were dominated by smooth brome. The other most abundant species were alfalfa, dandelion, Canada thistle, bluegrass, and clover. There were approximately 35 plant species found along the West Dyke in the first survey, but no rare or COSEWIC/MESA-listed plant species (Table 4.3-7).

Results for the July survey were similar. Smooth brome was once again the dominant plant, with alfalfa, dandelion, Canada thistle and sweet clover also in evidence. Fifty plant species were found in the first two surveys, but none were rare or endangered (Table 4.3-8).

The July survey was reduced in scope due to the widespread mowing of the West Dyke ROW. Mowing appeared to be an ongoing process between Site 1 and Site 10 (Figure 4.3-9). A species list was compiled for some of the mowed sites, but in other locations plants had been completely harvested and so it was not possible to gather any data.

4.4 CONCLUSIONS

- The Floodway vegetation surveys identified 105 species. The West Dyke vegetation surveys identified 50 species.
- One rare species of shrub, *Amorpha fruticosa*, was found on the Floodway Lower Slope. It is listed as S1/S2 in Manitoba, though it is not a COSEWIC/MESA-listed species.
- The Floodway slopes are grasslands dominated by smooth brome, bluegrass, alfalfa, Canada thistle, and sweet clover.
- The West Dyke slopes are grasslands dominated by smooth brome, alfalfa and bluegrass.
- The willow Salix exigua occurs as dense thickets on an estimated 25% of the Floodway Base.
- A two-week flood in June 2004 killed the aboveground biomass of all species on the Floodway Base except two willow species (*Salix exigua, S. lutea*) and the herb fringed loosestrife.
- Two weeks after the floodwaters had receded, some recovery of the vegetation was evident. Eight weeks after the floodwaters had receded, vegetation on the Floodway Base had largely recovered.
- A long-term effect of flooding was the removal of plant litter on the Floodway Base. This increases
 the potential for erosion, and also increases the potential for the successful germination of willow
 seeds.
- There is almost no aquatic vegetation, either emergent or submerged, in the Floodway Low-Flow Channel.



Figure 4.3-9 Mowed area of West Dyke adjacent to Figure 3.3-1.

4.5 REFERENCES

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