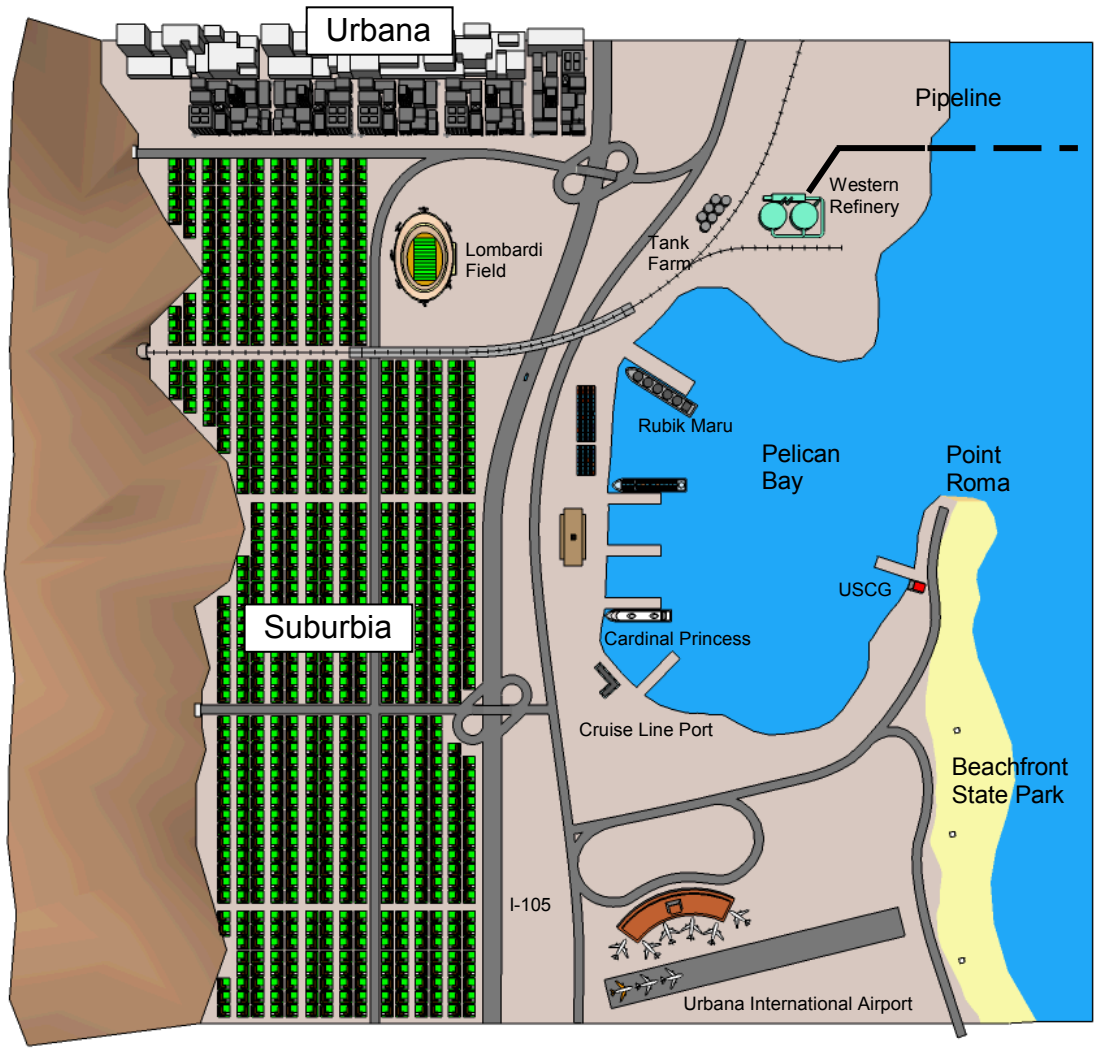
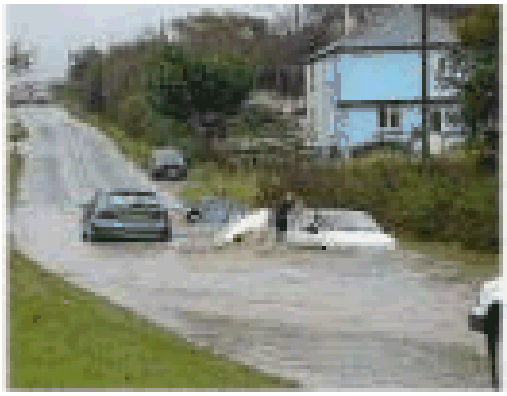
Needles High School /River Valley High School Case Study #2

Background Information

Over the past decade, there has been a heightened awareness of the natural oil reserves harbored in the Urbana-Suburbia region, and a significant infrastructure has emerged in response to this market. This infrastructure includes approximately 30,000 miles of off-shore pipeline which is connected to the Pelican Bay refinery by a major underwater pipeline, a daisy-chain of drilling platforms, and significant harbor operations and rail infrastructure at the north end of Pelican Bay. The workforce to support these operations numbers in the tens-of-thousands. For the past two years, the Environmental Protection Agency performed a number of site inspections and issued a number of warnings and citations for environmental non-compliance. Despite the recent economic boom, Suburbia's budget is in severe deficit, severely hampering ongoing efforts in emergency preparedness and response.



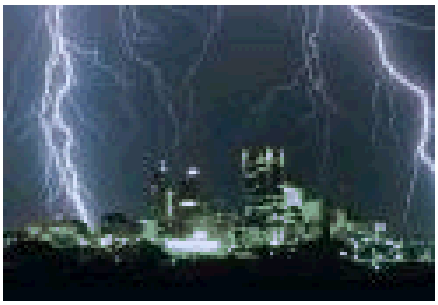
Current Situation
The late summer and early fall seasons have been fraught with significant storm activity all along the coast of Majestica. The Urbana/Suburbia area has experienced nearly twenty inches of rainfall in the past two days and there has been localized flooding in both the port and city areas. Several streets are impassible due to standing water and officials have become concerned about the stability of some of the structures, including bridges and freeway overpasses. Disaster response and preparedness measures are currently stretched to their limit. A number of smaller neighborhoods have "self-initiated" stockpiles of food, potable water, and basic first aid supplies/medications. Local high schools have readied their gymnasiums as temporary housing and "contingency hospitals."



Understandably, the oil and pipeline industry has decided to take a number of proactive steps to minimize loss. Most notably, pipeline and refinery operations have been cut to 30 percent by mandating that individuals stay home from work. Mandatory evacuations of the offshore oil drilling platforms have resulted in staffing cutbacks to 10 percent of routine operations.

Situation Update
On Monday morning, the National Weather Service issues yet another severe storm watch for the southern coast of Majestica due to the possibility of Tropical Depression Samatha hitting the area sometime between Tuesday afternoon and Wednesday evening. On Tuesday morning, Samantha has slowed, but intensified. Peak winds are now at 45 miles per hour and the storm is projected to come ashore in the Urbana/Suburbia area sometime late Tuesday night or early Wednesday morning. Although the storm is not expected to reach hurricane strength, severe thunderstorms and possible tornado activity is predicted.

At 11:50 PM, as the first storm bands from Samantha begin to come ashore, a significant lightning strike hits in the vicinity of the refinery north of Pelican Bay. Shortly afterwards, a large explosion occurs. Plant HAZMAT vehicles are immediately deployed on-site. Due to extreme flooding conditions, other local ground units are unavailable to assist. The plant currently has approximately four hundred workers on-site. The nearest trauma care hospital is fifteen miles away. All aircraft are currently grounded. The plant has three full-time Emergency Medical Technician-Paramedics, however, only one is on location at the time of the explosion.



Basic Analytic Framework (consider yourself to be the Suburbia emergency response team)

1. What are the primary and secondary/tertiary disaster areas? What are your immediate (hours) and near-term (days) concerns? What are your long-term concerns (weeks to months out)? Are there any really long-term concerns that you need to address immediately (years out)?
2. What information do you want—can you draw an information-needs timeline for this problem?
3. What is your estimate of the casualties (both dead and injured)? What sort of injuries do you expect? How will they be handled? Do you anticipate long-term chronic effects? From what?
4. What "situation assessment" tools and information sources do you have at your disposal? How would you deploy (geographically) your incident resources? Why?
5. What are your recommended priorities for: the Mayor; the refinery plant manager; the Governor; senior policy makers in Washington, D.C.? Industries such as the cruise lines, the port authorities, and the railroad?
6. Do you recommend evacuation of the area beyond the immediate confines of the refinery? Why? What is your (risk-based and stratified) plan?
7. Write a description of the sequence of events that happened before, during, and after the storm in narrative form. Include all pertinent emergency response actions and the consequences of the event. Make sure to include a record of communications between important individuals and organizations (e.g., the on-scene commander, the emergency response chief in Urbana, the Suburbia officials, any interaction with Majestica or federal officials, etc.). Your write-up should include a time line from the first forecast of the severe weather until the entire situation has been returned to normal.
8. What lessons-learned will you incorporate into future response plans?

What are your plans for teaming with the private sector during the mitigation and recovery phases of this operation?