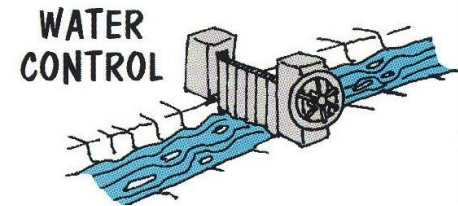
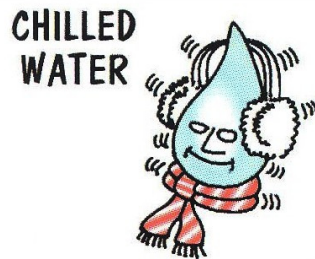
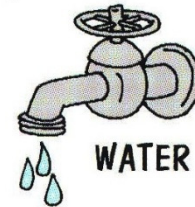
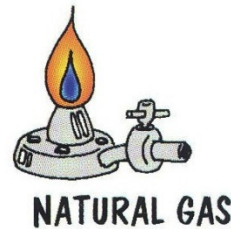
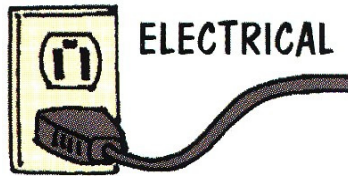




**The Reedy Creek  
Improvement District**

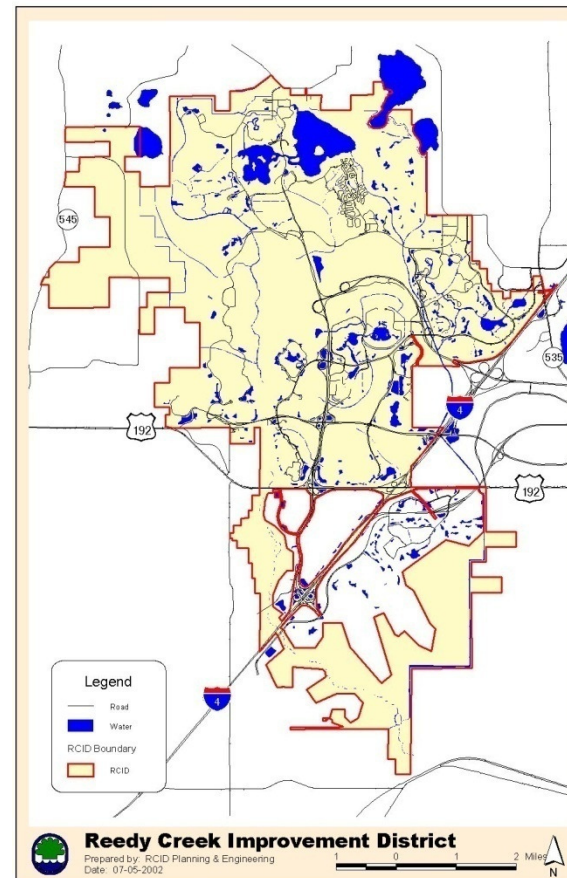
Reedy Creek Energy Services  
Reliable Magic

# Diversified Utility Services



# Service Area

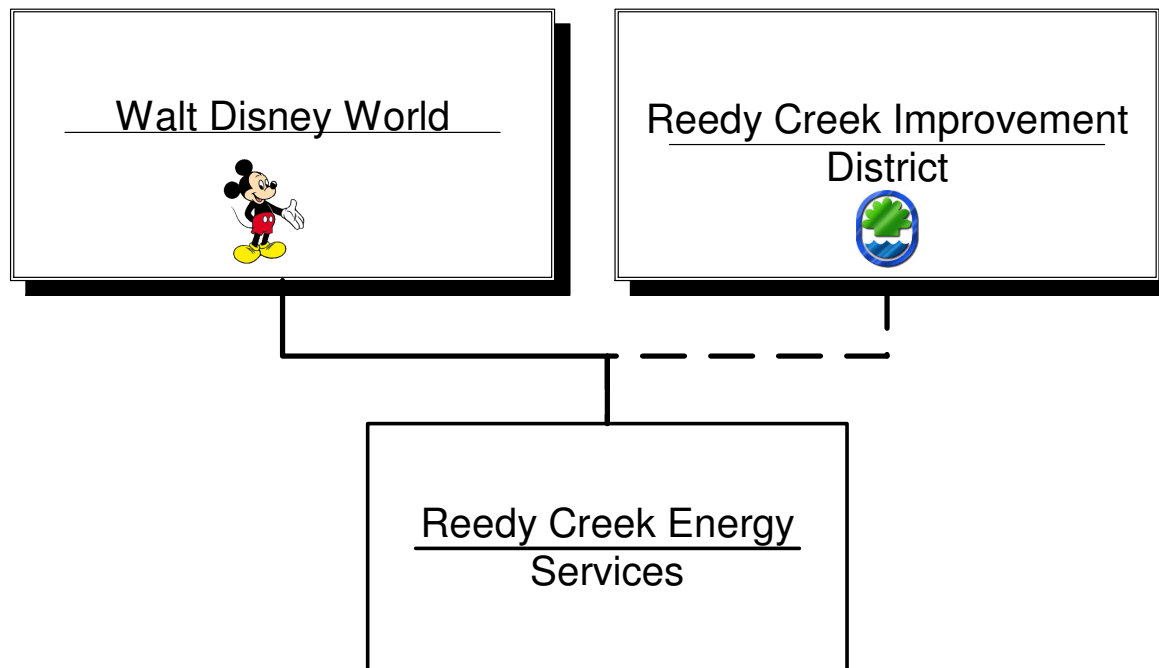
- 38 square miles





# Reedy Creek Energy Services

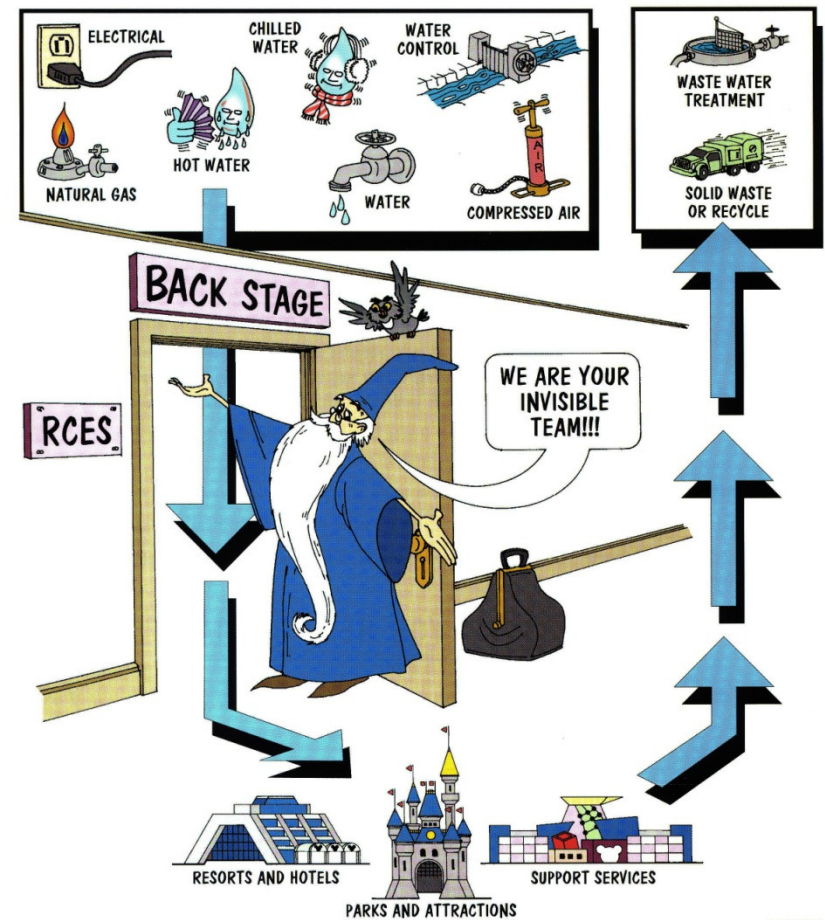
- Contractor to the Reedy Creek Improvement District



# Unique in Utility Industry

## ■ MISSION

- Invisible
- Close to Customers
- Highest Reliability



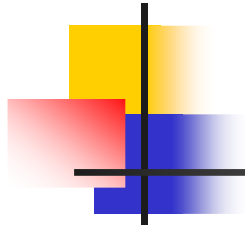


# Unique in Utility Industry

- Operate 7 days, 24 hours
- Workforce: 290 skilled, well-trained people
- Strict regulatory environment



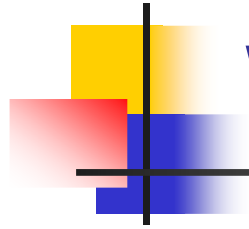
**Florida Public Service Commission**



# Drinking Water

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- Supplied from 12 wells on property -  
Florida Aquifer
  - Excellent water quality
    - Chlorination only
  - 68% of water returns as sewage to  
wastewater treatment facility



# Wastewater Treatment

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- 15 MGD annual average daily flow
  - 100% of treated wastewater becomes reclaimed (reuse) water
  - Solid residuals dewatered and composted



# Reuse/Reclaimed Water

- Irrigation
- Cooling towers
- Vehicle washing

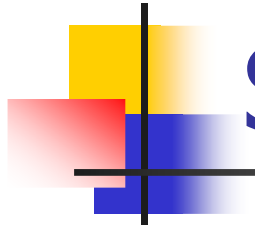


Storage tanks (15 million gallons)

# Solid Waste Services

- Fleet of 24 trucks
  - 24 hours/day, 7 days/week





# Solid Waste Services

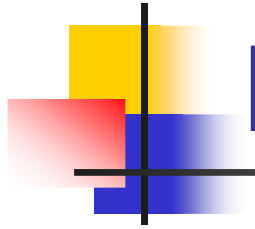
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- Collect 133,000 tons annually for disposal & recycling
  - 11,000 tons recycled
  - 2850 tons wood and yard waste chipped for blending in compost
- In-vessel food composting facility

# Chilled Water

- Meet air conditioning demands
- Manage chiller plants
- 40,000 ton capacity





# High Temperature Hot Water

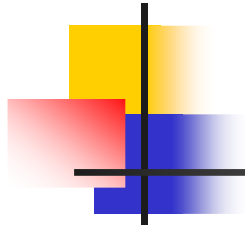
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- Average temperature of 350°F
- Provided to Magic Kingdom and resort hotels
  - Building heat
  - Domestic hot water
  - Chilled water production

# Other Services

- Water control - Drainage
- Canal system maintenance
- Roadways & signs





# Natural Gas Distribution

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- Primary fuel for co-generation plant
- Heating
- Cooking
- Auxiliary boilers
- Swimming pools

# Electric Generation & Distribution

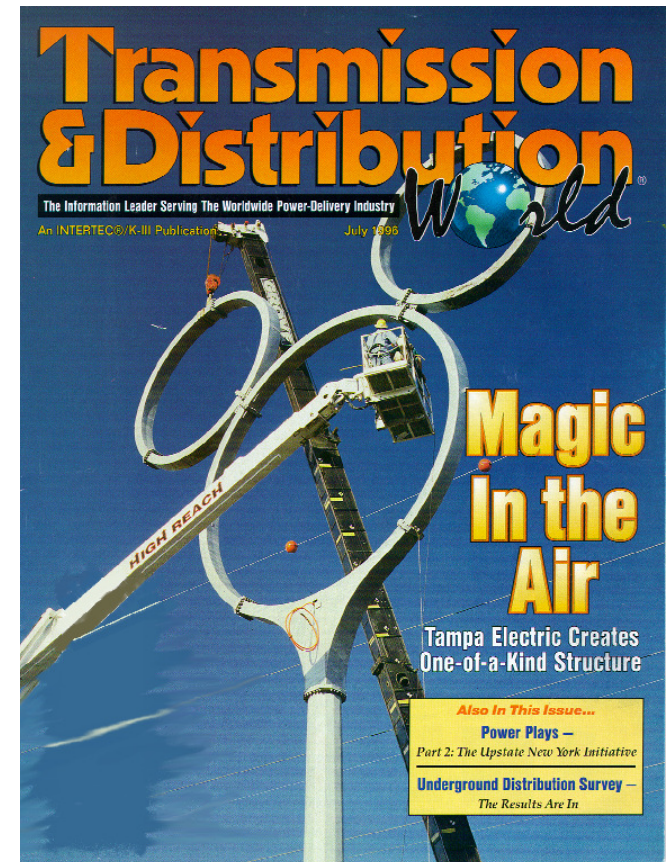
- Purchase about 75% of power needs
- 196 MW peak load
- Remaining 25% of power needs (52.5 MW)  
Combined cycle co-generation plant





# Electric Generation & Distribution

- 28 miles of 69 kV lines
  - 16 miles underground
  - Aesthetics, security, reliability
- 290 miles of underground 12 kV feeders



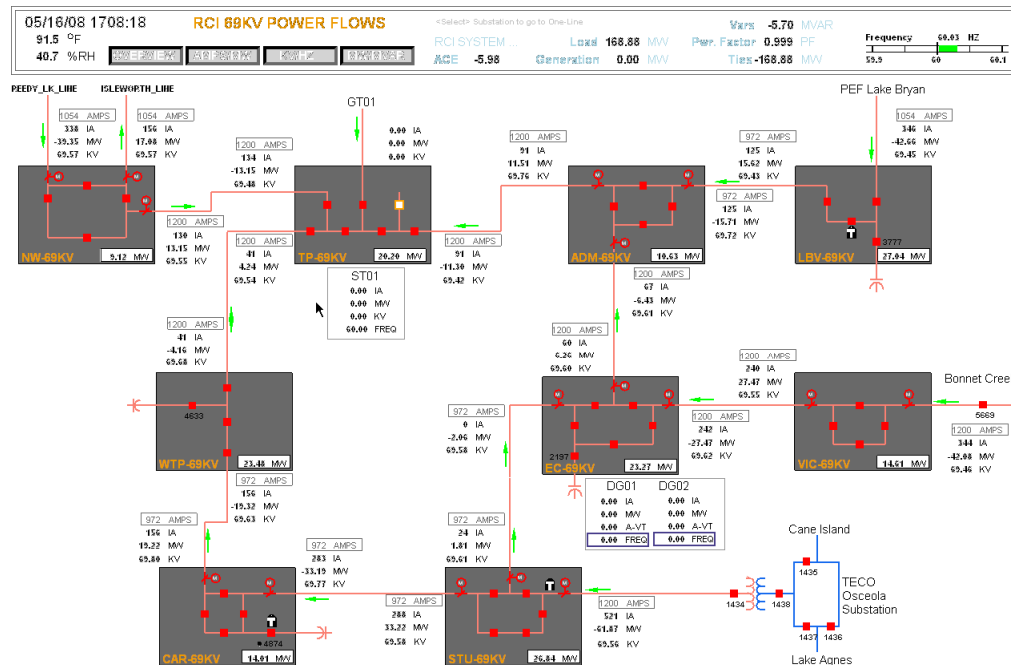
# Electric Distribution

- Nine 69 kV substations

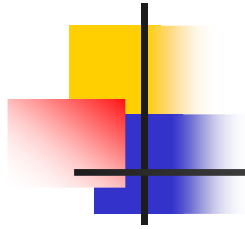


# Electric Distribution

## ■ Energy Control Center



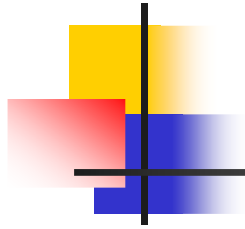
24 hour coverage



# Distribution Switchgear

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- Metal Enclosed Switchgear
  - Switching Stations
  - Unit Substations



# Distribution Switchgear

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- 15 kV Metal Clad Switchgear
  - Arc-resistant
  - OSHA 1910.269
  - IEEE C37.20.7

# Distribution Switchgear

DEVICE TABULAR - RDS			
Done	S40	BUS-A A400	Print
Old Device Id :			Tag...
SEL-351A RELAY POINTS :		12659.56	VOLTAGE
2032 RELAY COMM.	OK	13090.00 11850.00	HIGH LIMIT LOW LIMIT
RELAY STATE	ENABLED	7311.00	PHASE A VOLTS
RELAY FAILURE	OK	7300.00	PHASE B VOLTS
BREAKER/SWITCH POINTS :		7316.00	PHASE C VOLTS
SCADA CONTROL	ENABLED	176.00	PHASE A AMPS
BREAKER STATUS	CLOSED	600.00 0.00	HIGH LIMIT LOW LIMIT
RELAY TRIP	OK	175.00	PHASE B AMPS
TRIP COIL #1	OK	600.00 0.00	HIGH LIMIT LOW LIMIT
A PHASE FAULT	OK	187.00	PHASE C AMPS
B PHASE FAULT	OK	600.00 0.00	HIGH LIMIT LOW LIMIT
C PHASE FAULT	OK	14.00	AMPS NEUTRAL
GROUND FAULT	OK	100.00 -100.00	HIGH LIMIT LOW LIMIT
		22.00	KILOWATTS
		-3943.00	KILOVARS



# Distribution Switchgear

- Special Cases
  - Mixed Gear



# Reliability That Never Stops

- Main Street USA





# Low-Voltage Switchgear

DEVICE TABULAR - RDS			
Done	ENERGY	SUBSTA	U519
	Old Device Id :	A4A	8224-3165
		Print	
		Tag...	
RTU REMOTE-LOCAL	REMOTE	153.56	KILOWATTS
REMOTE-LOCAL	REMOTE	485.02	VOLTAGE
BR/SW #4 REM-LOC	REMOTE	514.00	HIGH LIMIT
		446.00	LOW LIMIT
SWITCH #1	CLOSED	253.10	AMPS
SWITCH #2	CLOSED	2400.00	HIGH LIMIT
		-10.00	LOW LIMIT
MAIN BREAKER	CLOSED	115.57	BKR/SW #4 KW
SWITCH #4	CLOSED	187.80	BKR/SW #4 AMPS
CONTROL POWER #1	ON	2000.00	HIGH LIMIT
CONTROL POWER #2	ON	-10.00	LOW LIMIT
CONTROL POWER #4	OFF		
XFMR ALARM	OK		



# Low-Voltage Switchgear

- Unit Substations
  - Indoor double-ended



# Low-Voltage Switchgear

- Outdoor Switchboards
  - Animal Kingdom Conservation Station



# Low-Voltage Switchgear

## ■ Motor Control Centers

DEVICE TABULAR - RDS			
Done	CEP	XFMR	T1551
Old Device Id :		Print	
Tag...			
MAIN BREAKER	CLOSED	178.58	KILOWATTS
		256.12	PHASE A AMPS
		900.00	HIGH LIMIT
		-1.00	LOW LIMIT
		254.75	PHASE B AMPS
		900.00	HIGH LIMIT
		-1.00	LOW LIMIT
		258.59	PHASE C AMPS
		900.00	HIGH LIMIT
		-1.00	LOW LIMIT
		475.40	VOLTAGE
		514.00	HIGH LIMIT
		446.00	LOW LIMIT
		272.24	PHASE A VOLTS
		274.98	PHASE B VOLTS
		276.19	PHASE C VOLTS



# Automation Networking

- System Control



# Automation Networking

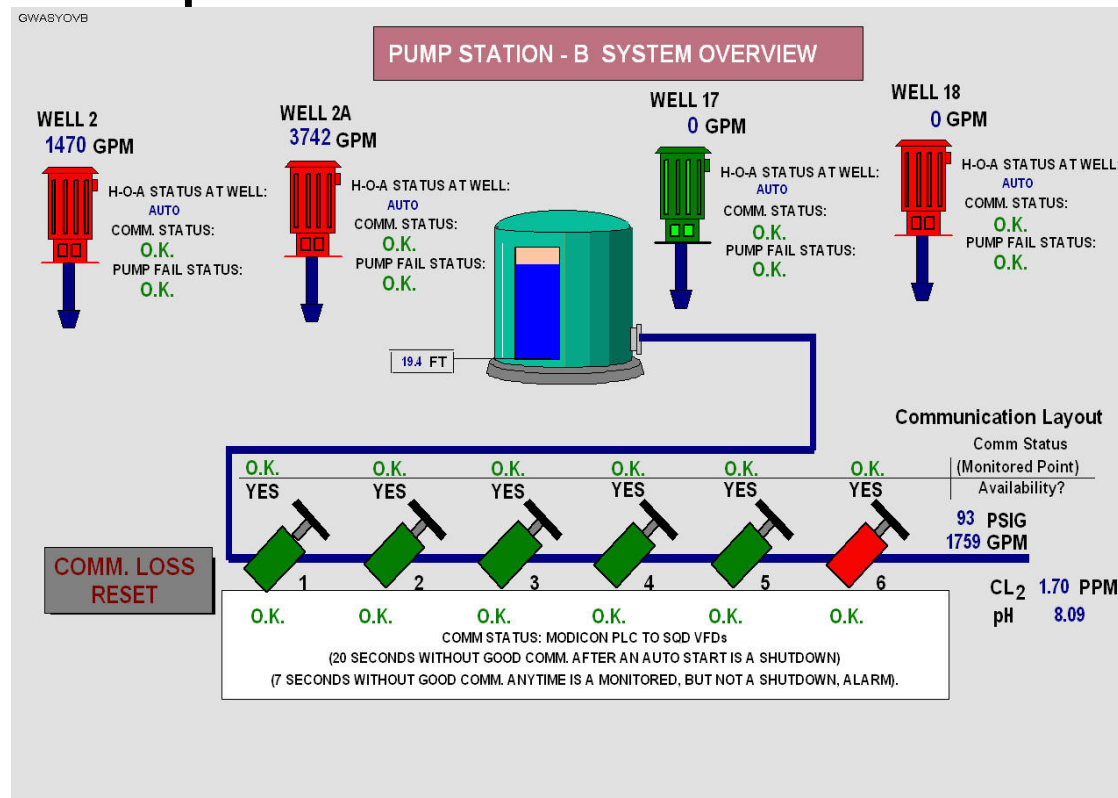
DEVICE TABULAR - RDS

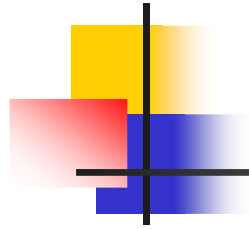
Done **CEP** **PMS** **P127** Print  
Old Device Id : Tag...

RTU REMOTE-LOCAL	REMOTE	-201.80	BKR/SW #1 KW
SWITCH #1	CLOSED	-14.10	BKR/SW #1 AMPS
BR/SW #1 REM-LOC	REMOTE	600.00 -600.00	HIGH LIMIT LOW LIMIT
SWITCH #2	CLOSED	64.40	BKR/SW #2 KW
BR/SW #2 REM-LOC	REMOTE	6.41	BKR/SW #2 AMPS
SWITCH #3	TRIPPED	600.00 -600.00	HIGH LIMIT LOW LIMIT
BR/SW #3 REM-LOC	REMOTE	0.02	BKR/SW #3 KW
FUSE #1	CLOSED	0.00	BKR/SW #3 AMPS
BATTERY CHARGER	OK	600.00 -600.00	HIGH LIMIT LOW LIMIT
		12441.85	VOLTAGE
		13710.00 11225.00	HIGH LIMIT LOW LIMIT
		7148.07	PHASE A VOLTS
		7035.92	PHASE B VOLTS
		7365.93	PHASE C VOLTS

# Automation Networking

- Process Control Systems
  - Pump Station B MCC





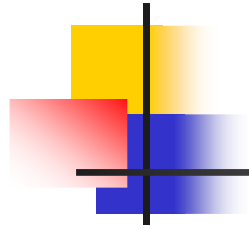
# Reedy Creek Energy Services

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***THANK YOU!***





# Reedy Creek Energy Services

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*Questions?*