PUBLIC WATER SUPPLY UTILITIES- CLIMATE IMPACT WORKING GROUP UTILITY RESEARCH AGENDA DRAFT

May-11 (updated May 2012)

CLIMATE AREAS	UTILITY NEEDS	AVAILABLE TOOLS	RESEARCH NEEDS	CURRENT RESEARCH PROJECTS	ADDITIONAL RESEARCH NEEDS
Temperature Impacts	OTILITY NEEDS	AVAILABLE 100L3	RESEARCH NEEDS	PROJECTS	RESEARCH NEEDS
emperature impacts					
			Urban ET estimates		
			associated with temp		
	Daily and monthly max		impacts; EDA on historical		
	temperature and Seasonal Temp.	NOAA forecasts; SECC -	temperature vs demand		
	Change	AgroClimate.org	across different sectors		
				1. Drought	
				index/irrigation water	
				balance forecasts using	
				CPC 3-month outlooks	
				(Martinez) 2.	
				Downscaled/bias	
				corrected reference	
				Evapotranspiration	
	Irrigation Damand Changes			across the SE USA	
	Irrigation Demand Changes			(Martinez)	
	1. How seasonal temp. forecasts				
	impact irrigation demands				
	Proportion of water demand	WASD submeter billing			
	for irrigation	records			
	Cooling Demand changes				
		Downscaled IPCC			
		projections and other			
		sensitivity experiments			
		conducted in COAPS;		COAPS/USGS-La Florida	
	1. How could cooling water	Winter-Summer variation		& COAPS/ORAU project	
	demand change with temp?	for current metered flow	Bias correct the projections	(Vasu)	
Rainfall Impacts	Perional rainfall predictions				
	Regional rainfall predictions				
	Long term rainfall forecasts -				
	_	Global Climate models -	Downscale models to		
	climate models to Florida regions	AR4, NARCAST	Florida, calibrate w/ Fl data		
		,	Demand vs rainfall; r/p		
			between rainfall and		
	2. Long term changes in rainfall	Change in ENSO pre and	temperature for demand		
	patterns in Florida	post 1960	estimation		
	2. Short term forecasts for winter-				
	spring dry season, available Jan 1	IASCLIP FORECAST FORUM -		Downscaled GFS and CFS	Better predictions in
	for 3/1-6/15	IFF, winter forecasts better		forecasts (Martinez)	spring
	3. Length of wet or dry season		hydroperiod durations;		
	and its variability	ENSO effects	development of indicators		
Stamma/Hr					
Storms/Hurricanes	Predict Nos./ Likelihood of Florida	Good models for total nos.			Predictions for nos.
	hurricane impacts	of hurricanes			hurricanes to hit Florida
	marricane impacts	or numeanes	Climate Compact doing		marricanes to the Fiorida
	Model inundation and damage	GIS inundation model	Action Plans		
	Storm surge impacts	Storm surge models			
	(regional or local)				
			coupled		
		coupled	surge/surface/groundwater		
		· ·	models to better predict	1	Hydrodynamic model fo
	Impact of Storm/inundation on	surface/Groundwater	models to better predict		riyardaynanne moderic
	Impact of Storm/inundation on salt water intrusion	surface/Groundwater models	surge impact on SWI		salt water intrusion
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Sea Level Rise				
	Monitor SLR data vs. models to	SE Climate Commission		
	develop statewide concensus	developing white paper		
	How do temp. and SLR forecasts			
	correlate?			
		SE Climate Commission		
	Florida SLR predictions	developing white paper		
	p	a a p B		
			increased vertical	
			delineation across south	
		USGS has models and IMS	Florida; hydrostratigraphic	
		websites for South Florida	correlation to vertical	
	Salt water intrusion boundary	WQ and WL data	delineations and movement	
		Available for coastal		
	Building Coastal Construction Line			Needs to be updated
	Building Coastal Constituction Line	Counties		Needs to be apaated
		Climate Compact		
	Drainage/Stormwater impacts	developing Action Plan		
Carbon Emissions				
	Utility methods to reduce carbon	WERF research - Utility		
	footprint	reduction methods		
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	Nikasa sa sida isa sa ata fasas asaa			
	Nitrous oxide impacts from ww			How to measure nitrous
	plants on climate			oxide emissions
Social Science				
			Media & Public Perception	
			on Policy	
			Cognitive Processes in	
			response to Climate Change	
			response to climate change	
			[]	
			Deleloping Competencies &	
			Accessing Information	
			Risk management and	
			communication	
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