

Site/Project Name		Application Numb	er		Assessment Area Name			
SR 429 Wekiva Parkway / Sl	R 46 Realignment					, 35, 36, 37 - Wekiva River - nd Seminole Counties		
FLUCCs code	Further classific	ation (optional)		Impac	et or Mitigation Site?	Assessment Area Size		
510 - Streams and Waterways 630 - Wetland Forested Mixed 644 - Floating Aquatics	R2UBH - Riverine Bottom, Permane	•	ıl, Unconsolidated	-	act -shading by bridge nd some temporary disturbance	6.5 acres		
Basin/Watershed Name/Number	Affected Waterbody (Cla	iss)	Special Classifica	tion (i.e	e.OFW, AP, other local/state/fe	deral designation of importance)		
Upper St. John's River basin 03080101	Class I	II		OFW	V, AP, WSR, Wekiva Ri	ver Protection Act		
Geographic relationship to and I	nydrologic connection	with wetlands, o	ther surface wate	er, upl	ands			
See Part II of report								
Assessment area description The Wekiva River is one of the few and Rock Spring Run. The Wekiva Floridan aquifer in the form of clear are two major tributaries of the We upstream of the St. Johns River.	is a major tributary of the r, natural springs and fro	e St. Johns River m drainage of app	. Waters forming the proximately 130 m	he upp iles of	per reaches of the Wek watershed. The Little V	iva River arise from both the Wekiva River and Blackwater Creek		
Significant nearby features Wekiva Springs State Park, Lower Wekiva River Preserve State Park, Rock Springs Run State Park, Seminole State Forest, Black Bear Wilderness Preserve, Blackwater Creek, St. John's River, SR 46, Interstate 4, City of Orlando			Uniqueness (considering the relative rarity in relation to the regional landscape.) Unique, the Wekiva River is one of the few remaining near-pristine riverine systems in central Florida. The springheads at Wekiwa Spring and Rock Springs are two of only a few areas in central Florida where the limestone rock of the Floridan Aquifer can be observed at the surface.					
Functions		Mitigation for pr	evious	s permit/other historic	cuse			
Wildlife habitat, ecological preserve	e, water supply, recreation	on.	No previous perm	nit or m	nitigation requirements.			
Anticipated Wildlife Utilization B species that are representative of expected to be found)						ist species, their legal ntensity of use of the assessment		
Florida black bear, raccoon, wading species, turkey, raptors, nine-band snakes, American alligator, freshwa	ed armadillo, white tailed		(SSC), snowy egi	ret (SS (T), ba	SC), tricolored heron (Sald eagle (E), least tern	SC), limpkin (SSC), little blue heron SC), white ibis (SSC), Southeastern (T), Florida black bear (T), cardinal		
Observed Evidence of Wildlife U	tilization (List species	directly observe	d, or other signs	such	as tracks, droppings,	casings, nests, etc.):		
No species observed immediately	adjacent to assessment	area (SR 46 exist	ing bridge).					
Additional relevant factors:								
Impact to the Wekiva River is antic Impact will be only a slight increase under the widened bridge deck will	e from existing bridge. T	his impact will be						
Assessment conducted by:			Assessment date(s):					
CH2MHILL Biologist: Steve Eakin			January 2007					

Site/Project Name			Application Numb	per		Assessment Area Name	e or Number	
SR 429 Wekiva Parkway / SR	R 46 R	ealignment					W25, W26, W27 and p outside of ROW- Lake County	
FLUCCs code		Further classific	ation (optional)		Impac	et or Mitigation Site?	Assessment Area Size	
641 - Freshwater Marshes 631 - Shrubby Wetland 617 - Mixed Wetland Hardwoods 630 - Wetland Forested Mixed		Deciduous, Broad-l Flooded; PEM1F -	ne, Forested, Broad Leaved Evergreen, Palustrine, Emergel Flooded; PSS6/7 Pa	d-Leaved Seasonally nt, Persistent,	·	mpact along road/ eference wetlands	0.97 acres Shrub and 0.56 acres Marsh. Forested areas are outside of ROW	
Basin/Watershed Name/Number	Affect	ed Waterbody (Cla	ass)	Special Classificat	tion (i.e	e.OFW, AP, other local/state/fe	deral designation of importance)	
Upper St. Johns 03080101		Class I	II			No OFW		
Geographic relationship to and h	ydrol	ogic connection	with wetlands, o	ther surface water	er, upl	ands		
See Part II of report								
Assessment area description A wetland mosaic, dominated by mi. Liquidambar styraciflua, Magnolia v located approximately 250 feet to th	virginia	ana , Persea palus	stris, Panicum hei	<i>mitomon, Cephalar</i> In State Preserve.	nthus	occidentalis , and Pont	edaria cordata. The wetland is	
Significant nearby features		Iniqueness (co	onside	ering the relative rarity	y in relation to the regional			
SR 46, Rock Springs Run Preserve, State Forest, Wekiva River, City of 0	Park, Seminole	Not Unique						
Functions		Mitigation for pre	eviou	s permit/other historic	cuse			
Wildlife habitat, water quality improvements, C02 sequestration						nitigation requirements. and maintained as imp	Landuse surrounding wetland is roved pasture.	
Anticipated Wildlife Utilization Ba species that are representative of expected to be found)			•	•		• • •	ist species, their legal ntensity of use of the assessment	
Florida black bear, raccoon, Easterr cranes, woodstorks, red winged blat bald eagle, red-shouldered hawk, w species such as the Northern cardin red-headed woodpecker, red-bellied tufted-titmouse, American crow, mig	ckbird hite ta nal, mo d wood	, turkey, nine-ban tiled deer, commo ockingbird, pileate dpecker, downy w	nded armadillo, on urban avian ed woodpecker, voodpecker,		ittle Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill rane (T), Bald eagle (T), Wood stork (E), Florida Black bear (T)			
Observed Evidence of Wildlife Uti	ilizatio	on (List species	directly observe	d, or other signs	such	as tracks, droppings,	casings, nests, etc.):	
Rooting from wild pigs, pig seen adj	jacent	to wetland, north	ern cardinal, Ame	rican crows, green	tree f	rog.		
Additional relevant factors:								
Additional relevant factors: Wetland is in an important wildlife control.	orrido	r connecting Wek	iva Springs State	Park to the South	and S	eminole State Forest a	nd the Ocala National Forest to the	
Wetland is in an important wildlife co	orrido	r connecting Wek	iva Springs State	Park to the South		eminole State Forest a	nd the Ocala National Forest to the	

SR 429 Wekiva Parkway / SR 46 Realignment FLUCCs code S22 - Lakes 3-0 acres, < 100 acres They Savany	Site/Project Name		Application Numb	ner		Assessment Area Name	or Number	
FULUCes code 523 - Lakes > 10 acres, < 100 acres 61 Bay Swamps 630 Welstand Forested Mixed 630 Welstand Forested Mixed 634 Emergent Aquatic Vegetation 634 Emergent Aquatic Vegetation 634 Emergent Aquatic Vegetation 634 Emergent Aquatic Vegetation 635 Essimilar Materials 634 Emergent Aquatic Vegetation 635 Essimilar Materials 635 Essimilar Materials 636 Essimilar Materials 636 Essimilar Materials 637 Essimilar Materials 638 Essimilar Materials 639 Essimilar Materials 630 Welstand Forested, Deciduous, Seasonality Hooded 640 FCRC: Palastrine, Forested, Deciduous, Seasonality Hooded 641 Feminism Materials 642 Emergent Aquatic Vegetation 643 Essimilar Materials 644 Emergent Aquatic Vegetation 645 Essimilar Materials 645 Essimilar Materials 646 Emergent Aquatic Vegetation 647 Emergent Aquatic Vegetation 648 Essimilar Materials 649 Essimilar Materials 640 Essimilar Materials 640 Essimilar Materials 640 Essimilar Materials 641 Essimilar Materials 642 Emergent Aquatic Vegetation 644 Emergent Aquatic Vegetation 645 Essimilar Materials 646 Emergent Aquatic Vegetation 647 Emergent Aquatic Vegetation 648 Essimilar Materials 649 Essimilar Materials 640 Essimilar Materials 640 Essimilar Materials 640 Essimilar Materials 640 Essimilar Materials 641 Essimilar Materials 642 Essimilar Materials 644 Emergent Aquatic Vegetation 645 Essimilar Materials 646 Essimilar Materials 647 Essimilar Materials 648 Essimilar Materials 649 Essimilar Materials 649 Essimilar Materials 649 Essimilar Materials 640 Essimilar Mater	-	₹ 46 Realignment	/ tppnoution runn					
15.33 - Lakes > 100 acres LittliPH - Lacustrine, Limeelic Unconsolidated bottom. Permanenty flooded PCOF - Palustrine, Forested, Deciduous, Semigarmanenty flooded PCOF - Palustrine, Forested, Deciduous, Semigarmanenty flooded PCOF - Palustrine, Forested, Deciduous, Seasonally flooded PCOF - Palustrine, Forested, Deciduous, Palustrine, Forested, Deciduous, Palustrine, Palustrine, Forested, Deciduous, Palustrine, Palustri	ON 425 WORWAT ARWAY / OF	T 40 redailgriment				Tarinee E	and Common County	
Upper St. Johns 03080101 Class III No OFW Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands See Part II of report Assessment area description Yankee Lake is a lake/wetland complex comprised of open water, freshwater marshes, and forested wetlands, located north of SR 46 and east of the Weki River in Seminole County Florida. The wetland is bordered by SR 46 to the south and Yankee Lakes Regional Wastewater Treatment Facility Property on West and North sides. Low Density, single family residential housing borders the wetland to the east. Significant nearby features Yankee Lakes Regional Wastewater Facility, Wekiva Springs State Park, Lower Wekkiva River Preserve State Park, Rock Springs Run State Park, Seminole State Forest, Black Bear Wilderness Preserve, Blackwater Creek, St. John's River, SR 46, Interstate 4, City of Orlando Functions Mitigation for previous permit or mitigation requirements. Landuse surrounding Yankee is used as spray field application for the Yankee Lakes Regional Wastewater Treatment Facility and low density, single family residential housing. Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonabily expected to be found) Florida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillio, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Approximately 7-10 wood ducks observed on multiple occasions, red-shouldered hawk, Great horned owl, coral snake, green tree frogs (calls) Additional relevant factors: Proximity of Wastewater spray field and RiBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	523 - Lakes >10 acres, < 100 acre 611 Bay Swamps 630 Wetland Forested Mixed 641 Freshwater Marshes	buttom, Permane PFO6F - Palustri Semipermanently PFO6C - Palustri Seasonally floode PEM1F - Palustri	ine, Limnetic, Unco ently flooded ne, Forested, Dec / flooded ne, Forested, Dec ed ne, Emergent, Pe	onsolidated iduous, siduous,				
Upper St. Johns 03080101 Class III No OFW Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands See Part II of report Assessment area description Yankee Lake is a lake/wetland complex comprised of open water, freshwater marshes, and forested wetlands, located north of SR 46 and east of the Weki Rayer in Seminole County Florida. The wetland is bordered by SR 46 to the south and Yankee Lakes Regional Wastewater Treatment Facility Property on West and North sides. Low Density, single family residential housing borders the wetland to the east. Significant nearby features Yankee Lakes Regional Wastewater Facility, Wekiva Springs State Park, Lower Wekiva Fiveserve State Park, Rock Springs Run State Park, Seminole State Forest, Black Bear Wildermess Preserve, Blackwater Creek, St. John's River, SR 46, Interstate 4, City of Orlando Functions Mitigation for previous permit or mitigation requirements. Landuse surrounding Yankee is used as spray field application for the Yankee Lakes Regional Wastewater Treatment Facility and low density, single family residential housing. Anticipated Wildlife utilization Based on Literature Review (List of species that are representative of the assessment area and reasonabily expected to be found) Florida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Additional relevant factors: Proximity of Wastewater spray field and RiBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	Basin/Watershed Name/Number	Affected Waterbody (Cla	ass)	Special Classificat	tion (i.	e.OFW. AP. other local/state/fed	eral designation of importance)	
See Part II of report Assessment area description Yankee Lake is a lake/wetland complex comprised of open water, freshwater marshes, and forested wetlands, located north of SR 46 and east of the Weki River in Seminole County Florida. The wetland is bordered by SR 46 to the south and Yankee Lakes Regional Wastewater Treatment Facility Property on West and North sides. Low Density, single family residential housing borders the wetland to the east. Significant nearby features Yankee Lakes Regional Mastewater Facility, Wekiva Springs State Park, Lower Wekiva River Preserve State Park, Rock Springs Ruste Park, Seminole State Forest, Black Bear Wilderness Preserve, Blackwater Creek, St. John's River, SR 46, Interstate 4, City of Orlando Functions Mitigation for previous permit/other historic use No previous permit or mitigation requirements. Landuse surrounding Yankee squestration, aesthetics Anticipated Wildliffe Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Anticipated Wildliffe Utilization by Listed Species (List species, their legal species that are representative of the assessment area and reasonably chabitary species Plorida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species Observed Evidence of Wildliffe Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Approximately 7-10 wood ducks observed on multiple occasions, red-shouldered hawk, Great horned owl, coral snake, green tree frogs (calls) Additional relevant factors: Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	Upper St. Johns 03080101		•		,			
West and North sides. Low Density, single family residential housing borders the wetland to the east. Significant nearby features Yankee Lakes Regional Wastewater Facility, Wekiva Springs State Park, Seminole State Forest, Black Bear Wilderness Preserve, Blackwater Creek, St. John's River, SR 46, Interstate 4, City of Orlando Functions Mitigation for previous permit/other historic use No previous permit/other historic use No previous permit of mitigation requirements. Landuse surrounding Yankee is used as spray field application for the Yankee Lakes Regional Wastewater Treatment Facility and low density, single family residential housing. Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Florida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Approximately 7-10 wood ducks observed on multiple occasions, red-shouldered hawk, Great horned owl, coral snake, green tree frogs (calls) Additional relevant factors: Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	See Part II of report Assessment area description Yankee Lake is a lake/wetland com	nplex comprised of open	n water, freshwate	r marshes, and for	ested	wetlands, located north		
Anticipated Wildiffe Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Florida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Additional relevant factors: Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in yankee Lake although no signs of eutrophication or impact were observed.							Treatment Facility Property on the	
Yankee Lakes Regional Wastewater Facility, Wekiva Springs State Park, Lower Wekiva River Preserve State Park, Rock Springs Run State Park, Seminole State Forest, Black Bear Wilderness Preserve, Blackwater Creek, St. John's River, SR 46, Interstate 4, City of Orlando Functions Flood water mitigation, water quality improvements, wildlife habitat, C02 sequestration, aesthetics Flood water mitigation, water quality improvements, wildlife habitat, C02 sequestration, aesthetics Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Florida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Approximately 7-10 wood ducks observed on multiple occasions, red-shouldered hawk, Great horned owl, coral snake, green tree frogs (calls) Additional relevant factors: Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	Significant nearby features			• •	onside	ering the relative rarity	in relation to the regional	
Flood water mitigation, water quality improvements, wildlife habitat, C02 sequestration, aesthetics No previous permit or mitigation requirements. Landuse surrounding Yankee su used as spray field application for the Yankee Lakes Regional Wastewater Treatment Facility and low density, single family residential housing. Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Florida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species Gopher tortoise (SSC), Eastern indigo snake (T), Gopher Frog (SSC), Americal alligator, SSC), snowled stork (E), Florida mouse (SSC), Sco), Sandili crane (T), Bald eagle (T), Wood stork (E), Florida mouse (SSC), Sharman's fox squirrel (SSC), Florida Black bear (T) Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Approximately 7-10 wood ducks observed on multiple occasions, red-shouldered hawk, Great horned owl, coral snake, green tree frogs (calls) Additional relevant factors: Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	Lower Wekiva River Preserve State Park, Rock Springs Run State Park, Seminole State Forest, Black Bear Wilderness Preserve, Blackwater Creek,			. ,	e wetla	and is not unique in the I	regional landscape.	
Flood water mitigation, water quality improvements, wildlife habitat, CU2 sequestration, aesthetics Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Florida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Approximately 7-10 wood ducks observed on multiple occasions, red-shouldered hawk, Great horned owl, coral snake, green tree frogs (calls) Additional relevant factors: Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	Functions	Mitigation for pro	eviou	s permit/other historic	use			
species that are representative of the assessment area and reasonably expected to be found.) Florida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species Gopher tortoise (SSC), Eastern indigo snake (T), Gopher Frog (SSC), American alligator (SSC), Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heror (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E), Florida mouse (SSC), Sherman's fox squirrel (SSC), Florida Black bear (T) Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Approximately 7-10 wood ducks observed on multiple occasions, red-shouldered hawk, Great horned owl, coral snake, green tree frogs (calls) Additional relevant factors: Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.		y improvements, wildlife	e habitat, C02	is used as spray f	field a	pplication for the Yanke	e Lakes Regional Wastewater	
species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species alligator (SSC), Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heror (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E), Florida mouse (SSC), Sherman's fox squirrel (SSC), Florida Black bear (T) Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Approximately 7-10 wood ducks observed on multiple occasions, red-shouldered hawk, Great horned owl, coral snake, green tree frogs (calls) Additional relevant factors: Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	species that are representative o			classification (E				
Approximately 7-10 wood ducks observed on multiple occasions, red-shouldered hawk, Great horned owl, coral snake, green tree frogs (calls) Additional relevant factors: Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	species, turkey, raptors, nine-band snakes, American alligator, freshwa	ed armadillo, white tailed	d deer, frogs,	alligator (SSC), Li (SSC), Sandhill ci	ittle Bl rane (lue Heron (SSC), Snowy T), Bald eagle (T), Woo	y egret (SSC), Tricolored heron d stork (E), Florida mouse (SSC),	
Additional relevant factors: Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	Observed Evidence of Wildlife U	tilization (List species	directly observe	d, or other signs	such	as tracks, droppings,	casings, nests, etc.):	
Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.	Approximately 7-10 wood ducks ob	served on multiple occa	asions, red-should	ered hawk, Great I	horne	d owl, coral snake, gree	n tree frogs (calls)	
eutrophication or impact were observed.	Additional relevant factors:							
Assessment conducted by: Assessment date(s):		, ,	ation Basins) may	affect water levels	and v	water quality in Yankee	Lake although no signs of	
	Assessment conducted by:			Assessment date	e(s):			
CH2MHILL Biologist: Steve Eakin January 2007	CH2MHILL Biologist: Steve Eakin			January 2007				

Site/Project Name		Application Numb	per	Assessment Area Name or Number			
SR 429 Wekiva Parkway / S	R 46 Realignment			W	/16 - Lake County		
FLUCCs code	Further classific	cation (optional)		Impact or Mitigation Site?	Assessment Area Size		
641 - Freshwater Marsh	PEMH - Palustrin Permanently floo	ne, Emergent, Per oded	rsistent,	Impact to marsh along existing road	0.4 ac (5.3 ac marsh)		
Basin/Watershed Name/Number	Affected Waterbody (Cla	ass)	Special Classifica	tion (i.e.OFW, AP, other local/state/fe	ederal designation of importance)		
Upper St. Johns 03080101	Class I	III		No OFW	1		
Geographic relationship to and	hydrologic connection	with wetlands, o	ther surface water	er, uplands			
See Part II of report							
Assessment area description Wetland is a freshwater marsh dor aquatic vegetation. The wetland is Neighborhood Lakes parcel to the	s bordered by SR 46 imm				e deepest and contains floating ast and south, and the undeveloped		
Significant nearby features			Uniqueness (co	onsidering the relative rari	ty in relation to the regional		
SR 46, wildlife crossing under SR Wekiva Springs State Park, Lower Seminole State Forest, City of Orla		Not Unique					
Functions			Mitigation for pro	evious permit/other histori	c use		
Water quality improvements, floodwater attenuation, wildlife habitat, C02 sequestration			No previous perm	nit or mitigation requirements	i.		
Anticipated Wildlife Utilization B species that are representative of expected to be found)				zation by Listed Species (I , T, SSC), type of use, and	List species, their legal intensity of use of the assessment		
Florida black bear, raccoon, Easte blackbird, turkey, nine-banded arm white tailed deer, scrub jays, burro such as the Northern cardinal, mot headed woodpecker, red-bellied w titmouse, American crow, migrator cohabitary species, other various h	houldered hawk, an avian species pecker, red- dpecker, tufted-	Gopher tortoise (SSC), Eastern indigo snake (T), Gopher Frog (SSC), Florida Scrub Jay (T), Florida Burrowing Owl (SSC), Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E), Florida mouse (SSC), Sherman's fox squirrel (SSC), Florida Black be					
Observed Evidence of Wildlife U	tilization (List species	directly observe	d, or other signs	such as tracks, droppings	, casings, nests, etc.):		
Nearby Scrub Jay colonies are doo exist in close proximity to the wetla	•	•			e of the survey but they are known to ve previously been documented.		
Additional relevant factors:							
Wetland is near one of two wildlife Seminole State Forest on the north		∍ct Rock Springs F	Run State Preserve	e / Wekiva Springs State Par	k on the south side of SR 46 and		
Assessment conducted by:			Assessment dat	e(s):			
CH2MHILL Biologist: Steve Eakin			January 2007				

Site/Project Name			Application Numb	oer		Assessment Area Name or Number		
SR 429 Wekiva Parkway / Sl	R 46 F	Realignment				a spring run north	of Boch Road - Orange County	
FLUCCs code		Further classific	ation (optional)		Impa	ct or Mitigation Site?	Assessment Area Size	
510 - Streams and Waterways (minor springs) Wet Prairies	643 -	PEM1 - Palustrine	e, Emergent, Pers	sistent, Saturated	F	Reference Wetlands	<10 ac	
Basin/Watershed Name/Number	Affec	ted Waterbody (Cla	ass)	Special Classifica	ition (i	.e.OFW, AP, other local/state/fe	deral designation of importance)	
Upper St. Johns 03080101		Class I	II			No OFW		
Geographic relationship to and I	ıydro	logic connection	with wetlands, o	ther surface wat	er, up	lands		
See Part II of report								
Assessment area description A wet prairie wetland associated w Osmunda cinnamomea. Land use								
Significant nearby features				Uniqueness (collandscape.)	onsid	ering the relative rarit	y in relation to the regional	
SR 437, Lake Lucie, Rock Springs Run Preserve, Wekiva Springs State Park, Seminole State Forest, Wekiva River, City of Orlando				Somewhat unique. Three other minor spring runs occur within close proximity to WO45.				
Functions				Mitigation for pr	eviou	s permit/other historic	cuse	
Wildlife habitat and source of fresh	water	r.		No previous pern	nit or r	mitigation requirements.		
Anticipated Wildlife Utilization B species that are representative c expected to be found)							ist species, their legal ntensity of use of the assessment	
Florida black bear, raccoon, Easter cranes, woodstorks, red winged blabald eagle, red-shouldered hawk, vapecies such as the Northern cardi red-headed woodpecker, red-bellie tufted-titmouse, American crow, mitortoises and cohabitary species, o	ackbiro white t inal, m ed woo igrator	d, turkey, nine-ban cailed deer, commo nockingbird, pileate odpecker, downy w ry song birds, frogs	nded armadillo, on urban avian ed woodpecker, voodpecker, s, gopher	Heron (SSC), Sn	owy e		T), Gopher Frog (SSC), Little Blue neron (SSC), Sandhill crane (T), Bald T)	
Observed Evidence of Wildlife U	tilizat	ion (List species	directly observe	d, or other signs	such	as tracks, droppings,	casings, nests, etc.):	
none observed								
Additional relevant factors:								
Assessment conducted by:				Assessment dat	te(s):			
CH2MHILL Biologist: Steve Eakin				January 2007				

Site/Project Name			Application Numb	oer		Assessment Area Name or Number			
SR 429 Wekiva Parkway / SR	R 46 R	Realignment				W48, W49,	W50, W51 - Lake County		
FLUCCs code		Further classific	cation (optional)		Impa	ct or Mitigation Site?	Assessment Area Size		
impact area: 534 Pond, 631 Wetland Shrub, 641 Freshwater Marshes reference wetlands outside of ROW 630 Wetland Forested Mixed 644 Emergent Aquatic Vegetation PFO6C - Palustrine, Forested, Dec Seasonally Flooded PEM1G - Palustrine, Emergent, Pe Intermittently Flooded PSS1 - Palustrine Scrub-Shrub, Br Deciduous, Various Water Regime			ersistent,		eact to shrubby wetland d marsh along existing road	<10 along roadway (a 65 acre wetland)			
Basin/Watershed Name/Number	Affec	ted Waterbody (Cla	ass)	Special Classifica	ition (i	e.OFW, AP, other local/state/fee	deral designation of importance)		
Upper St. Johns 03080101		Class I	-			No OFW			
Geographic relationship to and h	nydrol	ogic connection	with wetlands, o	ther surface water	er, up	lands			
See Part II of report									
Assessment area description A wetland mosaic, dominated by m caroliniana, Cephalanthus occiden US 441. Land use surrounding the	ntalis ,	Panicum hemitom	non, and Pontedar	<i>ria cordata</i> . The v	wetlan	nd is bisected by the exis			
Significant nearby features				Uniqueness (co	onsid	ering the relative rarity	y in relation to the regional		
SR 46, US 441, Town of Mt. Dora, Rock Springs Run Preserve, Wekiva Springs State Park, Seminole State Forest, Wekiva River, City of Orlando				Not Unique					
Functions				Mitigation for pr	eviou	us permit/other historic	use		
Wildlife habitat, water quality impro sequestration, some recreation.	vemer	nts, storm water at	ttenuation, C02	No previous perm	nit or r	mitigation requirements.			
Anticipated Wildlife Utilization Baspecies that are representative of expected to be found)			a and reasonably	<u> </u>		n by Listed Species (L SC), type of use, and i	ist species, their legal ntensity of use of the assessment		
Raccoon, Eastern cottontail, wadin winged blackbird, turkey, nine-band hawk, common urban avian specie mockingbird, pileated woodpecker, woodpecker, downy woodpecker, to song birds, frogs, fishes.	ded arr es such , red-he	madillo, bald eagle n as the Northern o eaded woodpecke	e, red-shouldered cardinal, er, red-bellied	-shouldered al, Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandh-crane (T), Bald eagle (T), Wood stork (E)					
Observed Evidence of Wildlife U	tilizati	on (List species	directly observe	d, or other signs	such	as tracks, droppings,	casings, nests, etc.):		
Fish observed breaking the surface	e of the	e open water area	s.						
Additional relevant factors:									
Wetland was previously impacted f and development of the surroundin			SR 46. The wetla	and is still connecte	ed hyd	drologically but impacts	to wildlife increased from vehicles		
Assessment conducted by:				Assessment dat	te(s):				
CH2MHILL Biologist: Steve Eakin			l	January 2007					

Site/Project Name		Application Numb	er	Assessment Area Name or Number			
SR 429 Wekiva Parkway / Sł	R 46 Realignment			w	55, W56 - Lake County		
FLUCCs code	Further classific	cation (optional)		Impact or Mitigation Site?	Assessment Area Size		
643 - Wet Prairie 644 - Emergent Aquatic Vegetation	· ·	- Palustrine, Unco	onsolidated	Impact to marsh along existing road	1.5 ac impact (5 ac wetland)		
Basin/Watershed Name/Number	Affected Waterbody (Cla	ass)	Special Classificat	ion (i.e.OFW, AP, other local/sta	e/federal designation of importance)		
Upper St. Johns 03080101	Class I	III		No O	FW .		
Geographic relationship to and h	ydrologic connection	with wetlands, o	ther surface wate	r, uplands			
See Part II of report							
Assessment area description A wetland, dominated by emergent odorata, Cephalanthus occidentalis wetland is located on undeveloped	, and <i>Panicum hemitor</i>	mon. The wetland	d is located to the s		airie. Vegetation includes: <i>Nymphae</i> of CR 437 in Lake County, FL. The		
Significant nearby features		Uniqueness (co landscape.)	nsidering the relative ra	rity in relation to the regional			
Sorrento Cemetery, SR 46, CR 437 Mt. Dora, Rock Springs Run Prese Seminole State Forest, City of Orla		Not Unique					
Functions		Mitigation for pre	evious permit/other hist	oric use			
Wildlife habitat, water quality impro	vements, C02 sequestr	ation, recreation	No previous perm	it or mitigation requireme	nts.		
Anticipated Wildlife Utilization Baspecies that are representative of expected to be found)					(List species, their legal d intensity of use of the assessment		
Raccoon, Eastern cottontail, wadin nine-banded armadillo, bald eagle, common urban avian species such pileated woodpecker, red-headed wowny woodpecker, tufted-titmouse frogs, wetland fishes, gopher tortois various herpetological species.	white tailed deer, al, mockingbird, woodpecker, atory song birds,	alligator (SSC), Li (SSC), Sandhill cr	ttle Blue Heron (SSC), Sr	te (T), Gopher Frog (SSC), American howy egret (SSC), Tricolored heron Wood stork (E), Florida mouse (SSC), a bear (T)			
Observed Evidence of Wildlife U	tilization (List species	directly observe	d, or other signs	such as tracks, droppin	gs, casings, nests, etc.):		
Wood ducks. Bull frog calling.							
Additional relevant factors:							
Wetland is both spring fed from a s (2003) no surface water was prese seasonal rainfall returning to avera	nt and the wetland appe	eared to be ephem	neral. The wetland	appears to have remaine	hen the wetland was first observed d inundated since that time with		
Assessment conducted by:			Assessment date	e(s):			
CH2MHILL Biologist: Steve Eakin			January 2007				

Site/Project Name		Application Numb	per	Assessment Area Name or Number		
SR 429 Wekiva Parkway / S	R 46 Realignment				small isolated wetla	and outside ROW - Orange County
FLUCCs code	Further classific	cation (optional)		Impac	et or Mitigation Site?	Assessment Area Size
641 - Freshwater Marsh	PEM1G - Palustri Intermittently floo	ine, Emergent, Pe ded	ersistent,	F	Reference Wetland	< 0.3 ac
Basin/Watershed Name/Number	Affected Waterbody (Cla	ass)	Special Classificat	tion (i.	e.OFW, AP, other local/state/fe	ederal designation of importance)
Upper St. Johns 03080101	Class I	II			No OFW	1
Geographic relationship to and	hydrologic connection	with wetlands, o	other surface water	er, up	lands	
See Part II of report						
Assessment area description Wetland is a small isolated freshwasurrounded by pine plantation and	-	/ Salix caroliniana	a, Ludwigia peruvia	ına, T	ypha sp . and Cephala	nthus occidentalis . The wetland is
Significant nearby features			Uniqueness (co	nside	ering the relative rarit	y in relation to the regional
SR 435, SR 46, Rock Springs Run Park, Lower Wekiva River Preserv of Orlando			Not Unique			
Functions		Mitigation for pre	eviou	s permit/other histori	c use	
Water quality improvements, wildlife habitat, C02 sequestration			No previous perm	it or n	nitigation requirements	
Anticipated Wildlife Utilization B species that are representative of expected to be found)			•		•	ist species, their legal intensity of use of the assessment
Florida black bear, raccoon, Easte blackbird, turkey, nine-banded arm white tailed deer, common urban a cardinal, mockingbird, pileated woodbellied woodpecker, downy woodp migratory song birds, frogs, wetlan species, other various herpetologic	nadillo, bald eagle, red-shavian species such as the odpecker, red-headed whecker, tufted-titmouse, And fishes, gopher tortoise	houldered hawk, e Northern oodpecker, red- american crow,	Heron (SSC), Sno	owy e	gret (SSC), Tricolored	(T), Gopher Frog (SSC), Little Blue heron (SSC), Sandhill crane (T), Bald C), Sherman's fox squirrel (SSC),
Observed Evidence of Wildlife U	tilization (List species	directly observe	d, or other signs	such	as tracks, droppings	, casings, nests, etc.):
None observed but gopher tortoise	burrows located in close	e proximity to the	wetland.			
Additional relevant factors:						
Assessment conducted by:			Assessment date	e(s):		
CH2MHILL Biologist: Steve Eakin			January 2007			

Site/Project Name		Application Numb	per	Assessment Area Name or Number			
SR 429 Wekiva Parkway / SF	₹ 46 Realignment				W42 - Lake	e Sten - Seminole County	
FLUCCs code	Further classific	cation (optional)		Impac	et or Mitigation Site?	Assessment Area Size	
641 - Freshwater Marsh, Lake Ste	n PUBH - Palustrin Permanently floor	ne, Unconsolidated oded	bottom,		Impact	11 ac impact to a 15 ac wetland	
Basin/Watershed Name/Number	Affected Waterbody (Cla	ass)	Special Classifica	ition (i.	e.OFW, AP, other local/state/fe	deral designation of importance)	
Upper St. Johns 03080101	Class I	III			No OFW		
Geographic relationship to and h	ydrologic connection	with wetlands, o	other surface water	er, upl	lands		
See Part II of report							
Assessment area description Lake Sten (FLUCFCS 644). A wetlin Seminole County Florida. The wspatterdock (Nuphar lutea), Americ peruviana) is established on the so layer and are often deep (2 – 4 feet vegetation within the littoral fringe of	retland is bordered by Incan water lily (<i>Nymphae</i> buthwestern edge along t) near the center. Cattle	nternational Parkw e odorata), and ma International Park le were observed v	ray to the north and aidencane (<i>Panicu</i> way. Lake Sten is within the wetland ent due the grazin	d west um her s typic and a g of th	t. The littoral zone of th mitomon). An invasive al of these 644 wetland djacent uplands on the le cattle.	e wetland is dominated by exotic, primrose willow (<i>Ludwigia</i> types, which lack a canopy or shrub northeastern shore. Emergent	
Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)						
International Parkway, Interstate 4, Springs State Park, Seminole State Orlando.		The Lake Sten w	etland	is not unique in the reg	ional landscape.		
Functions			Mitigation for pr	eviou	s permit/other historic	: use	
Flood water mitigation, water qualit sequestration, aesthetics	y improvements, wildlife	habitat, C02			•	Landuse surrounding Lake Sten cattle grazing and citrus farming.	
Anticipated Wildlife Utilization Baspecies that are representative of expected to be found)						ist species, their legal ntensity of use of the assessment	
Raccoon, Eastern cottontail, wadin nine-banded armadillo, bald eagle, common urban avian species such pileated woodpecker, red-headed v downy woodpecker, tufted-titmouse frogs, wetland fishes, gopher tortois various herpetological species.	red-shouldered hawk, v as the Northern cardina voodpecker, red-bellied e, American crow, migra	white tailed deer, al, mockingbird, woodpecker, atory song birds,	alligator (SSC), L (SSC), Sandhill c	ittle Bl rane (lue Heron (SSC), Snow	T), Gopher Frog (SSC), American y egret (SSC), Tricolored heron d stork (E), Florida mouse (SSC), ear (T)	
Observed Evidence of Wildlife U	ilization (List species	directly observe	d, or other signs	such	as tracks, droppings,	casings, nests, etc.):	
Raccoon tracks. Approximately 7 a gopher tortoise is commensal with						ediately south of Lake Sten. The	
Additional relevant factors:							
Assessment conducted by:			Assessment dat	te(s):			
CH2MHILL Biologist: Steve Eakin			January 2007				

Site/Project Name		Application Numb	per	Assessment Area Name or Number				
SR 429 Wekiva Parkway / Sf	₹ 46 Realignme	nt		W	2 - Orange County			
FLUCCs code	Further	classification (optional)	ŀ	Impact or Mitigation Site?	Assessment Area Size			
631 - Wetland Shrub		PSS1 - Palustrine Scrub	o-Shrub	Impact	<0.2 ac of a 0.7 ac wetland			
Basin/Watershed Name/Number	Affected Waterb	oody (Class)	Special Classificat	ion (i.e.OFW, AP, other local/state/f	ederal designation of importance)			
Upper St. Johns 03080101		Class III		No OFV	I			
Geographic relationship to and h	nydrologic con	nection with wetlands, o	ther surface wate	r, uplands				
See Part II of report								
Assessment area description Wetland is a small isolated shrub w property currently owned by Orang and terracing of the slopes was pre Other surrounding areas are mode	e County. Signs	s indicate that the property of the survey. West of the	y is potentially haza le wetland is a high es and commercial	ardous but the cause was no density single family reside plant nurseries.	ential development and golf course.			
Significant nearby features			Uniqueness (co landscape.)	nsidering the relative rari	ty in relation to the regional			
SR 435, SR 46, Rock Springs Run Park, Lower Wekiva River Preserve of Orlando		, Wekiva Springs State	Not Unique					
Functions	nctions Mitigation for previous permit/other historic use							
Water quality improvements, wildlif	e habitat, C02 s	equestration	No previous permi	it or mitigation requirements	i.			
Anticipated Wildlife Utilization Baspecies that are representative of expected to be found)		ent area and reasonably	<u> </u>	zation by Listed Species (I T, SSC), type of use, and	List species, their legal intensity of use of the assessment			
Florida black bear, raccoon, Eastern cottontail, wading birds, red winged blackbird, turkey, nine-banded armadillo, bald eagle, red-shouldered hawk, white tailed deer, common urban avian species such as the Northern cardinal, mockingbird, pileated woodpecker, red-headed woodpecker, red-bellied woodpecker, downy woodpecker, tufted-titmouse, American crow, migratory song birds, frogs, wetland fishes, gopher tortoises and cohabitary species, other various herpetological species. Gopher tortoise (SSC), Eastern indigo snake (T), Gopher Frog (SSC), Litteron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill cran eagle (T), Wood stork (E), Florida mouse (SSC), Sherman's fox squirred (Florida Black bear (T))					heron (SSC), Sandhill crane (T), Bald C), Sherman's fox squirrel (SSC),			
Observed Evidence of Wildlife U	tilization (List s	species directly observed	d, or other signs s	such as tracks, droppings	, casings, nests, etc.):			
None observed but gopher tortoise	burrows located	d in close proximity to the	wetland.					
Additional relevant factors:								
Assessment conducted by:			Assessment date	⊋(s):				
CH2MHILL Biologist: Steve Eakin			January 2007					

Site/Project Name			Application Number		Assessment Area Name or Number		
SR 429 Wekiva F	Parkway /	/ SR 46 Realignment			W33, 33A, 34, 35, 36, 37 - Wekiva River - Lake and Seminole Counties		
mpact or Mitigation			Assessment conducted by:			Assessment date:	
-	_	g by bridge ry disturbance	CH2M HILL Biologist Stev	ve Eakin	J:	anuary 2007	
Scoring Guidance] !	Optimal (10)	Moderate(7)	Mi	nimal (4)	Not Presen	t (0)
The scoring of each ndicator is based on wha would be suitable for the ype of wetland or surface water assessed	•	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	wetland	evel of support of l/surface water unctions	Condition is insu provide wetland water funct	d/surface
.500(6)(a) Location a Landscape Suppo v/o pres or current	ort	Adjacent wildlife habitats outs John's River and land use typ volume roadways, commercia State Parks and Preserves, p limited other than in areas tha Wekiva River floodplain has b access to these areas outside	nes common to developing urbal areas, and other natural veorovide excellent support for eat have been developed into ropeen preserved. Surrounding	pan areas. The second of the s	These include resing munities. The nate cies. Wildlife accreas along the rive two been impacted	idential areas, med atural areas, partic less to habitats is r er. The majority of	dium ularly the not the
9							
.500(6)(b)Water Enviro (n/a for uplands)		Aquatic environment appropri hydroperiod appropriate and i Wekiva River is directly conne from groundwater, rainfall and to be unimpacted by surround water quality improvements.	not impacted by berms, levee ect to the nearby St. John's R d incidental amounts of runoff	s, ditches, o iver and Bla from some	or nearby stormwa ckwater River dov impervious surfac	ter retention ponda wnstream. Water i es. Water quality	inputs appears
v/o pres or	ماخدد						
10	with						
.500(6)(c)Community st	tructure						
 Vegetation and/ Benthic Commun 	or/	Vegetation community: Litte floodplain wetland is diverse a palustris, Juniperus virginiana the past.	and dominated by <i>Taxodium</i>	distichum, A	Acer rubrum, Magr	nolia virginiana, Pe	ersea
v/o pres or current	with	·					
9							
-		_		_			
	00/20 //	If preservation as mitiga	ation,		For impact assess	sment areas	l
Score = sum of above score	`						
uplands, divide by 20 current	0)	Preservation adjustmen	nt factor = N/A	FL =	delta x acres =		
uplands, divide by 20	`	Preservation adjustmen Adjusted mitigation delt		FL =	delta x acres =		
uplands, divide by 20 current or w/o pres	0)	Adjusted mitigation delt		FL =	delta x acres =		
uplands, divide by 20 current or w/o pres	0) with	,	a = N/A		delta x acres =	essment areas	

Site/Project Name		Application Number Assessment Area Name or Number							
SR 429 Wekiva Parkway	/ SR 46 Realignment			contiguous	/25, W26, W27 an∉ swamp outside of ∟ake County				
Impact or Mitigation		Assessment conducted by:		Assessment date					
Impact to shrubby wetland and n outside ROW is Ref		CH2M HILL Biologist Ste	ve Eakin	J.	anuary 2007				
Scoring Guidance	Optimal (10)	Moderate(7)	Miı	nimal (4)	Not Presen	t (0)			
The scoring of each	Condition is optimal and	Condition is less than		,					
indicator is based on what would be suitable for the	fully supports	optimal, but sufficient to		vel of support of	Condition is insu				
type of wetland or surface	wetland/surface water	maintain most wetland/surface water		/surface water inctions	provide wetland water funct				
water assessed	functions	functions							
		side of assessment area inclu							
		pes common to areas develoways, commercial areas (nurs							
.500(6)(a) Location and Landscape Support		State Parks and Preserves,							
Landscape Support		Preserve surrounding the w							
		Wildlife access to habitats is li surrounding uplands have bee							
w/o pres or		serves has been reduced. Th	•						
current with	of SR 46 in the Rock Springs	SR 46 in the Rock Springs Run State Preserve.							
8									
L L									
.500(6)(b)Water Environment	Aguatic environment appropri	riate for the seasonally floode	d forested a	and emergent mar	reh watland masai	C			
(n/a for uplands)		d appropriate and not impact		-					
		ts from groundwater and rain	fall. Water	quality appears to	be unimpacted b	у			
	surrounding land use.								
w/o pres or									
current with	_								
10									
.500(6)(c)Community structure									
		e vegetation community has							
1. Vegetation and/or		Dominant species include Ace emitomon, Cephalanthus occi			-	-			
Benthic Community		ion and past logging as many							
w/o proc or	dense shrub layer has devel	oped.							
w/o pres or current with									
	-								
9									
			_			_			
Score = sum of above scores/30 (if uplands, divide by 20)	If preservation as mitig	ation,		For impact asses	sment areas				
current	Preservation adjustme	nt factor = N/A		delta x acres =					
or w/o pres with	Adjusted mitigation del	ta = N/A		uoila x aui65 =					
0.90						•			
	If mitigation		<u> </u>						
Delta = [with-current]	Time lag (t-factor) = N/	A	F	or mitigation asse	essment areas				
	Risk factor = N/A		RFG	= delta/(t-factor x	risk)				

Site/Project Name			Application Number		Assessment Area	a Name or Numbe	er .
1	a Parkway	/ SR 46 Realignment			Yankee Lake - Seminole County		
Impact or Mitigation		, et le lieungillioni	Assessment conducted by:		Assessment date:		
	eference W	/etlands	CH2M HILL Biologist Stev	ve Eakin		January 2007	
			0.12.11.1.122 2.10.10g/iot 0.10				
Scoring Guidance		Optimal (10)	Moderate(7)	Mi	inimal (4)	Not Preser	nt (0)
The scoring of each indicator is based on wh would be suitable for the type of wetland or surfa water assessed	ne	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	wetland	evel of support of d/surface water unctions	Condition is insu provide wetland water func	d/surface
.500(6)(a) Locatior Landscape Supp w/o pres or current 7		Adjacent wildlife habitats outs Wekiva River, and land use to Wastewater Treatment Plant, natural vegetation communitis support for expected species sides of the lake/wetland com Wastewater Treatment Plant	residential areas, medium voes. The natural areas, particulate access to these areas is aplex. The remaining upland	oping from ro blume roadw ularly the Sta somewhat li	ural to urban. The vays, commercial a ate Parks and Pres mited from the eas	ese include a Regi areas (nurseries), serves, provide ex st, west, and sout	onal and other ccellent hern
.500(6)(b)Water Envii (n/a for uplands w/o pres or current		Aquatic environment approprimosaic. Assessment area hy stormwater retention ponds. Plant does have a spray field within an upland area adjacei	rdroperiod appropriate and no Water inputs from groundwat for land application and RIBs	t impacted I er and rainfa (Rapid Infil	by berms, levees, all. The Regional tration Basins) for	ditches, or nearby Wastewater Treadisposal of treate	/ tment d effluent
.500(6)(c)Community 1. Vegetation an 2. Benthic Common w/o pres or current 9	d/or		Some impacts form human dis	sturbance to nclude <i>Tax</i> o <i>im hemitom</i>	the plant commur	nities within the fo <i>Liquidambar styra</i>	rested aciflua,
Score = sum of above sco	•	If preservation as mitiga	ation,		For impact assess	sment areas	
uplands, divide by 20)		Preservation adjustmer	nt factor = N/A				
current or w/o pres	with			FL =	delta x acres =		
0.87		Adjusted mitigation delt	.a – ۱۷/M				
]	J					_
		If mitigation		F	or mitigation asse	essment areas	
Delta = [with-curr	rent]	Time lag (t-factor) = N/A	A	<u> </u>	<u> </u>		-
		Risk factor = N/A		RFG	= delta/(t-factor x	risk)	

Site/Project Name			Application Number		Assessment Area Name or Number		
SR 429 Wekiva Par	rkway / Sl	R 46 Realignment			W16	6 - Lake County	
Impact or Mitigation			Assessment conducted by:	sment conducted by: Assessment date:):	
Impact to mars	sh along (existing road	CH2M HILL Biologist Stev	e Eakin	January 2007		
Scoring Guidance		Optimal (10)	Moderate(7)	M	inimal (4)	Not Procon	+ (0)
The scoring of each	 	Optimal (10)	Condition is less than	IVI	IIIIIIai (4)	Not Present (0)	ι (υ)
indicator is based on what	Co	ondition is optimal and fully	optimal, but sufficient to	Minimal le	evel of support of	Condition is insu	fficient to
would be suitable for the	5	supports wetland/surface	maintain most		d/surface water	provide wetland	l/surface
type of wetland or surface		water functions	wetland/surface water	f	unctions	water funct	ions
water assessed			functions				
.500(6)(a) Location and Landscape Support	un d ind co sp ma so	developed improved pastu- clude residential areas, med immunities. The natural area recies. However portions of aintained as improved pastu- tuth side limiting wildlife acc	side of assessment area includeres and land use types commodium volume roadways, commeas, particularly the State Parlif the Neighborhood Lakes par ure for grazing livestock. The sess from the north. However	on to areas nercial area ks and Pres cel located wetland is , a wildlife u	developing from riss (nurseries), and serves, provide excimmediately to the located immediate	ural to urban. The other natural vege cellent support for e west of the wetla sly adjacent to SR	tation expected nd, are 46 on the
w/o pres or	to	access Rock Springs Run	Preserve from Seminole State	Forest.			
current w	vith						
8							
.500(6)(b)Water Environm (n/a for uplands) w/o pres or	Ac no rai	ot impacted by berms, levee	iate for the emergent marsh was, ditches, or nearby stormwa unoff. Water quality appears t	iter retentio	n ponds. Water in	puts from groundy	
current W	vith						
	Ve we	etland was previously perma	e vegetation community was a anently impacted from the cor n, Baccharis sp., and Cephala	nstruction o	f SR 46. Dominan		
10							
				ļ			1
Score = sum of above scores/3	30 (if	If preservation as mitiga	ation,		For impact assess	sment areas	
uplands, divide by 20) current		Preservation adjustmen	nt factor = N/A	EI	delta x acres =		
or w/o pres w	vith	Adjusted mitigation delt	a = N/A		uoila x aules =		
0.07				-			•
		If mitigation			For mitigation	nomont are -	
Delta = [with-current]		Time lag (t-factor) = N/A	A	<u> </u>	For mitigation asse	ssment areas	
		Risk factor = N/A		RFG	= delta/(t-factor x	risk)	

Site/Project Name	ite/Project Name		Application Number		Assessment Area Name or Number		
,	a Parkwav	/ SR 46 Realignment	7		a spring run north of Boch Road -		
Impact or Mitigation			Assessment conducted by: Assessme		Assessment date	Orange County	
Reference Wetlands			CH2M HILL Biologist Steve Eakin January 2007				
Cooring Cuidones		Outimal (40)	Madarata/7\	NA:	mina al (4)	Not Dresen	4 (0)
Scoring Guidance The scoring of each		Optimal (10)	Moderate(7) Condition is less than	IVII	nimal (4)	Not Presen	τ (υ)
indicator is based on w	hat	Condition is optimal and fully	optimal, but sufficient to		evel of support of	Condition is insu	
would be suitable for the type of wetland or surface.		supports wetland/surface water functions	maintain most wetland/surface water		d/surface water	provide wetland water funct	
water assessed	ace	water functions	functions	, ''	functions water functions		
.500(6)(a) Locatio Landscape Sup		Adjacent wildlife habitats outs forested areas, mixed foreste					
		commercial (nurseries) prope some species is limited due to	erties. The natural areas prov	ide moderat	e support for expe		
w/o pres or							
current	with	-					
7							
.500(6)(b)Water Envi (n/a for upland		Aquatic environment appropr appropriate enough to suppo water is susceptible to region	rt wetland plant species. Wat	er inputs fro	m groundwater or	nly. This type of s	urface
w/o pres or							
current	with						
10							
.500(6)(c)Community	structure						
Vegetation ar Benthic Comm		Vegetation community : The vegetation community not diverse and was dominated by two wetland shrub species, <i>Sambucus canadensis</i> and the invasive <i>Ludwigia peruviana</i> . The canopy and subcanopy strata were notably absent from the wetland. Some remnant tree snags were present and indicate that at one time, the wetland area was likely forested. Areas immediately adjacent to and within the boundary of the wetland are regularly cleared, mowed, and maintained. The herbaceous layer of the wetland was sparse due to the dense shrub layer.					
w/o pres or		mowed, and maintained.	e nerbaceous layer of the wet	iaiiu was sp	arse due to the de	erise siliub layer.	
current	with						
4							
	-						
Score = sum of above sc	`	If preservation as mitiga	ation,		For impact asses	sment areas	
uplands, divide by	/ 20)	Preservation adjustmer	nt factor = N/A				
current or w/o pres	with			FL =	delta x acres =		
0.70		Adjusted mitigation delt	ia = IV/A				
<u> </u>		J					-
		If mitigation		F	or mitigation asse	essment areas	
Delta = [with-cur	rent]	Time lag (t-factor) = N//	Α				
		Risk factor = N/A		RFG	= delta/(t-factor x	risk)	

Site/Project Name			Application Number		Assessment Area	a Name or Number	er
1	a Parkwav	/ SR 46 Realignment			W48, W49, W50, W51 - Lake County		
Impact or Mitigation			Assessment conducted by:		Assessment date:		
1	etland and	marsh along existing road	CH2M HILL Biologist Steve Eakin		January 2007		
						<u> </u>	
Scoring Guidance The scoring of each		Optimal (10)	Moderate(7) Condition is less than	Mi	nimal (4)	Not Preser	nt (0)
indicator is based on wh would be suitable for th type of wetland or surfar water assessed	ne	Condition is optimal and fully supports wetland/surface water functions	optimal, but sufficient to maintain most wetland/surface water functions	wetland	evel of support of d/surface water unctions	Condition is insu provide wetland water func	d/surface
.500(6)(a) Locatior Landscape Supp w/o pres or current 5		Adjacent wildlife habitats outs emergent marsh, abandoned uses near the wetland include wetland is bisected by SR 46 converted to multiple family d boundary, existing single fam 1000 feet to the west of the w	groves, and small parcels of e single family residential, mu . Wildlife access to habitats is wellings on the north side of t ily developments and extracti	mixed hardy Itiple dwellin s limited by the wetland we areas lim	wood and conifer fing units, and active SR 46 and by imple boundary. On the	forests. The dominate extractive areas roved pastures be south side of the	inant land . The eing wetland
.500(6)(b)Water Envir (n/a for uplands w/o pres or current 7		Aquatic environment appropring hydroperiod appropriate and However, the assessment are developed. The water environg the watershed. Water inputs	not impacted by berms, levee ea is at the lowest elevation ir nment in the wetland is highly	es, ditches, con a small, clowns	or nearby stormwa	ter retention pond at has been heav	ds. ily
.500(6)(c)Community structure Vegetation community: The vegetation community was appropriate for the wetland types observed. Sherbaceous layer were not diverse but typical of wetlands surveyed throughout the study area. The shrul was dominated by Salix caroliniana, Myrica cerifera, Acer rubrum, and Baccharis sp The herbaceous dominated by Panicum hemitomon and Nymphae odorata. Some disturbance to the vegetation community					area. The shrub The herbaceous getation commun	layer layer was ity was	
w/o pres or current 9	with	observed within the SR 46 R0	OW from routine maintenance	e and along t	tne wetland bound	dary near resident	alal areas.
Score = sum of above sco	•	If preservation as mitiga	ation,		For impact assess	sment areas	
uplands, divide by current	∠0)	Preservation adjustmer	nt factor = N/A				
or w/o pres	with	Adjusted mitigation delt	a = N/A	FL =	delta x acres =		
0.70		, , , , ,					J
		If mitigation					7
Delta = [with-curr	ent]	Time lag (t-factor) = N/A	4	F	or mitigation asse	essment areas	
	-	Risk factor = N/A		RFG	= delta/(t-factor x	risk)	

1						
Site/Project Name		Application Number			a Name or Numbe	r
SR 429 Wekiva Park	way / SR 46 Realignment				W55, W56	
Impact or Mitigation		Assessment conducted by:		Assessment date	_ake County	
		, and the second				
Impact to mars	h along existing road	CH2M HILL Biologist Stev	ve Eakin	J:	anuary 2007	
Scoring Guidance	Optimal (10)	Moderate(7)	` '		Not Presen	t (0)
The scoring of each indicator is based on what	Condition is optimal and fully	Condition is less than optimal, but sufficient to	Minimal le	vel of support of	Condition is insu	ifficient to
would be suitable for the	supports wetland/surface	maintain most		surface water	provide wetland	
type of wetland or surface	water functions	wetland/surface water		inctions	water funct	
water assessed		functions				
.500(6)(a) Location and Landscape Support w/o pres or current w/	and pine, pine plantations, ar observed within the adjacent commercial properties (nurse assessment area. The surro longleaf pine tree farms. Hea	side of assessment area incluind improved pastures. The exuplands. Other land uses inciries), and a cemetery. Wildlifunding upland forests are in a avy use by ATVs in the surrou	totic species lude sparse, e access to a state of rege	Enterolobium co single family resi adjacent habitat a eneration and we	entortisiliquum was idential dwellings, areas is not limited re historically oak	from the
<u> </u>						
.500(6)(b)Water Environme (n/a for uplands) w/o pres or current w	Aquatic environment somewhere The wetland is fed by a small is feed by groundwater and rewetland was observed to be a	nat appropriate for the wet pra ephemeral spring to the sout ainfall and susceptible to any dry during the dry season. As litches, or nearby stormwater	h which had regional grou sessment ar	been impacted frundwater impacts rea hydroperiod s	om ATV use. The . On several occa	wetland sions the
.500(6)(c)Community struct	ture					
Vegetation and/or Benthic Community	wetland types observed. Car	e vegetation community was hopy and shrub layer were aped to impacts. The herbace	propriately a	bsent from the we	etland type and the	Э
w/o pres or						
current w	ith					
4						
	_					
Score = sum of above scores/3	0 (if If preservation as mitigation	ation,		For impact assess	sment areas]
uplands, divide by 20)	· I I	·			-	1
current	Preservation adjustmen	nt factor = N/A		delta x acres =		
or w/o pres w	Adjusted mitigation deli	ta = N/A	FL = (ueita x autes =		
0.63		·				J
	If mitigation		E,	or mitigation asse	essment areas]
Delta = [with-current]	Time lag (t-factor) = N/A	Α	<u> </u>	cgallon asse		1
	Risk factor = N/A		RFG :	= delta/(t-factor x	risk)	
I .	INION IAULUI = IN/A	ı	1			I

Site/Project Name			Application Number			a Name or Numbe	
SR 429 Wekiva Pa	arkway ,	SR 46 Realignment				l wetland outside f range County	KOW -
Impact or Mitigation			Assessment conducted by:		Assessment date:		
Refe	erence V	Vetland	CH2M HILL Biologist Steve Eakin		January 2007		
Scoring Guidance	1	Optimal (10)	Moderate(7)	Mi	inimal (4)	Not Presen	t (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed		Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal le	evel of support of d/surface water unctions	Condition is insu provide wetland water funct	ifficient to
.500(6)(a) Location an Landscape Support w/o pres or current 5		Adjacent wildlife habitats outs conifer forest parcels, pine pla family residential dwellings, c access is somewhat limited fr The majority of the surrounding periods reducing wildlife acce	antations, mixed rangeland ar ommercial (nurseries) propert om the east by CR 435 and to ng uplands are pine plantatior	nd utility cor ies, and a r o the north b which at til	ridors. Other land medium use roadw by residential and	l uses include spar ay (CR 435). Wild commercial prope	rse single dlife rties.
.500(6)(b)Water Environ (n/a for uplands) w/o pres or current 7	ment with	Aquatic environment is some isolated within the watershed susceptible to changes in land hydroperiod was appropriate	and inputs are from groundwiduses and management prac	ater and rai	nfall. The water e	nvironment is high	
.500(6)(c)Community structure 1. Vegetation and/o 2. Benthic Communit w/o pres or current 7	or	Vegetation community: The The wetland was dominated be prone to a fluctuating wate herbaceous layer from being	by <i>Salix caroliniana, Myrica ce</i> er table which has selected for	erifera and	Ludwigia peruvian	a. The wetland a	
•							
Score = sum of above scores	s/30 (if	If preservation as mitiga	ation,		For impact assess	sment areas	!
uplands, divide by 20) current or w/o pres) with	Preservation adjustmen		FL =	delta x acres =		
0.63							ı
		If mitigation		Г.	For mitigation asses	soomont crees	I
Delta = [with-current	t]	Time lag (t-factor) = N/A	4		or mitigation asse	soment areas	!
		Pick factor - N/A		RFG	= delta/(t-factor x	risk)	

Site/Project Name		Application Number		Assessment Area Name or Number			
SR 429 Wekiva Par	kway / SR 46 Realignment			W42 - Lake Sten - Seminole Co			
Impact or Mitigation		Assessment conducted by: Assessment date:			e :		
	Impact	CH2M HILL Biologist Steve Eakin January 2007					
Cooring Cuidanas	On4: a1 /40\	Modorata/7\	85:	simal (4)	Not Process	(0)	
Scoring Guidance The scoring of each	Optimal (10)	Moderate(7) Condition is less than	iviin	imal (4)	Not Present	. (U)	
indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	optimal, but sufficient to maintain most wetland/surface water functions	wetland/s	evel of support of d/surface water functions Condition is insufficity provide wetland/su water functions			
.500(6)(a) Location and Landscape Support w/o pres or current v	These areas include professing retention ponds, abandoned vegetation communities includeveloped herbaceous layer. These areas provide moderate habitat for the listed limited to adjacent areas on these roadways provides not retention.	side of assessment area inclu- ional services, residential area citrus groves, cattle grazing ar ide areas of mixed oaks, slash is and invasive exotic species p te to poor support for expecte d species gopher tortoise and eastern border by I-4 and the v inhabitat value, increases noise issessment area are not applic	is, high and reas, and nat in pine, cabba present such d species. Tother commen western and reasons, light, trash,	nedium volume rural vegetation c ge palm, and sav as Caesars wee he abandoned ci ensal species. Whorthern borders	oadways, stormwar ommunities. Natur w palmetto with pood d and camphor tree trus grove provides /ildlife access to ha by International Pa	ter ral orly es. s abitats	
.500(6)(b)Water Environm (n/a for uplands) w/o pres or current	ent levees, ditches, or nearby sto inputs from rainfall, groundwedge and cattle grazing at the wetland. Wetland capable of	Aquatic environment appropriate for wetland type. Wetland hydroperiod appropriate and not impacted by berms, levees, ditches, or nearby stormwater retention ponds. No hydrologic connection of surface water bodies. Water inputs from rainfall, groundwater, and roadway runoff. Water quality impacted by roadway runoff from the western edge and cattle grazing at the eastern and southern edges of the wetland. Cattle observed standing and grazing in wetland. Wetland capable of providing flood water attenuation and some water quality improvements in areas removed from roadway and cattle.					
7							
.500(6)(c)Community structure	Ludwigia peruviana. Deeperodorata. Heavy impact to the native and non-native species areas and nesting/nursery has benthic Community: Not described.	toral zone dominated by <i>Panic</i> r areas in Lake Sten dominate e northeastern edge of the we s providing moderate value fo abitat for juvenile fish, amphibitirectly investigated but water city. No indicators of eutrophic	d by floating tland from ca r wildlife habi ans, and bird quality and qu	aquatics <i>Nuphar</i> attle grazing. We tat. Benefits to see that.	r lutea and Nympha etland strata compri wildlife include fora be sufficient to mai	sed of aging	
w/o pres or current v		emoval of vegetation from the			0		
			-				
Score = sum of above scores/3 uplands, divide by 20)	If preservation as mitig	ation,	F	or impact assess	sment areas		
current	Preservation adjustments Adjusted mitigation del		FL = d	lelta x acres =			
0.6							
	If mitigation						
Delta = [with-current]	Time lag (t-factor) = N/	A	Fo	or mitigation asse	essment areas		
	Risk factor = N/A		RFG =	= delta/(t-factor x	risk)		

Site/Project Name		Application Number		Assessment Area	a Name or Numbe	r
SR 429 Wekiva Parkway	/ SR 46 Realignment				W2	
Impact or Mitigation		Assessment conducted by:		Assessment date) :	
Impa	act	CH2M HILL Biologist Stev	e Eakin	J:	anuary 2007	
				l		
Scoring Guidance The scoring of each	Optimal (10)	Moderate(7) Condition is less than	Mi	nimal (4)	Not Presen	t (0)
indicator is based on what	Condition is optimal and fully	optimal, but sufficient to	Minimal le	evel of support of	Condition is insu	fficient to
would be suitable for the	supports wetland/surface	maintain most		/surface water	provide wetland	
type of wetland or surface water assessed	water functions	wetland/surface water functions	TU	unctions	water funct	ions
					ı	
.500(6)(a) Location and Landscape Support w/o pres or current with	regenerating pine flatwoods, include high density resident parcels. Wildlife access to he	side of assessment area poor mixed oak and conifer forest p ial, both completed and under abitats is severely limited to th rounding the assessment area	parcels, and construction e west due	some areas of xen, golf courses, and to high density res	eric oaks. Other land single family residential areas. Th	sidential
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with	isolated within the watershed	what appropriate for the shrub I and inputs are from groundw ithin the wetland which could I for the wetland type.	ater and rair	nfall. An underdet	termined film was	observed
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with	The wetland was dominated	e vegetation community was v by <i>Salix caroliniana</i> and <i>Lud</i> w hanged from previous land uso oint.	igia peruvia	ana. It is undetern	mined whether the	wetland
						_
Score = sum of above scores/30 (if	If preservation as mitig	ation,		For impact assess	sment areas	
uplands, divide by 20)	Preservation adjustmen	nt factor = N/A				
current or w/o pres with	,		FL =	delta x acres =		
0.47	Adjusted mitigation del	ia – IN/M				
	<u> </u>					-
	If mitigation		F	or mitigation asse	essment areas	
Delta = [with-current]	Time lag (t-factor) = N/	A				
	Risk factor = N/A		RFG	= delta/(t-factor x	risk)	