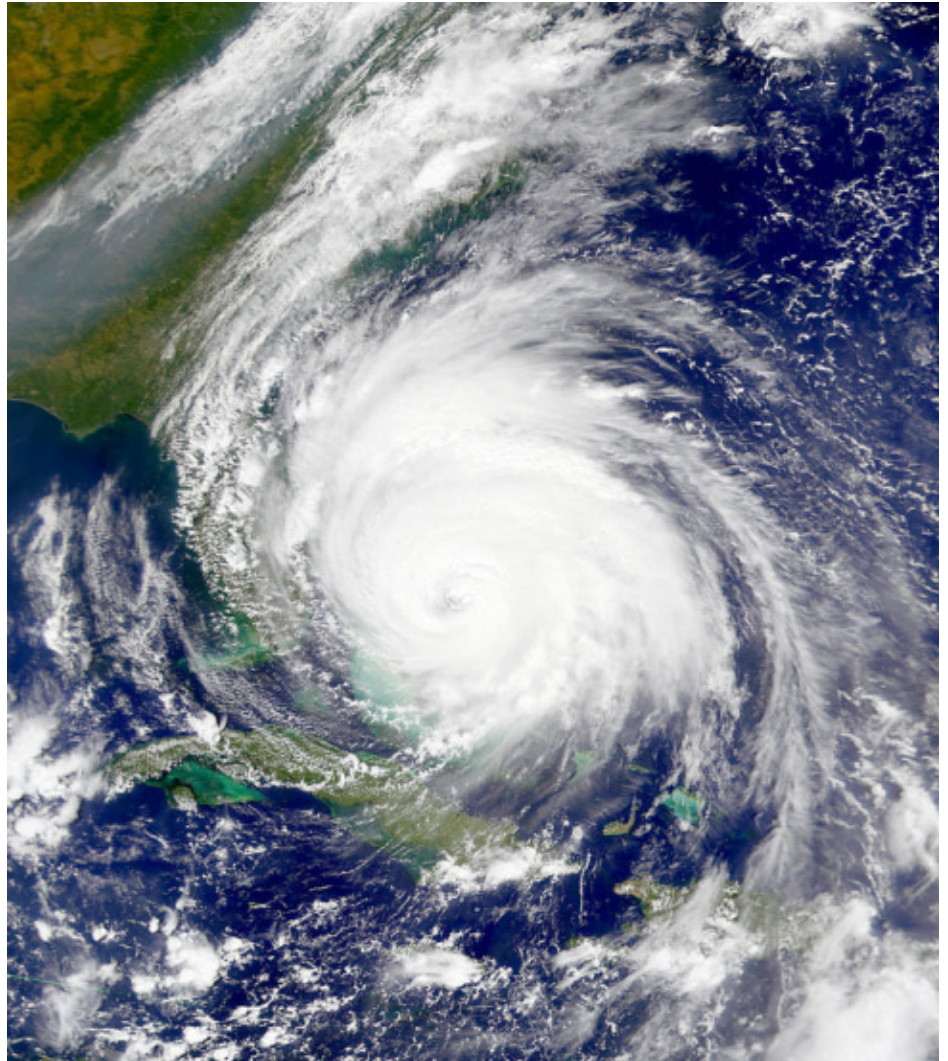


S T O R M

SIMULATION TRAINING ON RECOVERY & MITIGATION



An Overview

Richard A. Smith and Robert E. Deyle

Dedication

The idea for a disaster recovery gaming simulation for local officials was first conceived by my colleague and friend, Richard A. Smith, former Professor of Urban and Regional Planning at Florida State University. Richard's experience working as a graduate assistant for Al Feldt at Cornell University on the City Land Use Game (CLUG), and our study of community recovery after Hurricane Opal in Florida, served as the inspiration for STORM. Richard was felled by cancer only 3 months into this project in May 1998, but he persevered to see it through completion of all the major components of the game prior to his death in September 1999. I dedicate STORM in memory of his vision, enthusiasm, extraordinary effort, and companionship.

Robert E. Deyle
November 20, 2000



This technical paper was supported by the National Sea Grant College Program of the U.S. Department of Commerce's National Oceanic and Atmospheric Administration under NOAA Grant No. 76RG-0120. Additional funding was provided by the Florida Department of Community Affairs. The views expressed herein do not necessarily reflect the views of these organizations.

Additional copies are available by contacting Florida Sea Grant, University of Florida, PO Box 110409, Gainesville, FL, 32611-0409, (352) 392.2801.

Abstract

STORM (Simulation Training on Recovery and Mitigation) is a training device for state and local personnel who may have to deal with hurricane recovery but who lack prior experience. The game confronts players with the major decisions that local governments must make during hurricane recovery and demonstrates the value of pre- and post-storm recovery and mitigation planning.

Players are divided into two teams of 4 to 6 players that play in parallel. Each team serves as the Disaster Recovery Advisory Committee of a fictitious community, Laguna County, part of which has been hit by a category 3 hurricane. During the eight-hour simulation the teams perform a series of tasks and confront an array of policy issues that span the range from short-term to long-term recovery over 8 rounds of play ("weeks"): debris clearance and disposal; temporary repair of damaged public facilities and infrastructure; permitting of private-sector repair and reconstruction; permanent repair, reconstruction, and mitigation of damaged public facilities and infrastructure; submission of claims under the federal Public Assistance Program; and development of proposals for long-term mitigation under the federal Hazard Mitigation Grant Program. Each team is provided with a set of community planning documents to guide recovery decision making including a comprehensive plan, zoning ordinance, building code, hazard mitigation plan, and disaster recovery operations plan. In a final planning evaluation stage the two teams have the opportunity to compare their play of the game and to discuss and re-think their actions, especially in light of community planning documents.

Game materials include:

(1) A QuattroPro spreadsheet used to track each team's progress and provide regular status reports, including several indices that track their recovery progress and reductions in the community's vulnerability;

(2) A series of color maps (8.5" x 11") that depict existing land use, future land use for one area of the county (Pringle Beach), hazard zones and critical facilities, water supply districts, sewage districts, zoning districts, damage to major arterials and linear infrastructure, and locations of alternative sites for debris disposal;

(3) ArcView 3.2 files for producing the 8.5" x 11" maps plus wall-sized versions of some of the maps (34" x 44" and 17" x 22");

(4) CorelDraw files for a series of wall charts used to track the progress of teams as they play through the gaming simulation (also available as Adobe Illustrator files);

(5) A series of local planning documents including a comprehensive plan, zoning ordinance, building code, hazard mitigation plan, and disaster recovery operations plan;

(6) A game operator's manual that contains detailed instructions plus copies of the plans and all worksheets, handouts, and maps used in the game; and,

(7) A series of WordPerfect files for producing the planning documents, worksheets, and handouts used in the game.

Resources required to mount the gaming simulation include:

(1) Two computers with Corel QuattroPro and WordPerfect and at least one printer linked to the computers to produce status reports at the end of each round;

(2) A minimum of three game operators, two of whom serve as computer operators and the third of whom serves as the accountant and plays the role of the board of county commissioners for acting on policy proposals from the teams;

(3) Access to computing facilities, including a color plotter, to produce the ArcView wall maps and CorelDraw (or Adobe Illustrator) wall charts.

Preface

The inspiration for STORM lay in Richard Smith's experience working with Allan Feldt in developing one of the first applications of gaming simulation to the social sciences and to urban and regional planning, the City Land Use Game or CLUG, and in our observations of the recovery process in nine communities following Hurricane Opal which struck the Florida Panhandle in October 1995.¹ We undertook this project with funding from the National Oceanic and Atmospheric Administration Office of Sea Grant through the Florida Sea Grant College and supplemental funding from the Florida Department of Community Affairs (FDCA). FDCA was our principal collaborator on the project. They will use the gaming simulation for an on-going program of training state and local officials.

The conceptual framework for the simulation was developed from a review of selected works from
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¹ Smith, Richard A. and Robert E. Deyle (1998), "Hurricane Case Study: Opal in the Florida Panhandle," in James Schwab (ed.), *Planning for Post-Disaster Recovery and Reconstruction*, pp. 235-260. Planning Advisory Service Report No. 483/484. Chicago, IL: American Planning Association.

the disaster recovery literature,² our observations after Hurricane Opal, and a series of focus groups and interviews that we conducted at the onset of this project. We conducted focus groups with local officials who had played major roles in community recovery after Hurricane Andrew in 1992 and Hurricane Opal in 1995.³ We conducted telephone and personal interviews with state officials who play a direct role in assisting local governments with short-term and long-term recovery.⁴ We also convened a project advisory committee of local, state, and federal officials who provided review and guidance during our initial design of the game.⁵

Much of the game was designed with the help of a group of six graduate students in the Department of Urban and Regional Planning at Florida State University who participated in a special course during the Fall 1998 semester.⁶ After a series of lectures and discussions about gaming simulation and disaster mitigation and recovery, the students played sequential versions of portions of the game on a weekly basis. After each session, students would critique the game and make suggestions. We would make appropriate revisions and play the game again.

Allan Feldt, Professor Emeritus of Urban and Regional Planning at the University of Michigan, and

Marilyn Ruiz, formerly Assistant Professor of Geography at Florida State University, served as technical consultants to the project. Professor Feldt consulted in the original conceptualization of the simulation and observed and critiqued play of the game on three occasions between September 1998 and May 2000. Professor Ruiz used ArcView GIS software to create the initial maps used to depict hypothetical Laguna County based on modified physical and land use data for New Hanover County, North Carolina.

The gaming simulation was field tested on eight occasions and subsequently revised. In April 2000 three staff from FDCA, Keith Delhomme, Henry Erikson, and Jennifer Zadwick, began training to serve as game operators. These individuals participated in six of the field tests and made many suggestions that have been incorporated in the final version of the game.

² Haas, J. Eugene, Robert W. Kates, and Martyn J. Bowden (eds.) (1977), *Reconstruction Following Disaster*. Cambridge, MA: MIT Press. Monday, Jacquelyn (1992), *Learning from Hurricane Hugo: Implications for Public Policy*. Washington, DC: Federal Emergency Management Agency. Rubin, Claire B., Martin D. Saperstein, and Daniel G. Barbee (1985), *ACommunity Recovery from a Major Natural Disaster*. @ Monograph #41. Boulder, CO: Institute of Behavioral Science, University of Colorado. Rubin, Claire B. and Roy Popkin (1990), "Disaster Recovery After Hurricane Hugo in South Carolina." Working Paper #69. Boulder, CO: Institute of Behavioral Science, University of Colorado. Spangle Associates (1996), "An Evaluation of the Los Angeles Recovery and Reconstruction Plan after the North Ridge Earthquake." Portola Valley, CA: Spangle Associates.

³ Mark Ben-Asher, Florida City Finance Department; Pat Blackshear, Okaloosa County Department of Planning and Zoning; Corinne Brody, Dade County Audit and Management Services; David Brown, Coral Gables Finance Department; Houston Carter, Carter Associates; Grace Cespedes, Dade County Finance Department; George Collins, Okaloosa County Department of Emergency Services; Deborah Curtin, Metro Dade Team Metro; Mary Dayton, Bay County Budget Officer; Jon Fillinger, Bay County Department of Emergency Management; Neil Fleckenstein, Apalachee Regional Planning Council; Alison Heim, Dade County Department of Solid Waste; Roger Hernstadt, Dade County Department of Public Works; Erle Peterson, Dade County Office of Emergency Management; Steve Pitkin, Escambia County Department of Planning and Zoning; Frank Rollison, City of Miami Fire Fighting Division; Grant Sheehan, City of Miami Capital Improvement Division.

⁴ Susan Cook, Division of Housing and Community Development, Florida Department of Community Affairs; Steven Decker, Florida Department of Transportation; James Loomis, Florida Department of Community Affairs; Larry McIntyre, Florida Department of Labor; Tony McNeal, Bureau of Beaches and Coastal Systems, Florida Department of Environmental Protection; Eric Poole, Bureau of Recovery and Mitigation, Florida Department of Community Affairs; Dennis Smith, Division of Housing and Community Development, Florida Department of Community Affairs.

⁵ Dr. E. Jay Baker, Associate Professor, Department of Geography, Florida State University; Mr. Ralph Cantral, Director, Florida Coastal Management Program, Florida Department of Community Affairs; Mr. Tony Carper, Director, Broward County Emergency Management; Mr. Buster Case, Program Administrator, Division of Housing and Community Development, Florida Department of Community Affairs; Ms. Shirley Collins, Chief, Bureau of Recovery and Mitigation, Florida Department of Community Affairs; Ms. Deborah J. Curtin, Director, Metro Dade Team Metro; Mr. A. Todd Davison, Director, Mitigation Division, Federal Emergency Management Agency, Atlanta Regional Office; Mr. Charles Pattison, Director, 1000 Friends of Florida; Mr. Tom Pierce, Director, Division of Housing and Community Development, Florida Department of Community Affairs; Mr. James Ryan, Director, Volusia County Emergency Management Services; Mr. Michael Wanchick, Director, Broward County Strategic Planning and Growth Management.

⁶ Kari Albertson, Jonathan Oetting, Ethan Gibney, Michale Hallock-Solomon, Joseph MacDonald, and Todd Miller.

Overview

STORM (Simulation Training on Recovery and Mitigation) is a training device for state and local personnel who may have to deal with hurricane recovery but who lack prior experience. The game does this by confronting players with the major decisions that local governments must make during hurricane recovery and by demonstrating to players the value of pre- and post-storm recovery planning for the issues created by coastal storms. Players are divided into two teams of 4 to 6 players that play in parallel. Each team serves as the Disaster Recovery Advisory Committee of a fictitious community, Laguna County, part of which has been hit by a category 3 hurricane. The community has a comprehensive plan, zoning ordinance, building code, and disaster recovery operations plan. The comprehensive plan includes a capital improvements element in which particular capital projects throughout the county are identified, and a future land use element for a coastal barrier community known as Pringle Beach. Many of the disaster and mitigation relevant portions of these plans are codified in the Hazard Mitigation Strategy modeled after Florida's Local Mitigation Strategies.⁷ Throughout the game, players are encouraged to use these planning documents to formulate and implement recovery decisions.

STORM is a simulation of the post-storm recovery process. Because it is a gaming simulation it does not capture all of the reality of the post-storm context. Rather, it attempts to capture the most significant elements of this situation to demonstrate the opportunities and constraints for mitigation during post-disaster recovery and the value of plans for guiding post-disaster decision making. Players that are experienced in disaster recovery will undoubtedly notice omissions and slightly different time frames than may exist in the "real-world." These simplifications are necessary for the game to be played out in a single day.

Operator's Manual

This booklet provides a complete description of the game. Florida Sea Grant also makes available an Operator's Manual binder with the forms that will need to be duplicated and distributed to players. The information in the manual is organized behind a series of tabs, with most of the information needed for a particular stage of play located together. The manual's material that is distributed to players is color coded: for example, all the text on *white* pages is part of the operators' instructions or information. The text on *yellow* pages constitutes reference material for the players that is distributed to them at specified points in the game. The text on *blue* pages constitutes work orders submitted by players to

accomplish recovery actions and forms for approvals by the Board of County Commissioners. Information on *purple* sheets is distributed to players only on request. Instructions for assembling these materials are provided in a "Preparation Checklist" in the Operator's Manual.

Stages of Play

The game simulates five stages of disaster recovery (see page 6). Stage 1 consists of the storm event in which a certain level of damage is created in Laguna County from both water (surge, waves, inland flooding) and wind. Following a Presidential Disaster Declaration, each team plays through three stages: *short-term recovery*, *mid-term recovery*, and *long-term recovery* during which team members perform a series of tasks and confront an array of associated issues. In a final *planning evaluation stage*, the teams have the opportunity to compare their play of the game and to discuss and re-think their actions, especially in light of community planning documents.

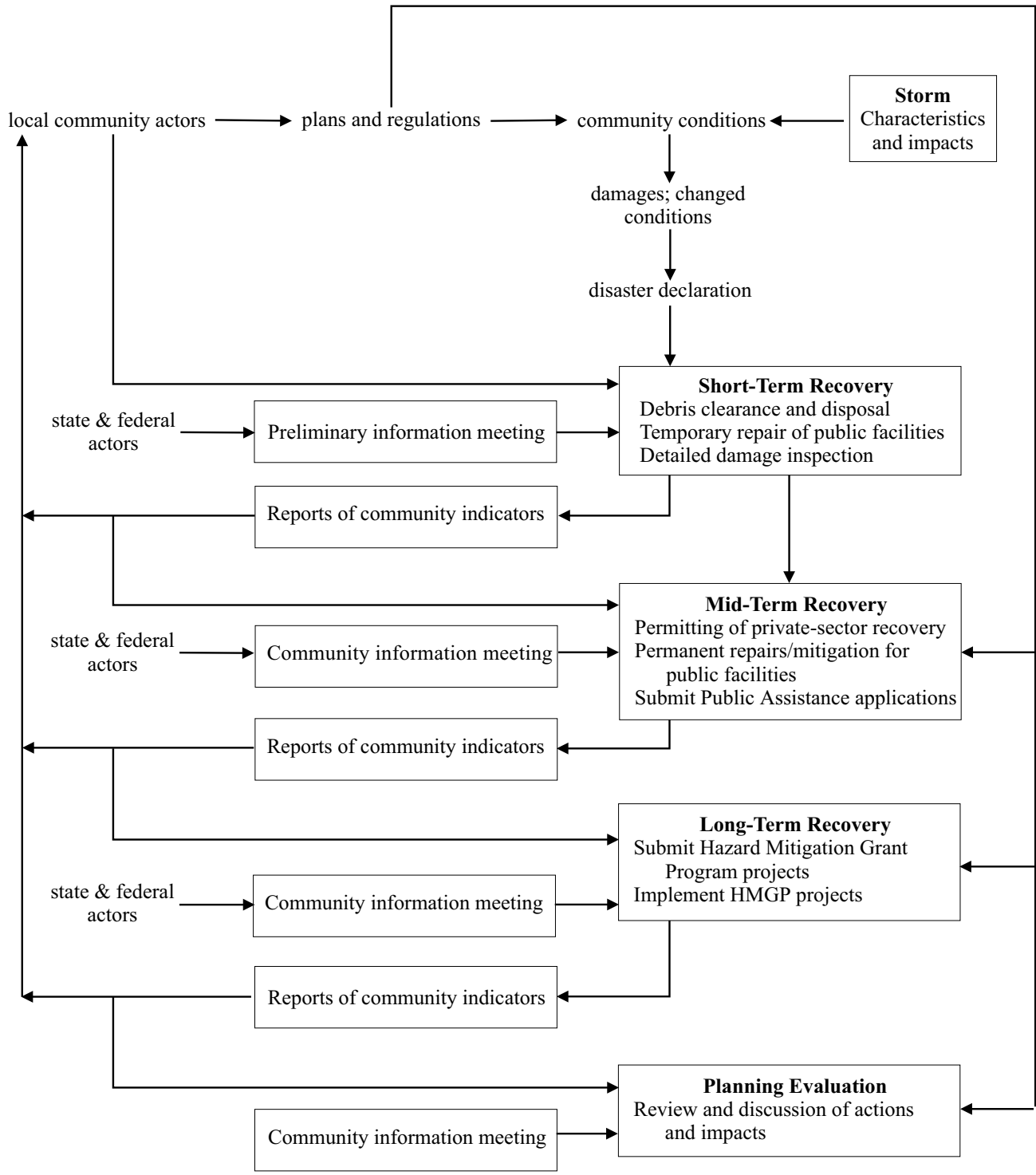
The structure of each recovery stage is similar. At the beginning a meeting is held between the players and the game operators. These meetings simulate, *in part*, the meetings that a community would have at critical junctures in the recovery process. They also serve to orient the players to the rules and conditions of the particular stage of play. In the first recovery stage, *short-term recovery*, players are provided with a preliminary assessment of the storm damage to roads and public facilities and a preliminary assessment of damage to residential and commercial structures. The major objectives of this stage are to clear and dispose of debris, perform emergency repairs to community facilities and infrastructure, and complete more detailed assessment of damage to private structures. The relevant plans in this stage include the *disaster recovery operations plan*, which defines the short-term recovery responsibilities of the different community actors and the sequence of actions that these actors should take and the *zoning ordinance*, which defines where debris disposal facilities may be located.

During *mid-term recovery* permits must be issued for private-sector repairs and applications prepared for funding from the federal Public Assistance Program for permanent repair of public infrastructure and facilities. Some mitigation may be accomplished coincident with repairing and restoring

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⁷ Florida Department of Community Affairs (1997), *The Local Mitigation Strategy: A Guidebook for Florida Cities and Counties*. Tallahassee, FL.

STORM Flowchart



public facilities and infrastructure. Thus, players are engaged in both private and public sector recovery and must resolve conflicts between the two (such as conflicts over whether rebuilding in certain areas will be allowed to occur). The binder includes a *comprehensive plan*, as well as a *hazard mitigation strategy*, and a *future land use map* (Pringle Beach only) to use in managing this conflict. Also at issue is the linkage between mid-term actions and long-term actions: actions taken during this stage should not conflict with actions that may be proposed during long-term recovery. In particular, players who contemplate mitigation initiatives must decide whether to initiate them using Public Assistance Program funds during mid-term recovery or wait for funds available from the Hazard Mitigation Grant Program during long-term recovery.

The *long-term recovery* stage is focused on the federal 404 Hazard Mitigation Grant Program in which communities seek federal funds for long-term mitigation projects. Decisions about these projects, and applications to state and federal agencies for project funds, should be guided by both the policy elements of *the comprehensive plan* and *the hazard mitigation strategy*, as well as the details of specific projects that are contained in the *capital improvements element of the comprehensive plan* and *the hazard mitigation strategy*.

During each of the recovery stages, teams are provided with feedback in the form of *community status indicators* that are reported at the end of each “week.” These indicators are meant to represent how well the players have implemented the particular recovery stage along a number of evaluative dimensions (such as the speed of residential recovery or the speed of business recovery). The indicators are sometimes accompanied by mock newspaper articles that articulate the frustrations of community residents and the political concerns of local elected officials.

The fifth stage is *community planning evaluation* in which players are given the opportunity to reflect on their play of the game and their use of planning documents for decision making. Comparisons are made between the two teams to highlight the important operational and policy decisions that were made and to discuss how community plans can guide those actions and decisions.

Teams

Players are organized into two teams that play in parallel. The teams are situated in separate working spaces (ideally separate corners of a large room) so that each can pursue independent recovery strategies.

The number of members per team will vary according to the context in which the game is played, but generally should not exceed five or six players. There is no attempt to assign team members to particular roles (e.g., elected official, emergency manager, planner). Teams may organize themselves in any manner they find useful such as by the tasks required to play the game (e.g., banker, plan specialist, record keeper, discussion leader, etc.). However, one player must be designated as the authorized signer of all checks.

Length of Play

The workshop requires 8 hours to complete (see sample workshop schedule under “Details of Play”). It is important that players commit themselves for this length of time.

Spreadsheet

An important component of the game is a large QuattroPro spreadsheet template that is operated by the game operators. The template’s main simulation sheet is comprised of a series of subtables that represent a) the characteristics of the storm, b) the pre-storm structure of the community, and c) the resulting damage to parts of the community from the storm.

The table representing storm conditions includes specification of the census tracts that are impacted by the storm, as well as the values for the wind and water conditions in each census tract for a category 3 storm.⁸ Starting with maximum sustained surface winds (MSSW) of 120 mph at landfall for the eye of the storm, values for MSSW and maximum instantaneous gusts are assigned to each of the census tracts impacted by the storm. Pre-storm data include an inventory of all private structures (single-family residential, multi-family residential, mobile homes, commercial, and industrial). These are categorized within each census tract by storm surge/flood hazard zone (V-zone, Category 1/2 zone, Category 3, 4, and 5 zones, and non-hazard areas) and by the building code under which each structure was constructed.

Storm conditions for each impacted census tract are used in combination with the inventory data

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⁸ Census tracts are used in the simulation as a convenient geographic unit of analysis that approximates a neighborhood. This simplifies both decision making and record keeping compared to what would be required if the status of individual structures were tracked.

and a series of damage tables⁹ to compute the amount of damage by tract and land use category. This damage is expressed as the percentage of a structure that is damaged, and is converted into categories of damage (<25%, 25-50%, >50%) that become operating constructs for the game. Damage to public facilities is programmed separately.

The remainder of the spreadsheet template consists of input and output tables contained in additional sheets. Input tables parallel the work sheets teams use for specific recovery tasks. Game operators enter information in the input tables as teams submit work sheets during the course of game play. Recovery progress is tracked and reported in a set of output tables that include summary statistics for each recovery stage plus community status indicators.

It is not necessary for game operators to fully understand or manipulate the basic spreadsheet tables. However, it is important that game operators understand the input and output tables. Throughout the operator's manual, however, the appropriate input/output tables are displayed and their functions explained.

Facilities, Equipment, and Materials

Facilities

Three playing spaces are required: one for each team and one for the game operators. The ideal arrangement is a large room with two round tables (6-8 ft. diameter), one for each team, set up with substantial space in between, and two long tables (8 ft. each) for the game operators are set up at the front of the room. Two additional 8-ft. tables are needed for handouts. These should be set up along the sides of the room. Wall space is required to hang 3 large maps (34" x 44") and 2 small maps (18" x 20") along the side walls for each team plus 6 large charts (34" x 44") along the front wall.

Equipment and Materials

Lists of equipment and materials for initial set up of the game are provided in the operator's manual. The game operators will need two computers with Corel QuattroPro software and two printers. Materials for each stage of play are listed at the beginning of each section in the manual. Sample work schedules, work orders, input spreadsheet tables and output tables also are included in each section.

Maps and Charts

The game uses a series of maps and charts.

Nine maps are produced from ArcView project files in 8.5" x 11" format for distribution to the individual players (see opposite page). Five of the maps also are produced in larger formats for wall display.

Staffing

A minimum of three game operators is required to run the game. Two game operators are principally concerned with entering data in the spreadsheet and printing weekly status reports. The third game operator performs the remaining game operations including: (1) allocation and tracking of labor and financial resources, (2) review and disposition of proposals submitted to the Board of County Commissioners, and (3) general problem solving. All three game operators should observe how teams play the game, in particular how they approach major issues and problems and how they make use of plans to guide those actions. These observations are important to the discussion that takes place in the Planning Evaluation stage and evaluating the overall performance of the gaming simulation.

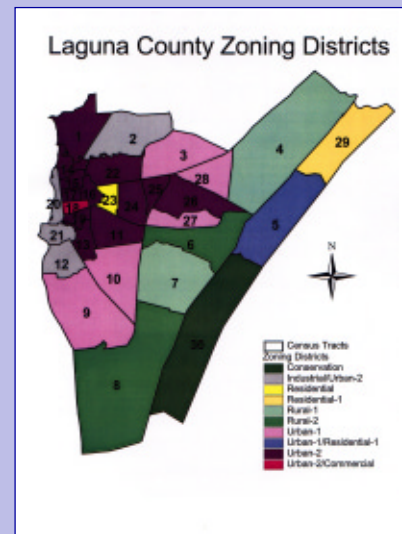
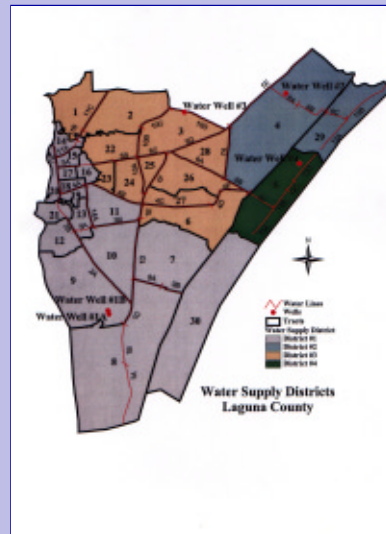
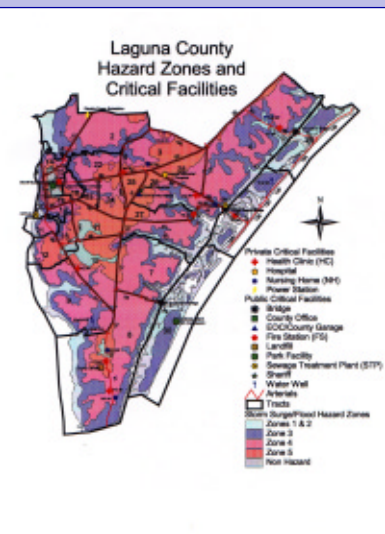
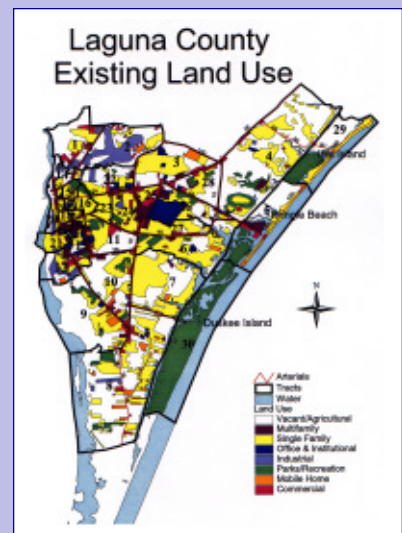
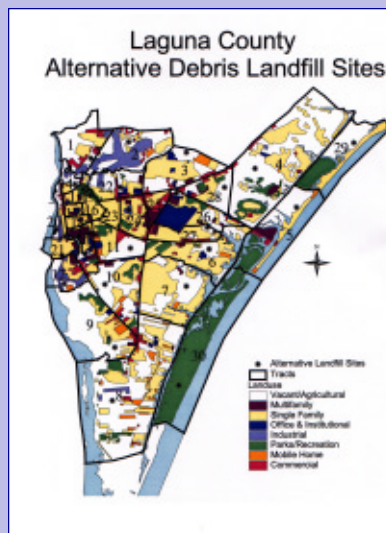
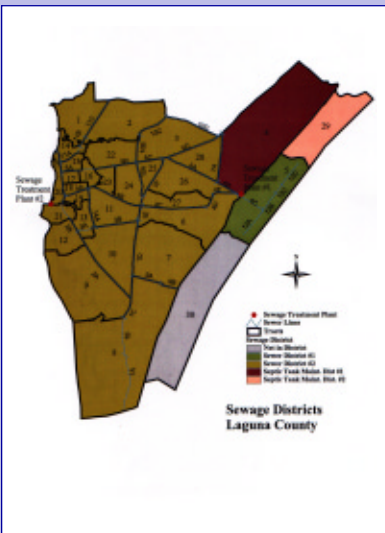
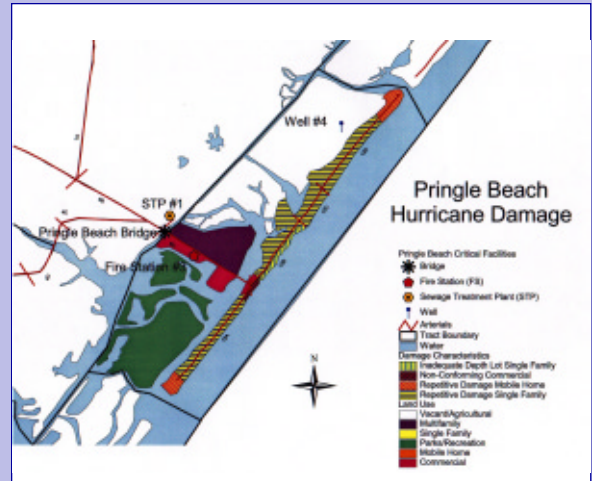
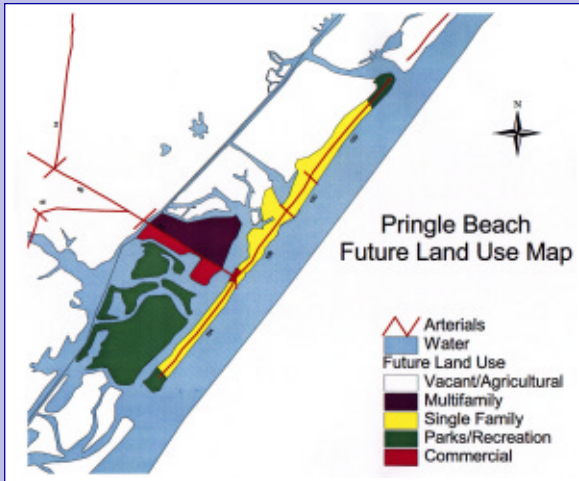
Player's Packet

Each player is given a packet of game materials at least one week prior to play. This packet consists of a series of documents including the "Player's Introduction," a description of recovery status indicators, a description of the community and the Board of County Commissioners, and copies of the Comprehensive Plan, Zoning Ordinance, Building Code, Hazard Mitigation Strategy, and Disaster Recovery Operations. Players should be encouraged to familiarize themselves with these documents before the game session. Three-ring binders are provided to players at the workshop. Two extra copies of the packet are prepared for each team in case substitute players materialize on the day of the workshop.

The documents given to the two teams differ in a number of important respects. First, the description of the Board of County Commissioners given to Team A suggests a commission that is actively concerned with the integrity of the plans made for the county and the desirability of following these plans. Team A's commission is portrayed as sensitive to protecting environmental resources and using growth

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⁹ Still-water flooding and wave damage estimates are based on Federal Emergency Management Agency, National Flood Insurance Program (1995), *Flood Insurance Rate Review - 1995*, Washington, DC. Wind damage estimates are based on damage tables contained in United States Army Corps of Engineers (1990), *Tri-State Hurricane Loss and Contingency Planning Study Phase II*, Mobile, AL.



The STORM game simulates the effects of a Category 3 hurricane on the fictitious community of Laguna County and a coastal barrier community known as Pringle Beach. Players are provided with full-color maps to help formulate and implement recovery decisions.

management tools to control development in the protection of these resources and community vulnerability. In contrast, Team B's commission is portrayed as emphasizing protection of private property rights and being reluctant to use governmental authority to diminish these rights. This commission also has less commitment to existing plans, especially during times of emergency, and less sensitivity to hazard mitigation issues. These differences in commission profiles are reflected in the differences in probabilities of commission approval of certain actions that may be raised by the two teams during the recovery process.

Second, the two teams differ in the content of their Hazard Mitigation Strategies (HMS) and the Capital Improvement Elements of their Comprehensive Plans (CIE). The HMSs for both teams generally codify the goals, objectives, and policies from the county's comprehensive plan and post-disaster redevelopment plan that are relevant to building a stronger, less vulnerable community. The HMS for Team A goes further, however. It identifies specific mitigation projects that are designed to reduce vulnerability, provides the results of benefit-cost analyses of these projects, and ranks them in order of impacts on vulnerability. The benefit-cost analyses and project rankings are in anticipation of the requirements of the federal Hazard Mitigation Grant Program. The mitigation projects included in Team A's HMS also are included in Team A's CIE.

These differences between the teams in planning environment and plan content are intended to move them in different directions during the recovery process. The differences, however, are unknown to the players and should not be discussed until the final stage of the simulation when players examine their play of the game and attempt to account for differences in recovery outcomes between the two teams.

Pre-Storm Activities

The game begins with an introduction to the community and the game (20 minutes), including reference to the maps contained in the Comprehensive Plan and the Hazard Mitigation Strategy and a brief explanation of the purposes of the various county plans and documents that are available to each team as reference documents. An outline of the major points to be addressed during this introduction is included at the beginning of each stage. Players are given an initial period of time (15 minutes) to organize themselves, review the planning documents, and discuss expectations. One player on each team must be designated as the authorized signer of all checks to facilitate accountability.

Details of Play - Suggested Schedule

The game is designed to take approximately eight hours including a 45-minute lunch and several breaks. A suggested schedule is:

8:30 am	Introduction to STORM	20 minutes
8:50 am	Team organization, definition of roles, etc.	15 minutes
9:05 am	Short-term recovery	
9:05 am	Introduction to STR	30 minutes
9:35 am	Week 1	45 minutes
10:20 am	Break	10 minutes
10:30 am	Week 2	30 minutes
11:00 am	Introduction to debris management	15 minutes
11:15 am	Week 3	30 minutes
11:45	Mid-term recovery	
	Introduction to private-sector MTR	15 minutes
Noon	Lunch	45 minutes
12:45 pm	Mid-term recovery (cont.)	
12:45 pm	Week 4	30 minutes
1:15 pm	Introduction to public-sector MTR	15 minutes
1:30 pm	Week 5	30 minutes
2:00 pm	Week 6	30 minutes
2:30 pm	Break	15 minutes
2:45 pm	Long-term recovery	
2:45 pm	Introduction to LTR	15 minutes
3:00 pm	Week 7	45 minutes
3:45 pm	Week 8	30 minutes
4:15 pm	Community planning evaluation	45 minutes

Short-Term Recovery

The short-term recovery (STR) process begins with a community meeting at which the operators explain that STR will consist of three “rounds,” each representing one week of real time. The first week is 45 minutes in duration. The second and third weeks last 30 minutes. A second meeting is held prior to the beginning of Week 3 which introduces the problem of debris disposal.

Mid-Term Recovery

Mid-term recovery is oriented around two major tasks: private sector recovery and public sector recovery. Private sector recovery concerns issuing permits for repair and reconstruction of private property and the policies that govern that process. Public sector recovery is driven by the provisions of the federal 406 Public Assistance Program. In reality both processes occur simultaneously, forcing players to make decisions about the allocation of resources between each and creating the potential for competing or synergistic outcomes. Both processes should be guided by the county’s plans. We introduce these two tasks in separate weeks to reduce information overload.

Long-Term Recovery

This stage of the game is oriented to the federal 404 Hazard Mitigation Grant Program (HMGP). While we recognize that other grant programs are available to support long-term recovery, we see the fundamental planning, policy, and operational issues as similar and, therefore, focus only on the HMGP. Long-term recovery begins in week 7 and extends into week 8. The intent of this stage of the game is to emphasize the value of having developed a long-term mitigation strategy for the community and addressing the HMGP requirements for funding specific projects ahead of time, as recommended in current State of Florida guidelines for the developing a local mitigation strategy (LMS).

Community Planning Evaluation

This stage of the simulation is meant to be a review of the gaming experience, including lessons learned and suggestions for improvement. This stage is relatively unstructured; the game operators should be prepared to listen to what players believe they learned from the game, the points of the game that contributed most to this learning, and the points that did little to contribute to learning. Game operators should explore a number of questions, such as the lessons learned about expediting the short-term recovery process, constraints encountered, and insights players may have gained about the value of using different community plans in recovery decision making.

For More Information

The principal goals of the STORM gaming simulation are to expose players to the major decisions that must be made during community recovery from hurricane damage and to demonstrate the utility of community plans in guiding those decisions.

Additional information about the gaming simulation may be obtained by contacting:

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