

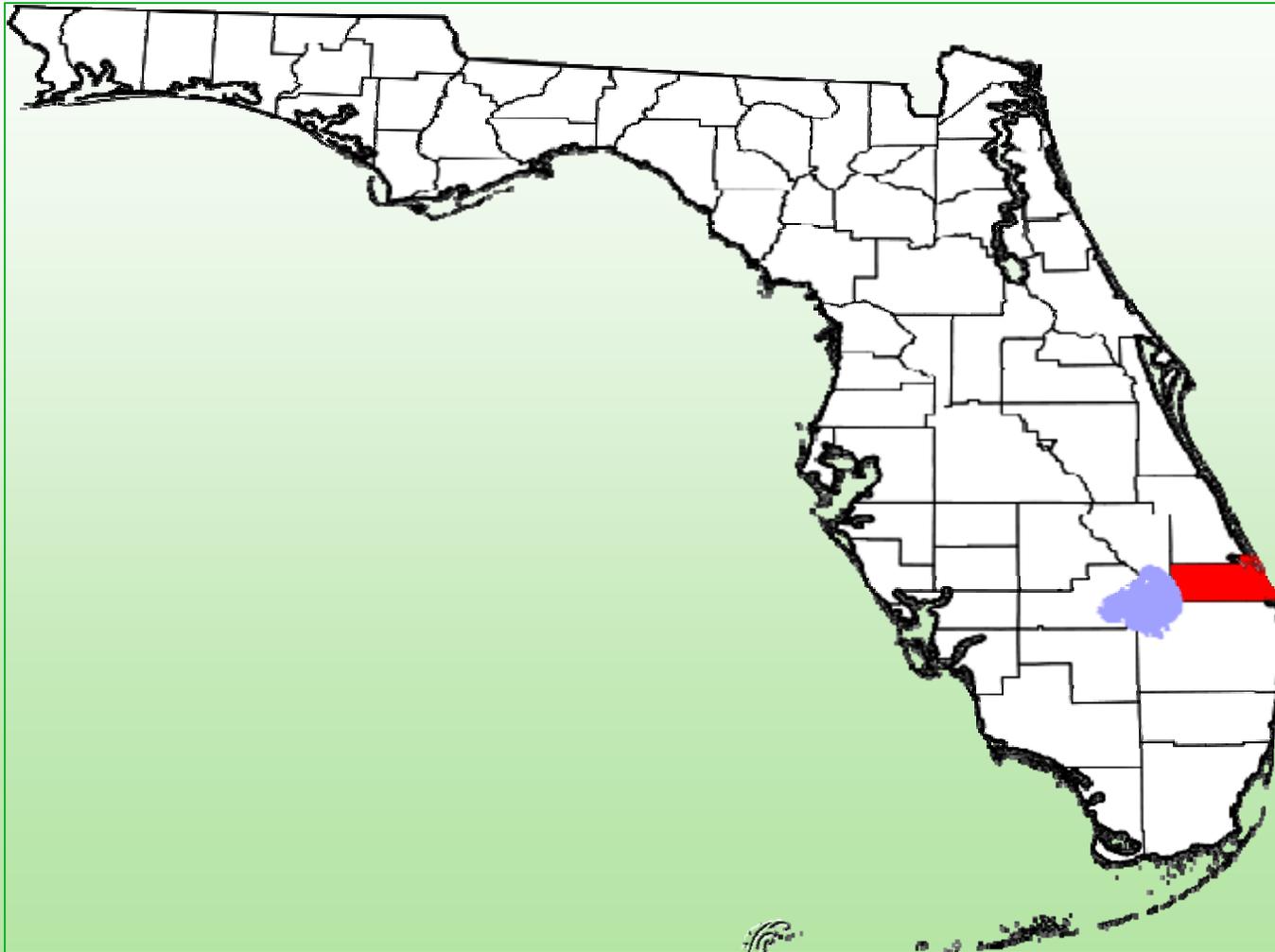
Reducing Sewage Overflows after Disasters 2006 - 2007

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PROBLEM

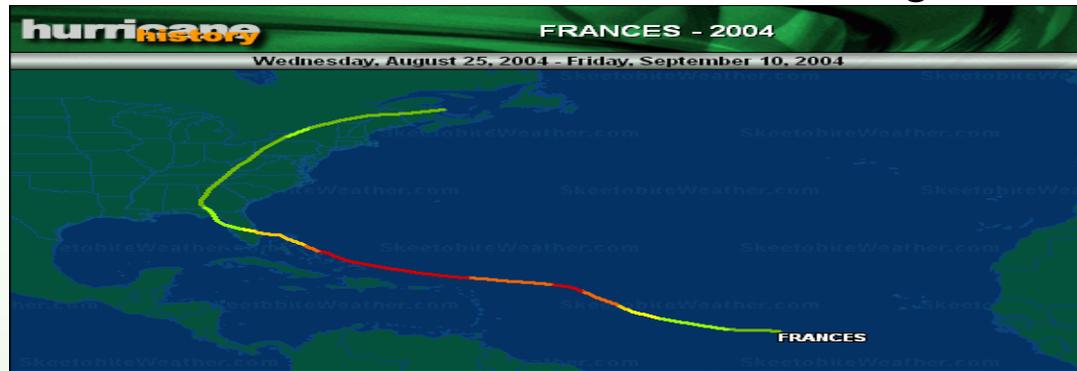
- ☞ Why do so many lift stations overflow after power outages?
- ☞ Why haven't our efforts helped to reduce the number of spills?

Martin County, Florida



Three hurricanes hit Martin County in 2 years

FRANCES



JEANNE



WILMA



WASTEWATER LIFT STATION



WHAT IS HAPPENING NOW

- ☞ Health department spends valuable time responding to numerous individual sewage spills
- ☞ Utilities spend less time responding to spills after each storm
- ☞ Utilities work individually and do not share extra resources

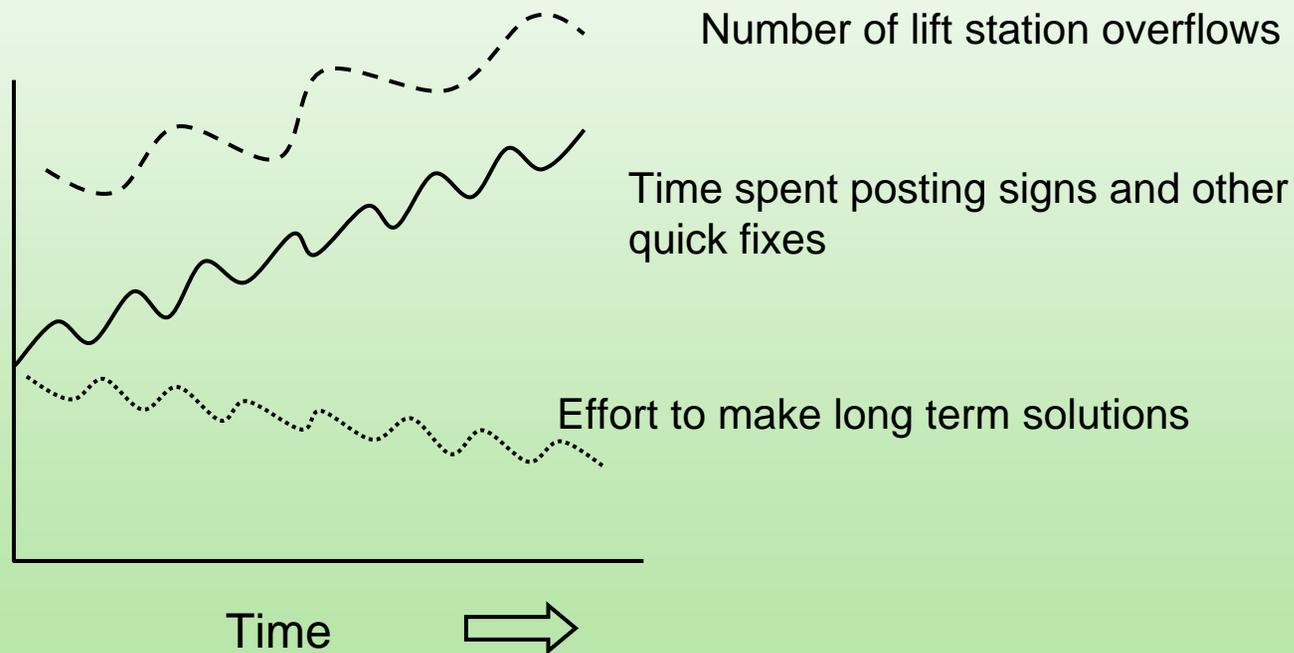
HURRICANE DAMAGED TRAILER PARK WITH OVERFLOWING LIFT STATION BEHIND BUILDINGS



UTILITY OWNER MENTAL MODELS

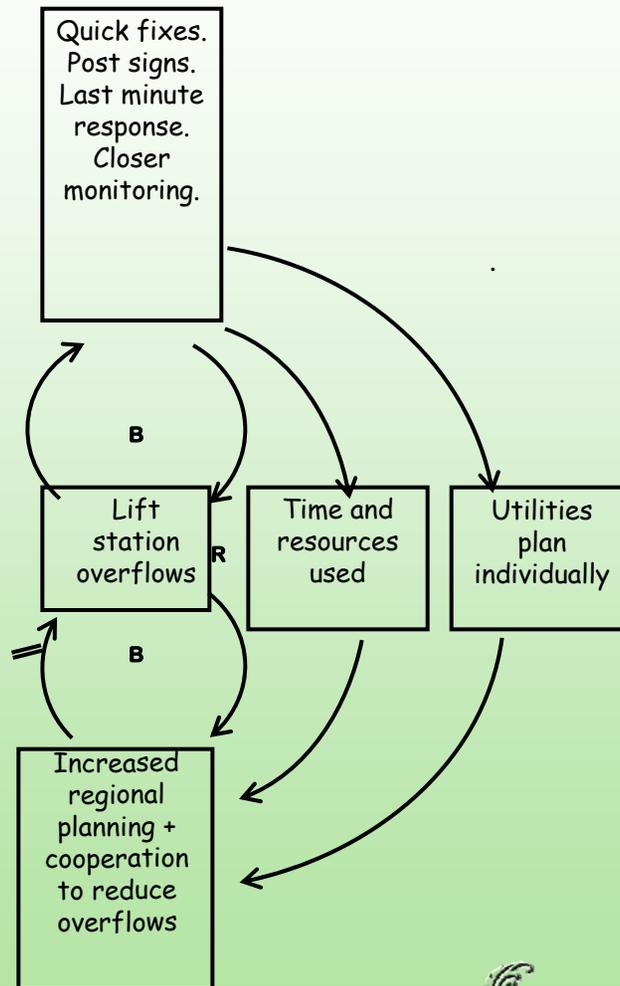
- ☞ Things are OK because the health department posts signs
- ☞ This type storm will never happen again
- ☞ Lift stations are not our first priority

BEHAVIOR OVER TIME- QUICK FIXES ARE NOT WORKING



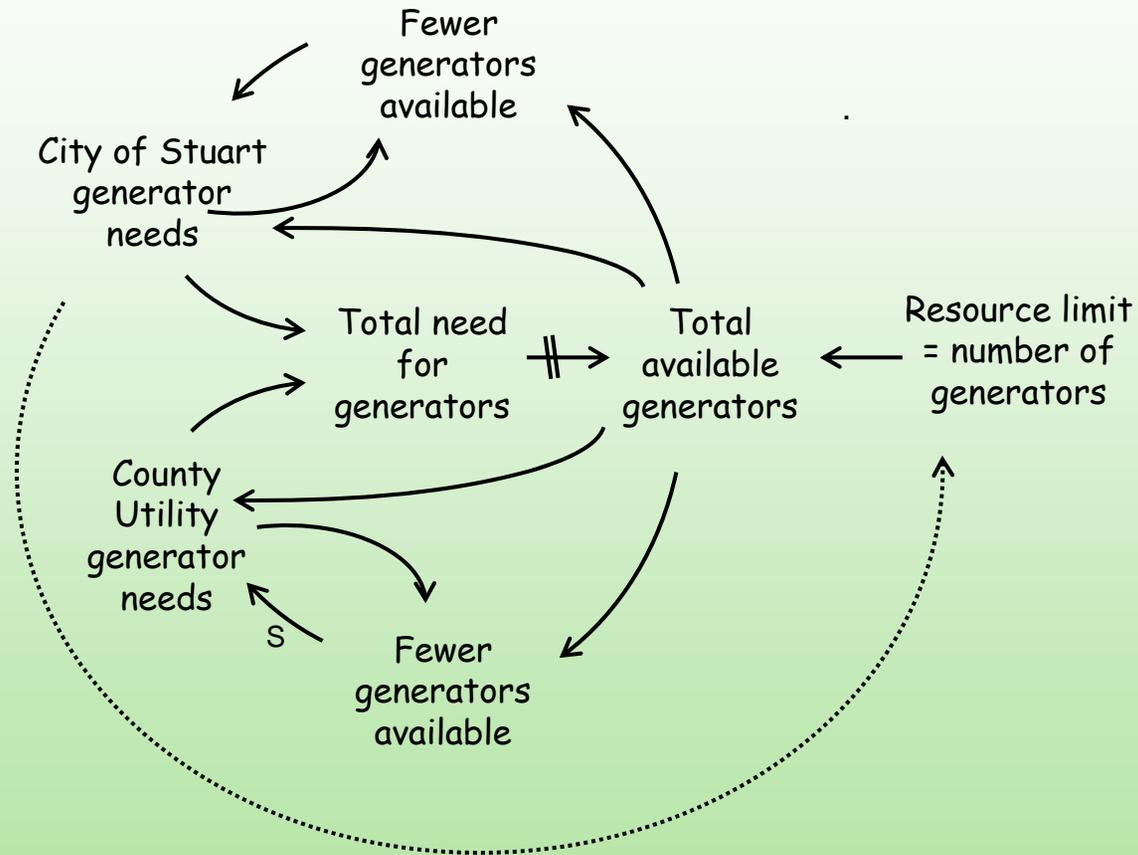
SHIFTING THE BURDEN

Quick fixes reduce efforts to work on a long term solution



TRAGEDY OF THE COMMONS

As more generators are needed, fewer are available



INTERVENTIONS

- ☞ Promote mutual aid agreements among local and regional utilities
- ☞ Improve cooperation between utilities to work on long term solutions
- ☞ Educate utilities on the health issues
- ☞ Work with utilities to purchase needed generators and pump trucks

NEXT STEPS

- ☞ Work toward the goal of having all utilities having mutual aid agreements
- ☞ Assure that each utility has a plan to deal with the worst case situation
- ☞ Continue partnerships with emergency planners and environmental officials

END RESULT CLEAN WATER AND HEALTHY RESIDENTS

