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3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill **USFWS Classification:** FO1/4

Sample Location: Stream 1 Upland **Date:** 10/21/93

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Pinus strobus	35/90	38.9	FACU
Quercus alba	35/90	38.9	FACU–
Fraxinus pennsylvanica	10/90	11.1	
Acer rubrum	10/90	11.1	
Lianas:			
Saplings:			
Pinus strobus	20/60	33.3	FACU
Quercus alba	20/60	33.3	FACU–
Fraxinus pennsylvanica	20/60	33.3	FACW
Shrubs:			
Viburnum dentatum	15/20	75	FAC
Fraxinus pennsylvanica	5/20	25	FACW
Seedlings and Herbs:			
Lonicera tatarica	5/10	50	FACU
Quercus alba	3/10	30	FACU–
Fraxinus pennsylvanica	2/10	20	FACW
Mosses and Liverworts:			

Tally:	OBL	FACW 3	FAC 1	FAC–	FACU 6	UPL	SUM 10

{OBL+FACW+FAC} X 100 = SUM

4/10 = 40%

Area Disturbed? YES X NO

Describe:

Continued on other side

Stream 1 Upland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			
0–12 inch	10 YR 3/4		
____ inch			
____ inch			

Soil Pedigree: Permeability:

Series and Phase: Drainage Class:

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: Dated:

PRIMARY INDICATORS:

____ Inundation (Depth)
____ Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
____ Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
____ Other (Buttressed Trees, Stooling)

CONCLUSIONS

No Hydrophytes Prevalent
No Wetland Hydrology
No Hydric Soils
No Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert Kennedy

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: PFO1/4**
Sample Location: Brook System – Wetland D	**Date: 10/20/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Acer rubrum	50/90	55.6	FAC
Pinus strobus	20/90	22.2	FACU
Ulmus americana	20/90	22.2	FACW–
Lianas:			
Saplings:			
Acer rubrum	20/40	50	FAC
Ulmus americana	10/40	25	FACW–
Fraxinus pennsylvanica	10/40	25	FACW
Shrubs:	10/10	100	FAC
Viburnum dentatum			
Seedlings and Herbs:			
Solidago sp.	10/10	100	?
Mosses and Liverworts:			

Tally:	OBL	FACW 3	FAC 3	FAC–	FACU 1	UPL	SUM 7

{OBL+FACW+FAC} X 100 = SUM	**Area Disturbed?**	YES X NO
6/7 = 85.7%	**Describe:**	

Continued on other side

Brook System – Wetland D

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			
0–18 inch	7.5 YR 2/0		standing water at 2"
____ inch			
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

X Inundation (Depth = 2")
____ Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS: (2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
X Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
X Other (Buttressed Trees, Stooling)

CONCLUSIONS

Yes Hydrophytes Prevalent
Yes Wetland Hydrology
Yes Hydric Soils
Yes Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist:

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: Pasture**
Sample Location: Brook System – Upland D and Stream 2 Upland	**Date: 10/21/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Lianas:			
Saplings:			
Pinus strobus	10/10	100	FACU
Shrubs:			
Juniperus virginiana	40/40	100	FACU
Seedlings and Herbs:			
Gramineae spp.	60/65	92.3	UPL
crab grass	5/65	7.7	
Mosses and Liverworts:			
Moss spp.			

Tally:	OBL	FACW	FAC	FAC–	FACU 2	UPL 1	SUM 3

{OBL+FACW+FAC} X 100 = SUM	**Area Disturbed?**	YES X NO
0/3 = 0%	**Describe:**	

Continued on other side

Brook System – Upland D and Stream 2 Upland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			
0–10 inch	10 YR 3/3		grazed pasture
____ inch			
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
____ Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
____ Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
____ Other (Buttressed Trees, Stooling)

CONCLUSIONS

No	Hydrophytes Prevalent	No	Hydric Soils
No	Wetland Hydrology	No	Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert J. Kennedy

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: PSS1**
Sample Location: Brook System -- Wetland C	**Date: 10/20/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Lianas:			
Saplings:			
Shrubs:			
Alnus rugosa	50/60	83.3	FACW+
Viburnum dentatum	10/60	16.7	
Seedlings and Herbs:			
Carex stricta	15/85	17.6	
Lythrum salicaria	5/85	5.9	
Panicum virgatum	65/85	76.5	FAC
Mosses and Liverworts:			

Tally:	OBL	FACW 1	FAC 1	FAC-	FACU	UPL	SUM 2

{OBL+FACW+FAC} X 100 = SUM 2/2 = 100%	Area Disturbed? YES X NO Describe:

Continued on other side

Brook System – Wetland C

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			groundwater at 3"
0–8 inch	10 YR 3/3		organic soil
____ inch			
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
X High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
X Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
X Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
X Other (Stooling)

CONCLUSIONS

Yes Hydrophytes Prevalent
Yes Wetland Hydrology
Yes Hydric Soils
Yes Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist:

Stream 2 Wetland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch 0–10 inch	10 YR 4/1 – matrix 7.5 YR 4/6 – mottles		clay soil, goundwater at 4"
10–12 inch	10 YR 3/1		
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
X Saturation in Upper 12 Inches (Depth = 4")
____ Watermarks
____ Driftlines
____ Sediment Deposits
X Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
X Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
X Other (Stooling)

CONCLUSIONS

Yes Hydrophytes Prevalent
Yes Wetland Hydrology
Yes Hydric Soils
Yes Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist:

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: PEMIE**
Sample Location: Stream 2 Wetland	**Date: 10/21/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Lianas:			
Saplings:			
Acer rubrum	5/5	100	FAC
Shrubs:			
Viburnum dentatum	5/10	50	FAC
Alnus rugosa	5/10	50	FACW+
Seedlings and Herbs:			
Lythrum salicaria	60/90	66.6	FACW+
Carex stricta	30/90	33.3	OBL
Mosses and Liverworts:			

Tally:	OBL 1	FACW 2	FAC 2	FAC–	FACU	UPL	SUM 5

{OBL+FACW+FAC} X 100 = / SUM 5/5 = 100%	**Area Disturbed?** YES X NO **Describe:**

Continued on other side

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill — **USFWS Classification:** FO1/4

Sample Location: Stream 3 Upland — **Date:** 10/21/93

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Tsuga canadensis	21/30	70	FACU
Quercus alba	9/30	30	FACU–
Lianas:			
Saplings:			
Acer saccharum	20/50	40	FACU–
Tsuga canadensis	20/50	40	FACU
Betula papyrifera	5/50	10	
Betula alleghaniensis	5/50	10	
Shrubs:			
Acer rubrum	30/60	50	FAC
Ulumus americana	10/60	16.7	
Pinus strobus	10/60	16.7	
Betula alleghaniensis	10/60	16.7	
Seedlings and Herbs:			
Acer rubrum	40/70	57.1	FAC
Ulmus americana	10/70	14.3	
Betula papyrifera	10/70	14.3	
Gramineae spp.	10/70	14.3	
Mosses and Liverworts:			

Tally:	OBL	FACW	FAC 2	FAC–	FACU 4	UPL	SUM 6

{OBL+FACW+FAC} X 100 = SUM

2/6 = 33.3%

Area Disturbed? YES X NO

Describe:

Continued on other side

Stream 3 Upland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			
0–2 inch	10 YR 4/4		sandy soils
2–12 inch	10 YR 6/4		
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
____ Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
____ Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
____ Other (Buttressed Trees, Stooling)

CONCLUSIONS

No ____ Hydrophytes Prevalent
No ____ Wetland Hydrology
No ____ Hydric Soils
No ____ Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M Hogan
Wetlands Technical Specialist:

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: PFO1/4**
Sample Location: Stream 3 Wetland	**Date: 10/21/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Acer rubrum	48/80	60	FAC
Tsuga canadensis	24/80	30	FACU
Quercus palustris	8/80	10	
Lianas:			
Saplings:			
Tsuga canadensis	10/20	50	FACU
Acer rubrum	10/20	50	FAC
Shrubs:			
Carpinus caroliniana	5/15	33.3	FAC
Tsuga canadensis	5/15	33.3	FACU
Ulmus americana	5/15	33.3	FACW–
Seedlings and Herbs:			
Mitchella repens	10/30	33.3	FACU
Ulmus americana	5/30	16.7	FACW–
Osmunda cinnamomea	5/30	16.7	FACW
Elymus virginicus	5/30	16.7	FACW–
Bidens cernua	5/30	16.7	FACW
Mosses and Liverworts:			
Moss spp.			

Tally:	OBL	FACW 5	FAC 3	FAC–	FACU 4	UPL	SUM 12

{OBL+FACW+FAC} / SUM X 100 = 8/12 = 66.6%	Area Disturbed? YES X NO Describe:

Continued on other side

Stream 3 Wetland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			
0–2 inch	10 YR 2/1		groundwater at 2"
2–10 inch	7.5 YR 2/0		sandy soils
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
X Saturation in Upper 12 Inches (Depth = 2")
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS: (2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
X Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
X Other (Shallow Root Systems, Stooling)

CONCLUSIONS

Yes Hydrophytes Prevalent
Yes Wetland Hydrology
Yes Hydric Soils
Yes Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert J. Kennedy

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: PFO1/4b**
Sample Location: Stream 4 Wetland	**Date: 10/21/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Acer rubrum	70/70	100	FAC
Lianas:			
Saplings:			
Acer rubrum	5/10	50	FAC
Betula papyrifera	5/10	50	FACU
Shrubs:			
Cornus stolonifera	30/70	42.9	FACW+
Viburnum dentatum	20/70	28.6	FAC
Viburnum sp.	10/70	14.3	
Acer rubrum	10/70	14.3	
Seedlings and Herbs:			
Onoclea sensibilis	20/95	21.1	FACW
Carex stricta	40/95	42.1	OBL
Lythrum salicaria	20/95	21.1	FACW+
Osmunda cinnamomea	10/95	10.5	
Chelone glabra	5/95	5.3	
Mosses and Liverworts:			

Tally:	OBL 1	FACW 3	FAC 3	FAC–	FACU 1	UPL	SUM 8

{OBL+FACW+FAC} X 100 = SUM 7/8 = 88%	Area Disturbed? YES X NO Describe:

Note: No upland plot was investigated on this transect because the floodplain extended to the rear edge of residential lots (private lawns).

Continued on other side

Stream 4 Wetland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			
0–12 inch	10 YR 2/0		groundwater at 1"
____ inch			
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
X Saturation in Upper 12 Inches (Depth = 1")
____ Watermarks
____ Driftlines
____ Sediment Deposits
X Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
X Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
X Other (Shallow Root Systems, Stooling)

CONCLUSIONS

Yes Hydrophytes Prevalent
Yes Wetland Hydrology
Yes Hydric Soils
Yes Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert J. Reinold

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: FO4**
Sample Location: Stream 5 Upland	**Date: 10/21/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Pinus strobus	50/50	100	FACU
Lianas:			
Saplings:			
Pinus strobus	10/30	33.3	FACU
Acer rubrum	20/30	66.6	FAC
Shrubs:			
Pinus strobus	60/75	80	FACU
Betula populifolia	10/75	13.3	
Quercus alba	5/75	6.7	
Seedlings and Herbs:			
Pinus strobus	20/35	57.1	FACU
Betula populifolia	5/35	14.3	
Quercus alba	5/35	14.3	
Solidago sp.	2/35	5.7	
Mitchella repens	3/35	8.6	
Mosses and Liverworts:			

Tally:	OBL	FACW	FAC 1	FAC–	FACU 4	UPL	SUM 5

{OBL+FACW+FAC} X 100 = SUM	**Area Disturbed?**	YES X NO
1/5 = 20%	**Describe:**	

Continued on other side

Stream 5 Upland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch 0–10 inch	10 YR 3/3		sandy soils
____ inch			
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
____ Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
____ Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
____ Other (Buttressed Trees, Stooling)

CONCLUSIONS

No	Hydrophytes Prevalent	No	Hydric Soils
No	Wetland Hydrology	No	Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert Kennedy

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: PSS1b**
Sample Location: Stream 5 Wetland	**Date: 10/21/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Lianas:			
Saplings:			
Shrubs:			
Alnus rugosa	45/55	81.8	FACW+
Viburnum dentatum	3/55	5.5	
Cornus stolonifera	3/55	5.5	
Acer rubrum	2/55	3.6	
Populus deltoides	2/55	3.6	
Seedlings and Herbs:			
Ambrosia sp.	20/60	33.3	?
Carex stricta	20/60	33.3	OBL
Rubus sp.	5/60	8.3	
Lythrum salicaria	10/60	16.7	
Solidago sp.	5/60	8.3	
Mosses and Liverworts:			

Tally:	OBL 1	FACW 1	FAC	FAC–	FACU	UPL	SUM 2

{OBL+FACW+FAC} X 100 = / SUM 2/2 = 100%	Area Disturbed? YES X NO Describe:

Continued on other side

Stream 5 Wetland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			
0–6 inch	7.5 YR 3/1		groundwater at 5"
6–12 inch	7.5 YR 3/1 – matrix 10 YR 5/1 – mottles		
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

_____ NTCHS List
_____ Organic Soil
_____ High Organic Content in Surface Horizon
_____ Histic Epipedon
_____ Sulfidic Material
_____ Aquic Moisture Regime
_____ Peraquic Moisture Regime
_____ Reducing Condition
_____ Iron Concretions
_____ Manganese Concretions
_____ Gleyed
_____ Wet Spodosols
_____ Dark Vertical Streaking of Subsurface Horizons
_____ OBL Plants
_____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

_____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

_____ Inundation (Depth)
_____ Saturation in Upper 12 Inches (Depth = 5")
_____ Watermarks
_____ Driftlines
_____ Sediment Deposits
X Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

_____ Oxidized Root Channels in Upper 12 Inches
X Water–Stained Leaves
_____ Local Soil Survey
_____ FAC Neutral Test
X Other (Stooling)

CONCLUSIONS

Yes Hydrophytes Prevalent
Yes Wetland Hydrology
Yes Hydric Soils
Yes Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert J. Reynolds

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill | **USFWS Classification:** FO4

Sample Location: Stream 6 Upland | **Date:** 10/21/93

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Quercus alba	70/90	77.8	FACU–
Pinus strobus	10/90	11.1	
Tilia americana	10/90	11.1	
Lianas:			
Saplings:			
Quercus alba	15/20	75	FACU–
Ulmus americana	5/20	25	FACW–
Shrubs:			
Pinus strobus	10/35	28.6	FACU
Viburnum dentatum	10/35	28.6	FAC
Quercus alba	5/35	14.3	
Cornus alternifora	4/35	11.4	
Cornus stolonifera	3/35	8.6	
Viburnum sp.	3/35	8.6	
Seedlings and Herbs:			
Gramineae spp.	85/95	89.5	UPL
Pinus strobus	2/95	2.1	
Quercus alba	2/95	2.1	
Cornus alternifora	2/95	2.1	
Vaccinium corybosum	2/95	2.1	
Acer rubrum	2/95	2.1	
Mosses and Liverworts:			

Tally:	OBL	FACW 1	FAC 1	FAC–	FACU 3	UPL 1	SUM 6

{OBL+FACW+FAC} X 100 = SUM

2/6 = 33.3%

Area Disturbed? YES X NO

Describe:

Continued on other side

Stream 6 Upland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch 0–12 inch	10 YR 3/3		
2–12 inch	10 YR 4/4		
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
____ Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
____ Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
____ Other (Buttressed Trees, Stooling)

CONCLUSIONS

No	Hydrophytes Prevalent	No	Hydric Soils
No	Wetland Hydrology	No	Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert J. Reynolds

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: PFO1**
Sample Location: Stream 6 Wetland	**Date: 10/21/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Quercus alba	32/80	40	FACU–
Acer rubrum	48/80	60	FAC
Lianas:			
Smilax walteri	5/5	100	OBL
Saplings:			
Quercus alba	5/15	33.3	FACU–
Acer rubrum	5/15	33.3	FAC
Ulmus americana	5/15	33.3	FACW–
Shrubs:			
Pinus strobus	5/20	25	FACU
Viburnum dentatum	10/20	50	FAC
Prunus pensylvanica	3/20	15	
Cornus alternifiora	2/20	10	
Seedlings and Herbs:			
Osmunda regalis	10/60	16.7	
Lythrum salicaria	20/60	33.3	FACW+
Carex stricta	15/60	25	OBL
Galium tinctorium	5/60	8.3	
Vaccinium corymbosum	5/60	8.3	
Solidago sp.	5/60	8.3	
Mosses and Liverworts:			

Tally:	OBL 2	FACW 2	FAC 3	FAC–	FACU 3	UPL	SUM 10

{OBL+FACW+FAC} X 100 = SUM 7/10 = 70%	**Area Disturbed?** YES X NO **Describe:**

Continued on other side

Stream 6 Wetland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			
0–12 inch	10 YR 3/1		sandy soils
____ inch			
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
____ Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
X Drainage Patterns

SECONDARY INDICATORS: (2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
X Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
X Other (Shallow Root Systems, Stooling)

CONCLUSIONS

Yes Hydrophytes Prevalent
Yes Wetland Hydrology
Yes Hydric Soils
Yes Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert Reinert

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill — **USFWS Classification:** FO1/4

Sample Location: Flint Pond 1 Upland — **Date:** 10/22/93

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Pinus strobus	40/90	44.4	FACU
Quercus alba	40/90	44.4	FACU–
Quercus palustris	10/90	11.1	
Lianas:			
Saplings:			
Pinus strobus	15/20	75	FACU
Quercus alba	5/20	25	FACU–
Shrubs:			
Pinus strobus	25/30	83.3	FACU
Quercus alba	5/30	16.7	
Seedlings and Herbs:			
Lycopodium sp.	12/30	40	?
Pinus strobus	8/30	26.7	FACU
Quercus alba	5/30	16.7	
Quercus palustris	5/30	16.7	
Mosses and Liverworts:			

Tally:	OBL	FACW	FAC	FAC–	FACU 6	UPL	SUM 6

{OBL+FACW+FAC} X 100 = / SUM

0/6 = 0%

Area Disturbed? YES X NO

Describe:

Continued on other side

Flint Pond 1 Upland

SOIL			
Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch 0–1 inch	10 YR 3/3		
1–7 inch	10 YR 3/4		
7–16 inch	10 YR 4/6		

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
____ Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
____ Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
____ Other (Buttressed Trees, Stooling)

CONCLUSIONS

No ____ Hydrophytes Prevalent
No ____ Wetland Hydrology
No ____ Hydric Soils
No ____ Wetland?

Wetlands Technician(s): [signature]
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert J. Reinold

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	USFWS Classification: PEM1
Sample Location: Flint Pond 1 Wetland	Date: 10/22/93

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Lianas:			
Saplings:			
Shrubs:			
Seedlings and Herbs:			
Typha latifolia	70/100	70	OBL
Lythrum salicaria	25/100	25	FACW+
Carex stricta	5/100	5	
Mosses and Liverworts:			

Tally:	OBL 1	FACW 1	FAC	FAC–	FACU	UPL	SUM 2

{OBL+FACW+FAC} X 100 = SUM	Area Disturbed?	YES X NO
2/2 = 100%	Describe:	

Continued on other side

Flint Pond 2 Upland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			
0–10 inch	10 YR 3/4		
10–15 inch	10 YR 4/6		
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
____ Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS:
(2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
____ Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
____ Other (Buttressed Trees, Stooling)

CONCLUSIONS

No	Hydrophytes Prevalent	No	Hydric Soils
No	Wetland Hydrology	No	Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert T. Reynold

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill **USFWS Classification:** PFO1/4

Sample Location: Flint Pond 2 Wetland **Date:** 10/22/93

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Quercus alba	32/80	40	FACU–
Quercus rubra	32/80	40	FACU–
Pinus strobus	12/80	15	
Acer rubrum	4/80	5	
Lianas:			
Saplings:			
Acer rubrum	5/10	50	FAC
Pinus strobus	5/10	50	FACU
Shrubs:			
Pinus strobus	5/10	50	FACU
Quercus rubra	3/10	30	FACU–
Acer rubrum	2/10	20	FAC
Seedlings and Herbs:			
Carex stricta	5/30	16.7	OBL
Acer rubrum	2/30	6.7	
Quercus rubra	2/30	6.7	
Pinus strobus	2/30	6.7	
Osmunda cinnamomea	5/30	16.7	FACW
Prunus sp.	2/30	6.7	
Solanum dulcamara	2/30	6.7	
Lythrum salicaria	10/30	33.3	FACW+
Mosses and Liverworts:			

Tally:	OBL 2	FACW 1	FAC 2	FAC–	FACU 5	UPL	SUM 10

{OBL+FACW+FAC} X 100 =
SUM

5/10 = 50%

Area Disturbed? YES X NO

Describe:

Continued on other side

Flint Pond 2 Wetland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
1 inch	fibrous		
0–4 inch	10 YR 3/1		groundwater at 3"
4–11 inch	10 YR 4/2		
11–16 inch	2.5 YR 5/2		

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

_____ NTCHS List
_____ Organic Soil
_____ High Organic Content in Surface Horizon
_____ Histic Epipedon
_____ Sulfidic Material
_____ Aquic Moisture Regime
_____ Peraquic Moisture Regime
_____ Reducing Condition
_____ Iron Concretions
_____ Manganese Concretions
_____ Gleyed
_____ Wet Spodosols
_____ Dark Vertical Streaking of Subsurface Horizons
_____ OBL Plants
_____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

_____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

_____ Inundation (Depth)
X Saturation in Upper 12 Inches (Depth = 3")
_____ Watermarks
_____ Driftlines
_____ Sediment Deposits
_____ Drainage Patterns

SECONDARY INDICATORS: (2 or more required)

_____ Oxidized Root Channels in Upper 12 Inches
X Water–Stained Leaves
_____ Local Soil Survey
_____ FAC Neutral Test
X Other (Shallow Root Systems)

CONCLUSIONS

Yes Hydrophytes Prevalent
Yes Wetland Hydrology
Yes Hydric Soils
Yes Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist:

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: FO1/4**
Sample Location: Flint Pond 3 Upland	**Date: 10/22/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Pinus strobus	55/90	61.1	FACU
Quercus rubra	35/90	38.9	FACU–
Lianas:			
Saplings:			
Quercus rubra	25/30	83.3	FACU–
Pinus strobus	5/30	16.7	
Shrubs:			
Acer spicatum	35/50	70	FACU–
Prunus serotina	10/50	20	FACU–
Quercus rubra	3/50	6	
Acer rubrum	2/50	4	
Seedlings and Herbs:			
Acer spicatum	20/40	50	FACU–
Mitchella repens	10/40	25	FACU
Acer rubrum	5/40	12.5	
Cornus rugosa	3/40	7.5	
Prunus serotina	2/40	5	
Mosses and Liverworts:			

Tally:	OBL	FACW	FAC	FAC–	FACU 7	UPL	SUM 7

{OBL+FACW+FAC} X 100 = SUM 0/7 = 0%	**Area Disturbed?** YES X NO **Describe:**

Continued on other side

Flint Pond 3 Upland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			
0–12 inch	10 YR 3/4		
____ inch			
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
____ High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
____ Saturation in Upper 12 Inches (Depth)
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS: (2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
____ Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
X ____ Other (Stooling)

CONCLUSIONS

No	Hydrophytes Prevalent	No	Hydric Soils
No	Wetland Hydrology	No	Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert J. Reinold

3 PARAMETER WETLAND DELINEATION
SUMMARY SHEET

Project Title: Charles George Landfill	**USFWS Classification: PFO/SS1/4**
Sample Location: Flint Pond 3 Wetland	**Date: 10/22/93**

VEGETATION

DOMINANTS BY STRATUM	Dominance Ratio	Percent Dominance	NWI Status of Dominants
Trees:			
Pinus strobus	20/30	66.6	FACU
Quercus rubra	10/30	33.3	FACU–
Lianas:			
Saplings:			
Quercus rubra	3/15	20	FACU–
Acer rubrum	10/15	66.6	FAC
Pinus strobus	2/15	13.3	
Shrubs:			
Vaccinium corymbosum	45/70	64.3	FACW–
Ilex verticillata	15/70	21.4	FACW+
Viburnum dentatum	5/70	7.1	
Quercus rubra	5/70	7.1	
Seedlings and Herbs:			
Vaccinium corymbosum	45/60	75	FACW–
Carex stricta	10/60	16.7	
Viburnum dentatum	3/60	5	
Quercus rubra	2/60	3.3	
Mosses and Liverworts:			

Tally:	OBL	FACW 3	FAC 1	FAC–	FACU 3	UPL	SUM 7

{OBL+FACW+FAC} X 100 = SUM	**Area Disturbed?**	YES X NO
4/7 = 57.1%	**Describe:**	

Continued on other side

Flint Pond 3 Wetland

SOIL

Depth	Munsell Color (Wet) Matrix/Mottle	USDA Texture (Wet)	Remarks
____ inch			organic peat
0–14 inch	7.5 YR 2/0		groundwater at 10"
____ inch			
____ inch			

Soil Pedigree: **Permeability:**

Series and Phase: **Drainage Class:**

____ NTCHS List
____ Organic Soil
X High Organic Content in Surface Horizon
____ Histic Epipedon
____ Sulfidic Material
____ Aquic Moisture Regime
____ Peraquic Moisture Regime
____ Reducing Condition
____ Iron Concretions
____ Manganese Concretions
____ Gleyed
____ Wet Spodosols
____ Dark Vertical Streaking of Subsurface Horizons
____ OBL Plants
____ OBL and FACW Plants and Wetland/Upland Boundary Abrupt

HYDROLOGY

____ Recorded Data Indicating Inundation or Saturation for Extended Period During the Growing Season

Source: **Dated:**

PRIMARY INDICATORS:

____ Inundation (Depth)
X Saturation in Upper 12 Inches (Depth = 10")
____ Watermarks
____ Driftlines
____ Sediment Deposits
____ Drainage Patterns

SECONDARY INDICATORS: (2 or more required)

____ Oxidized Root Channels in Upper 12 Inches
____ Water–Stained Leaves
____ Local Soil Survey
____ FAC Neutral Test
X Other (Shallow Root Systems, Stooling)

CONCLUSIONS

Yes Hydrophytes Prevalent
Yes Wetland Hydrology
Yes Hydric Soils
Yes Wetland?

Wetlands Technician(s):
Wetlands Scientist(s): Jennifer M. Hogan
Wetlands Technical Specialist: Robert Reynolds