



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

October 2017

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Data Qualified?

Yes / No

Location/STORET Station Name: Elder Springs Run DS of Myrtle St - Sanford Date: 12/27/2017
(mm/dd/yyyy)

STORET # 20010294 WBID: 2984 Latitude: 28.73461
(Decimal Degrees)

County: Seminole RQ - 2017-12-25-21 ORG ID: 21FLCEN Longitude: -81.26625
(Decimal Degrees)

Receiving Body of Water: _____ Field ID: 20010294

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
Mike Linger							☒ Sample Container	☐ Van Dorn	☐ Pole	
Katie Williams							☐ Carboy	☒ Syringe		
							☐ Dipper	☐ Other		
							Equipment ID _____			
							Collection Method			
							☒ Wading	☐ Canoe/Kayak		
							☐ From Shore	☐ Electric Motor		
							☐ Other	☐ Gasoline Motor		
Water Level: Dry / Low / (Normal) / Above Normal / Flooded							Meter ID# <u>Beth / 67</u>	Matrix: (Fresh) Marine / DI		
Photos: Yes / (No)							Flow: No Flow / Intestinal / (Flowing) / NA	Tide: Rising / Falling / Slack / (NA)		
							Tide Times: High Low			
Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Secchi Disk (m)	Sp COND (umhos/cm)	Temp. (C°)
(EST)	12:42	0.2		7.9	82	7.3	0.2		440	17.4
		0.3						0.3(s)		
CEN										

Biological Samples Collected:		None	(HA)	(SC)	(RPS)	Algae ID	LVS	LVI	Other	
SBIO ID Numbers:		SBIO-ID: <u>78161</u>	HA-ID: <u>1814947</u>	RPS-ID: <u>8864</u>	Macrophyte-ID: _____	LIMS#: <u>1956347</u>				
Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check					
Preserved Nutrients	☒ W-NH3 / ☐ W-NO2NO3 / ☐ W-TKN / ☐ W-TOC / ☐ W-S-A-TP	☒ Ice ☒ H2SO4	<u>SA7275010</u>	<u>10/2/18</u>	☒ <2					
Metals	☐ W-ICPM5 ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2					
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice								
Chlorophyll	☒ CHL SUITE-W	☒ Ice								
Physical/Aggregate (Fresh)	☒ Alkalinity / ☐ W-F / ☐ W-TSS / ☐ TURBIDITY / ☐ W-Cl-IC / ☐ W-COLOR / ☐ W-SO4-IC / ☐ W-TDS	☒ Ice								
Physical/Aggregate (Marine)	☐ Alkalinity / ☐ W-F / ☐ W-TSS / ☐ TURBIDITY	☐ Ice								
Macroinvertebrates	☒ MI-FW-Q-LDC	☒ Formalin								
Periphyton	☐ ALGAE-ID	☐ Ice								
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci	☒ Ice								
Molecular	☒ PCR FILTER ☐ PCR HF183 ☒ PCR BacR ☐ PCR GULL2 ☐ PCR GFD	☐ Ice								
Tracers	☒ W-SUC-AA-R ☒ W-UHERB-AA ☒ W-AHERB-AA	☒ Ice								
Pesticides	☐ W-PSNP-TQ ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice								
	☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Other								

Contains: 1:1 Sulfuric Acid
Lot No.: SA7275010
Expires: 10/02/18
See Safety Data Sheet (SDS)

Please Preserve

10/2/18

Elder Springs Run DS
of Myrtle St - Sanford

Date: 12/27/2017
RQ-2017-12-25-21

20010294
Field ID
STORET
20010294

Signature: [Signature] Date: 12/27/17

Field Parameters Entered into LIMS: VMW 12/29/17 Field Parameters QC in LIMS: MKL 1/8/18

Date Migrated to STORET: _____ Field Sheets Scanned/Saved: _____

DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: FDEP		STORET STATION NUMBER: 20010294	DATE (MM/DD/YY): 12/27/17	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Seminole	LOCATION: Elder Spring Six Mile	FIELD ID/NAME: 20010294	

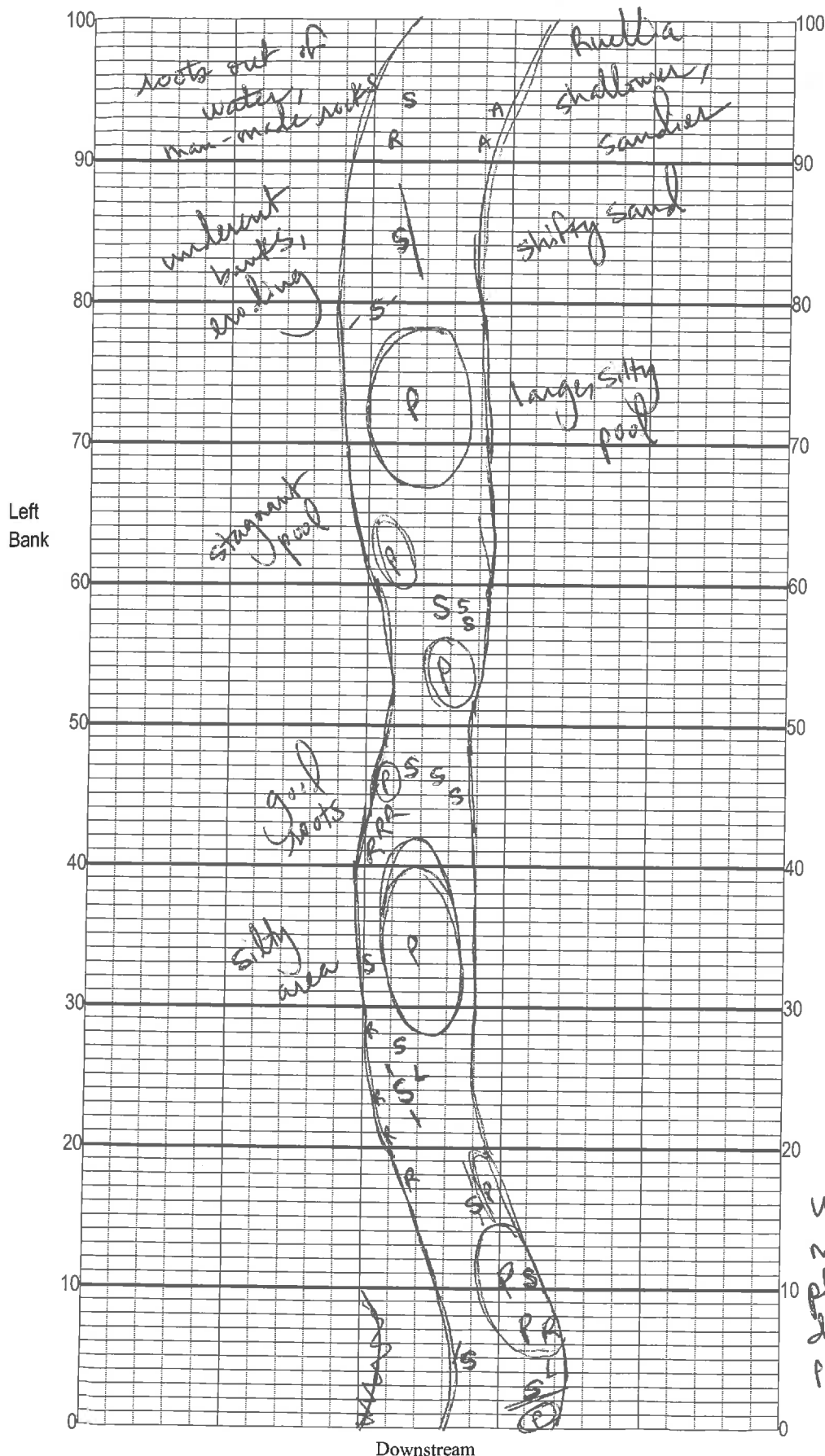
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered
Substrate Diversity 8	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability 4	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity 12	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering 15 ----- Primary Score 39	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization 18	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank 5 Left Bank 3	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank 3 Left Bank 8	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank 2 Left Bank 4 ----- Secondary Score 43	10 9	8 7 6	5 4	3 2 1

82

TOTAL SCORE

Date: 12/27/17	Analyst: Katie Williams	Signature: KWilliams
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Elder/Six Mile
 Date: 12/27/17
 Sampler: Kate Williams

100 m: Latitude 28.73461
 Longitude -81.26671
 0 m: Latitude 28.73419
 Longitude -81.26583

Substrates: Code key, draw proportionate habitat abundance. %

S	Snags	_____ %
R	Roots/undercut banks	_____ %
L	Leaf Packs (or mats)	_____ %
A	Aquatic Macrophytes	_____ %
		_____ %
		_____ %
P	Pools	total # observed = _____ # range expected = _____

Average width 25 m
 Average depth 0.4 m

Velocity measured at 100 meter mark.

WQ & chemistry taken at 100 meter mark.

Habitat Smothering:
 Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability:
 Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width:
 Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

used to be a nursery, so mostly non-natives/planted plants. Ruellia, Wedelia, different palms, white bird of paradise, camphor

Length of grid represents 100 m of stream (not linear meters).
 (Horizontal scale is double vertical scale, draw proportionately).

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID 78161 ORG ID 2IFLCE LATITUDE 28.73461
COUNTY Seminole STORET # 20010294 LONGITUDE -81.26625
DATE 12/27/17 TIME 1242 SAMPLING AGENCY 2IFLCE
SITE NAME Elder Springs Run DS of Myrtle Street
FIELD ID/NAME 20010294 RECEIVING BODY OF WATER Lake Jesup

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>50</u> Silviculture <u>5</u> Field/Pasture <u>15</u> Agricultural <u>10</u> Residential <u>20</u> Commercial <u> </u> Industry <u> </u> Other (Specify) <u> </u>								Landscape Development Intensity Index (LDI) <u> </u>
Local Watershed Erosion (select one): ☐ None ☐ Slight ☐ Moderate ☒ Heavy Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy						Typical Width (m) Depth (m)/Velocity (m/sec) Transect <u>2.5</u> m wide <u>0.13</u> m/s <u>0.13</u> m/s <u>0.13</u> m/s <u>0.2</u> m deep <u>0.2</u> m deep <u>0.2</u> m deep		
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>22m</u> Right Bank: <u>40</u>				Hydrologic Modification Score (per FT 3101) <u> </u>		Artificially Impounded ☐ Yes ☒ No		
High Water Mark: <u>0.5</u> + <u>0.3</u> = <u>0.8</u> (m) (above present water level) (present depth) (above bed)				Artificially ☒ No ☐ Mostly recovered, more sinuous Channelized: ☐ Some recovery ☐ Recent, severe				
Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%) ☐ Heavily Shaded ☒ Moderate Shaded (46-80%)								

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse	Sediment Odors ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify): <u> </u>	Smothering of Substrates Sand Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Silt Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Algae Smothering: None ☒ Slight ☐ Moderate ☐ Severe ☐
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SUBSTRATE TYPE

Assessment Tool: ☒ SCI ☒ RPS ☐ LVS
☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	<u> </u>	<u>7</u>	<u> </u>
Undercut Banks / Roots	<u> </u>	<u>7</u>	<u> </u>
Leaf Packs or Mat	<u> </u>	<u>2</u>	<u> </u>
Aquatic Vegetation	<u> </u>	<u> </u>	<u> </u>
Rock or Shell Rubble..	<u> </u>	<u>1</u>	<u> </u>
Sand.....	<u> </u>	<u>3</u>	<u> </u>
Mud / Muck / Silt	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top:	<u>0.2</u>	<u>17.4</u>	<u>7.3</u>	<u>7.9</u>	<u>82</u>	<u>440</u>	<u>0.2</u>	<u> </u>
Mid:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	☒ VOB
Bottom:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Meter ID:	<u>Betty 67</u>							<u>0.3</u>

Water Odors Normal ☒ Petroleum ☐
Sewage ☐ Chemical ☐ Other ☐

Water Sample Taken? ☒ Yes ☐ No
Sample Preserved? ☐ Yes ☐ No
Lot Number: Exp:

Algae Sample Taken? ☐ Yes ☒ No
Sample Preserved? ☐ Yes ☐ No
Lot Number: Exp:

Water Surface Oils Normal ☒ Sheen ☐
Globs ☐ Slick ☐ Other ☐

Color Tannic ☒ Green (Algae) ☐
Clear ☐ Other (Specify) ☐

Clarity Clear ☒ Slightly Turbid ☐
Turbid ☐ Opaque ☐

System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐

AMBIENT FIELD CONDITIONS / NOTES:

☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

Mike Linger, Katie Williams

SIGNATURE:

KWilliams

DATE:

12/27/17

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Six Mile (Elder Springs)					County: Seminole		Date: 12/27/17		Investigators: Mike Linger		
STORET Station Number: 20010294											

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	3			60	1	3		
	2	N				2	3		
	3	N				3	3		
	4	N				4	N		
	5	N		84		5	N		80
	6	N				6	N		
	7	N				7	N	Y	
	8	N				8	N	Y	
	9	N				9	N		
10	1	N			70	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		80		5	N		68
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
20	1	N			80	1	3		
	2	N				2	3		
	3	N	Y			3	N		
	4	N	Y			4	N		
	5	N	Y	72		5	N		40
	6	N	Y			6	N		
	7	N	Y			7	N		
	8	N	Y			8	N		
	9	N	Y			9	N		
30	1	N			90	1	5		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		80		5	N		32
	6	N				6	N		
	7	N				7	N		
	8	N				8	3		
	9	N				9	3		
40	1	3			100	1	N		
	2	4				2	N		
	3	3				3	N		
	4	N				4	N		
	5	N		68		5	N		4
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
50	1	N			Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached. Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank. Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6. Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.				
	2	N							
	3	N							
	4	N							
	5	N	84						
	6	N							
	7	N							
	8	N							
	9	N							

Secchi depth	0.3(s)
Estimated?	

# points ranked 4-6	2
total points assessed	99
% points ranked 4-6	2

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	
Habitat Assessment	✓
SCI/Biorecon	✓
Water sample	✓
RQ- 2017-12-25-21	

Algal Thickness Rank	
N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

Waterbody: Elder Springs	Date: 12/27	County: Seminole	Storet Number: 20010294
Analyst: Katie Williams	Signature: K Williams		
Comments: $\approx 2m^2$, no LVS			

[illegible]Revision Date: March 1, 2014