



# Disaster Dynamics: Hurricane Landfall

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## The Disaster Dynamics Project

Transforms descriptive case studies into interactive tools for secondary, undergraduate, and professional education

Teaches concepts of complexity, resilience, and adaptation

Contributes to the design of hazard resistant and resilient communities

## Overview

The Hurricane Landfall game is a computer strategy game about the interaction between natural hazards and human decisions. It focuses on urban development and land use planning in a fictional Gulf Coast barrier island community.

As the players negotiate their town's response to extreme events, they learn real-world lessons about planning for disaster resistance and resilience, systems thinking, sustainability, and the value of a holistic worldview.

## Instructional Support

Observe and comment on games as they are played

Post-game summary for debriefing and discussion

In-game explanations of important game concepts

Extensive Support Website:  
• Teaching Points  
• Lesson Guidance  
• Gameplay Tutorial  
• Troubleshooting Tips  
• Library of Links to Related K-12 Websites

## Target Audience

Students (Grades 7-12)

Undergraduates

Distance Education Students

Future Emergency Managers

Urban Planners



- Decision-Making Under Uncertainty
- The Precautionary Principle
- Making Tough Choices

- Planning and Balance
- Growth and Hazard
- Infinite Games

## Lessons Taught

- Addressing Root Causes
- Managing Limited Resources
- Problem-Solving and Negotiation

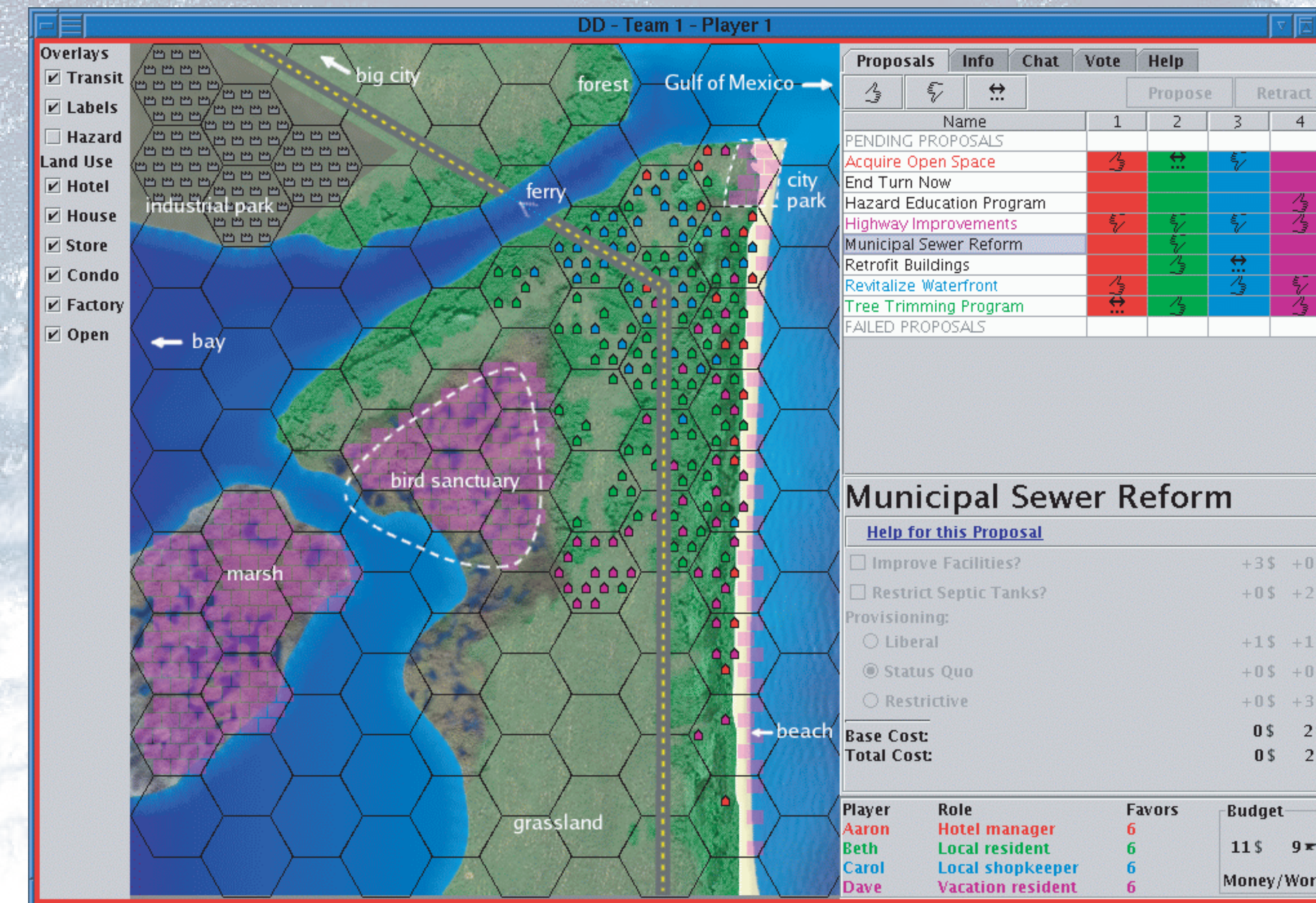
- Holistic Considerations
- Long-Term Consequences
- Complexity, Systems Thinking

## Technical

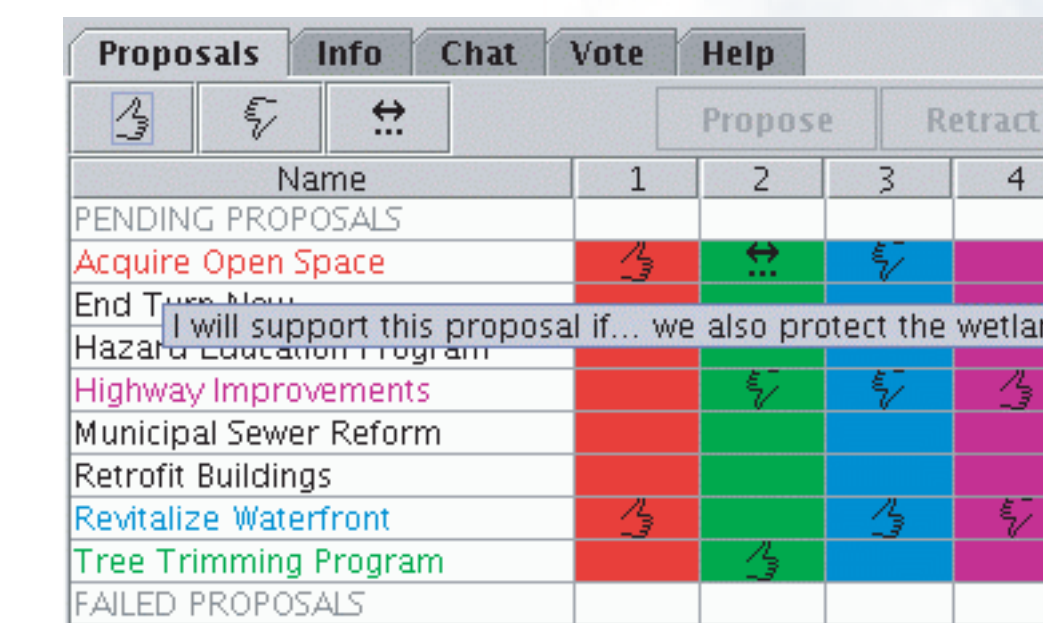
Java-based – runs on Windows, Mac, or Linux

Requires internet access

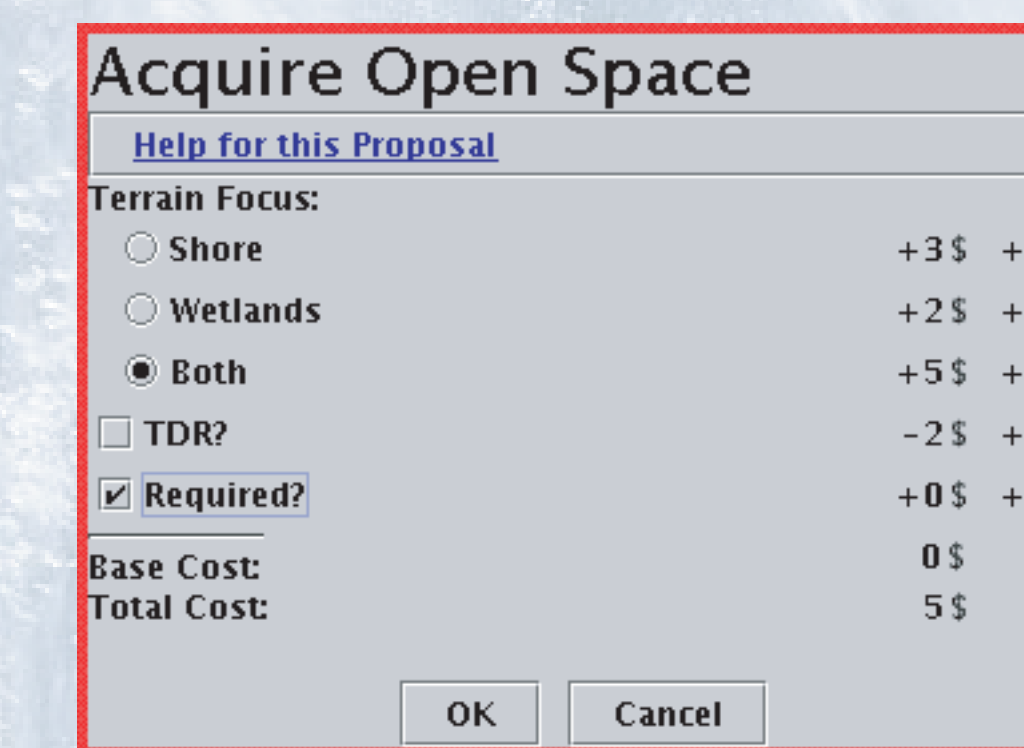
FREE!



Each player takes on a role representing one of the interests in a barrier island community.



...they must negotiate with one another...

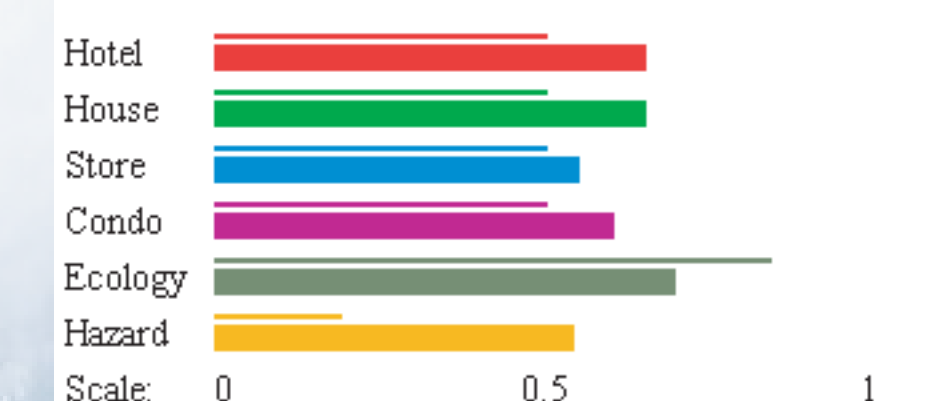


...choose the best policy options...

## Game Over

Congratulations! You've made it to the end of the game.

### Final Scores:



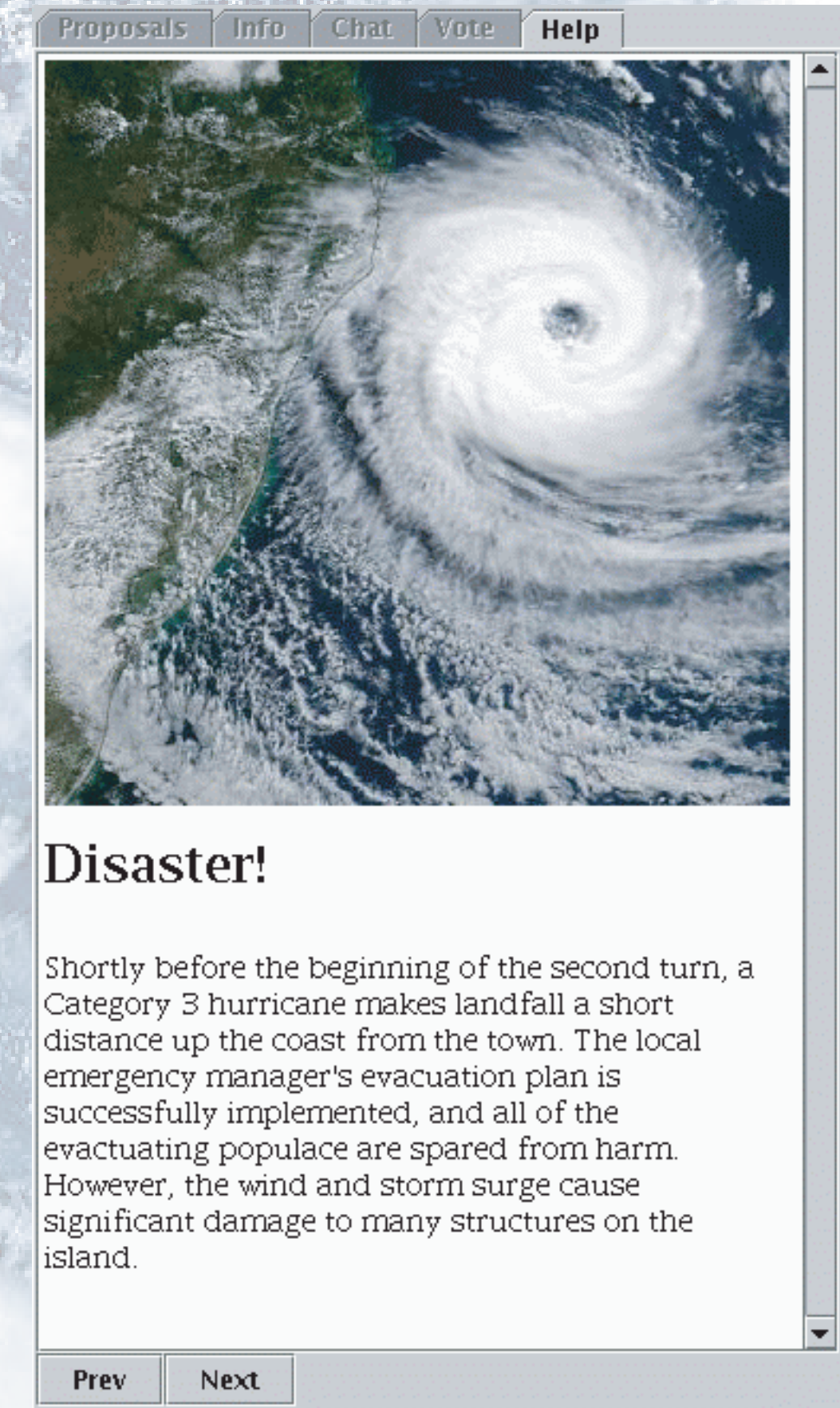
Here's how your city compares to the results of more than 10,000 simulated games:

Your ecology score is in the 60th percentile  
Average: 0.65 (high score is good, low score is bad)

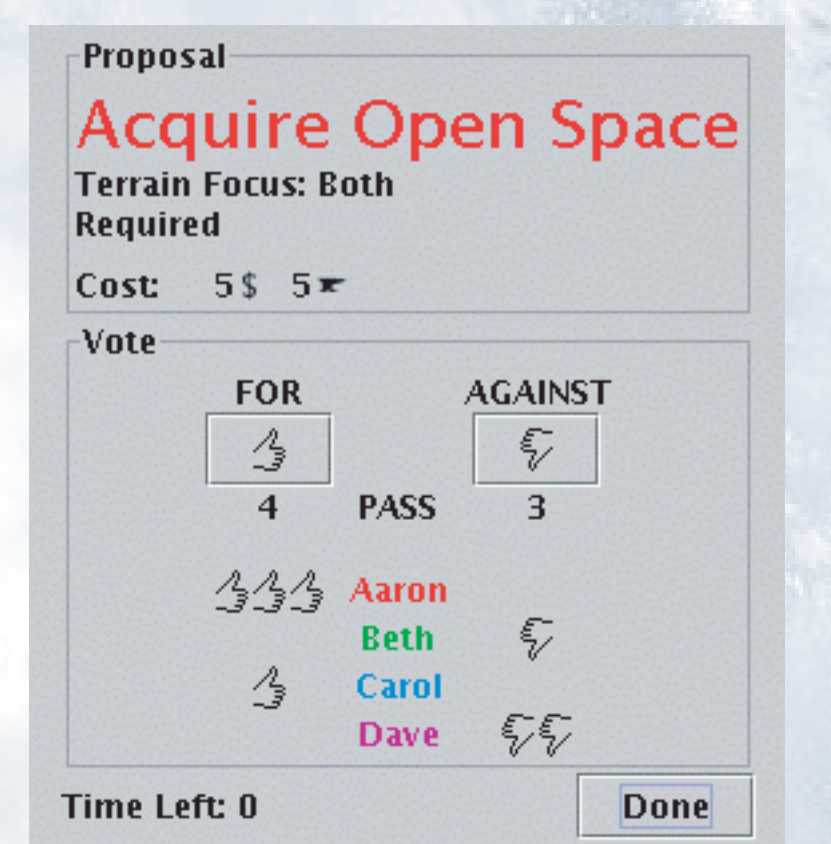
Your hazard score is in the 80th percentile  
Average: 0.48 (high score is bad, low score is good)

Take some time to reflect on the outcome. Are you satisfied with where you ended up? Is it where you expected to be?

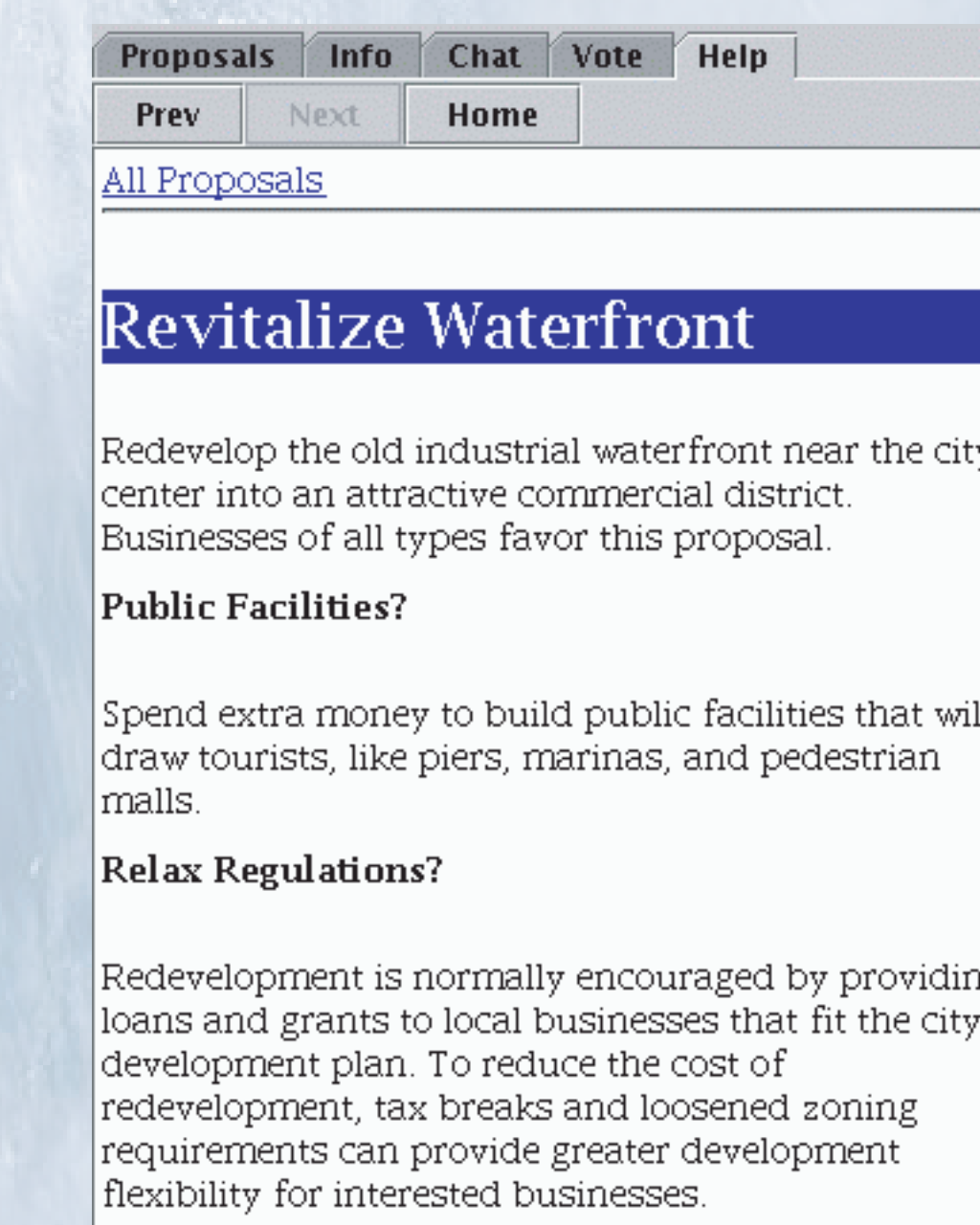
...to solve the town's problems and experience the long-term consequences of their decisions.



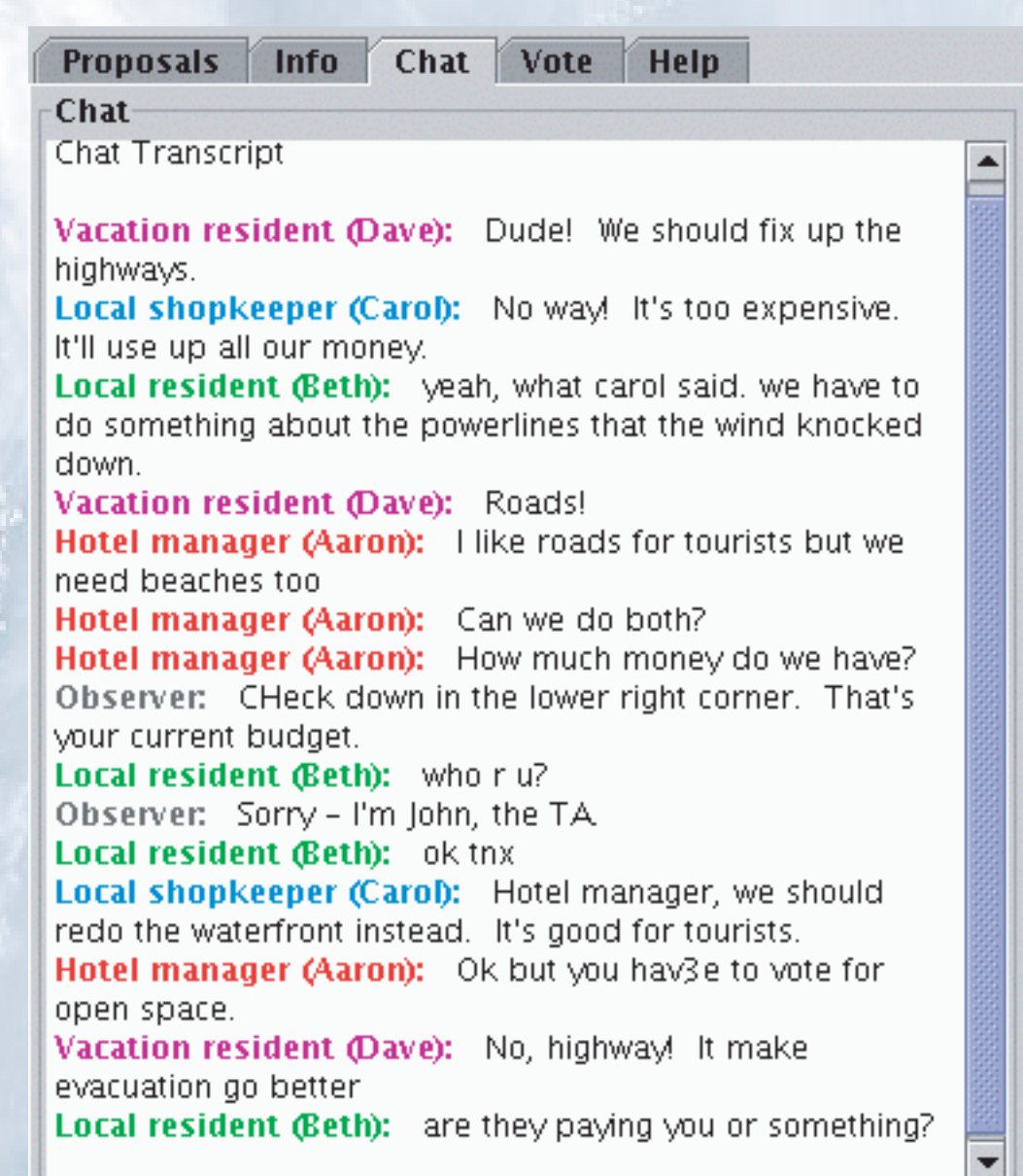
In the aftermath of a severe storm...



...and vote how to manage their collective resources...



A help system provides background information about game subjects.



in-game chat supports networked play and instructor involvement.