

**Columbia University**  
**Graduate School of Architecture, Planning and Preservation**  
**Fall, 2014 PLA 4394 Tuesday, 11AM- 1PM, 200 Buell**  
**Adjunct Associate Professor, Ethel Sheffer, FAICP**  
[insightsheffer@mindspring.com](mailto:insightsheffer@mindspring.com)

## **PLANNING FOR DISASTERS, RECOVERY AND RESILIENCE**

This course focuses on the challenges presented by the changing physical, social, economic, and policy causes and consequences of natural and human-made disasters. Particular attention will be given to basic issues of land use and development, to the need for pre-and post disaster hazard mitigation and to post disaster recovery, as well as to factors affecting community recovery and long term resilience. We will also analyze legal, institutional and governmental policies and regulations in the context of the cycle of preparedness, response and recovery.

The course will concentrate on disaster planning in the United States in the context of the increased urgency presented by climate change and the need for sustainable development, together with the constraints of fragmented government and private sector responses. Case studies will be drawn from around the U.S., with particular emphasis on Hurricane Sandy in New York City and Hurricane Katrina in New Orleans, together with selected comparisons from other cities and countries. We will examine a variety of issues and planning tools for hazard mitigation, risk and vulnerability analysis, urban design, and local stakeholder involvement-- all as part of effective planning for pre- and post- disaster response and recovery.

There will be guest speakers working in the field to provide hands-on experience in disaster prevention and recovery and we will have an inside tour of the NYC Office of Emergency Management(all dates contained in the syllabus and to be confirmed early in the semester).

### **Readings**

Books are available at Book Culture Book Store

James Schwab, *Planning for Post-Disaster Recovery: Next Generation*, American Planning Association: PAS576, Planners Advisory Publications, 2014, paperback(*Please note: This publication has been delayed and will not be in the Bookstore. We will be using an advance PDF copy which is posted on Courseworks.*)

James Schwab, *Planning and Drought*, PLA574, American Planning Association, Planners Advisory Publications, 2013

Brenda D. Phillips, *Disaster Recovery*, CRC Press/Taylor and Francis, 2009

H.V. Savitch, *Cities in a Time of Terror, Space, and Local Resilience*, M.E. Sharpe, 2008

Additional required and recommended readings are noted under each topic and are available on line and on Courseworks.

### **Student Requirements**

**Class Presentations and Discussions:** Each student is to write a 2-4 page paper on the readings for that week and submit to the instructor until mid-semester. For part of each class session September 9 through October 14, two or three students will be asked to discuss that week's suggested readings, raise critical questions and lead a short discussion on the issues in the readings. In advance of the class meeting, those students should communicate with each other and prepare a short list of discussion topics and questions to distribute to the class.

**Midterm Written Assignment: This assignment is due on October 21<sup>st</sup>**  
Students write a 7-10 page essay providing a critical look and analysis of the readings and cases in the first half of the semester on one of the following suggested topics and assertions:

Social and economic vulnerability to disasters: "There is no such thing as a natural disaster"

Climate change and climate hazards " Since changes in climate and data about the frequency and impact of climate hazards are so uncertain it is almost impossible for decision makers to provide transparency, reliable data and certainty to users at the national, state and city levels"

Professional planning tools and roles and their successes and constraints: "Effective planning occurs only after a disaster"

Federal and local government policies responding to disasters: " Politics and money always count most, even in a disaster"

Political lessons from Hurricane Katrina and Hurricane Sandy before and after the storms: "Professional planners have had only a limited impact on the rebuilding process because of the lack of response to environmental justice issues".

Effective planning tools for hazard mitigation and community rebuilding do exist and can be systematically employed by many communities. “Very few communities and jurisdictions in the United States have been engaged in long range hazard mitigation and effective planning for disaster recovery.”

**Final Research/Issue Paper:** Students will prepare an issue paper that deals with some aspect(s) of disaster mitigation, risk, response, recovery, or rebuilding. Students should choose a topic that is of personal interest to them and that relates to the themes and issues raised during the semester. As much as possible, the paper should be written from the point of view of a planner with a government agency or a nonprofit group or a community. It should include the definition of the specific problem faced by the community, city, state, or region, the existing policies and regulations, the potential action alternatives and constraints, and your specific recommendations for addressing the problem or issue. The paper should be 15- 20 pages in length. Students will present PowerPoint presentations of their work during the last two class sessions and each presentation will take approximately 15 minutes.

**A 3-4 page detailed outline of the final paper is due on October 24th. We will schedule 10-15 minute Powerpoint presentations by each student during the week of December 2<sup>nd</sup>. The final written paper is due on December 10th.**

**Note: subjects for all papers and assignments should be discussed with your instructor in advance of your choices for the midterm and final assignments.**

## **Schedule of Classes**

### **Week One: September 2 Introduction**

Course Overview  
Types of disasters  
Major concepts in disaster analysis  
Planners' roles in managing disasters

#### **Readings**

Schwab, J. 2014; Courseworks Chapter 1, Chapter 3, pp.1-4, 12-13  
Phillips, B. 2009, pp. 4-23

### **Week Two: September 9 Narratives and meanings of some historical and recent disasters**

Symbolic, social, cultural, political interpretations of disasters  
Violence, fear, terrorism – recent interpretations of human-caused disasters

#### **Readings**

John C. Mutter, 2008 “Preconditions of Disaster: Premonitions of Tragedy” pp.691-715  
in *Social Research*, Volume 74, No.3, Fall, 2008, Courseworks

Rutherford H. Platt, 2005 “Learning from disasters: the synergy of law and geography”,  
unpublished draft paper, pp.1-6 on the London Fire of 1666 , Courseworks

Ford, Gina, and Hellendrung, Jason. 2013. Four Essential Virtues in a Post-Disaster World.  
Posted January 11 at <http://blogs.planning.org/postdisaster/2013/01/11/four-essential-virtues-in-a-post-disaster-world>

**(Note: Please choose at least two essays on historical examples from the list below)**

Kevin Rozario, “Making Progress: Disaster Narratives and the Art of Optimism in Modern America”, pp.27-54 in Vale, Lawrence & Campanella, Thomas, (eds.) *The Resilient City*, Courseworks

Jasper Goldman, “Warsaw: Reconstruction as Propaganda”, pp. 135-159 in Vale and Campanella, Courseworks

Carola Hein, “Resilient Tokyo: Disaster and Transformation in the Japanese City” ,pp. 213-235, Courseworks

Beatrice Chen, “”Resist the Earthquake and Rescue Ourselves”: The Reconstruction of Tangshan after the 1976 Earthquake”, pp.235-254 Courseworks  
Savitch, H.V. pp. 3-23, pp.44-63

### **Week Three September 16 Hazard Identification and Risk Analysis,**

Identifying hazards

Variety and incidence of natural disasters

Beginning understanding of tools of assessment, measurement, response

Planning and Hazard Mitigation

#### **Readings**

Schwab, 2014, Chapter 3, pp.14-22 and browse through the rest of the chapter for cases and examples

Schwab, James C. Schwab, editor, 2008, *Planning and Drought* , Chapters 1,2, and 3  
Laurie Johnson, Laura Samant and Suzanne Frew, *Planning for the Unexpected: Land – Use Development and Risk*, pp.1-23, Courseworks

Federal Emergency Management Agency. 2013. *Integrating Hazard Mitigation Into Local Planning: Case Studies and Tools for Community Officials*. Available at  
<http://www.fema.gov/media-library/assets/documents/31372?id=7130>.

Topping, Kenneth C.2008 “Land Use Planning /Policy Guide 101 for Earthquakes(PowerPoint presentation,) Courseworks)

### **Week Four September 23 Climate Change: New Challenges and Threats**

Climate Change and the environment

Sea level rise, ice melt: scientific interpretations and measurements

Political and governmental interpretations and responses

#### **Readings**

Charles C. Mann, “How to talk to people about climate change so people will listen”  
Atlantic Magazine, August 13, 2014  
<http://www.theatlantic.com/magazine/archive/2014/09/how-to-talk-about-climate-change-so-people-will-listen/375067/>

Michael Oppenheimer, 2008 “A Physical Science Perspective on Disaster: Through the Prism of Global Warming”, pp.659-668, *Social Research*, Volume 74, No.3, Fall, 2008 , reading packet

American Planning Association. 2011. Policy Guide on Planning & Climate Change. Adopted April 27, 2008, updated April 11, 2011. Available online at  
[www.planning.org/policy/guides/pdf/climatechange](http://www.planning.org/policy/guides/pdf/climatechange)

U.S. coastal flooding on the rise, government study finds (<http://news.msn.com/us/us-coastal-flooding-on-the-rise-government-study-finds#tscptme>)

"SIRR Report" NYC Office of the Mayor, "A Stronger, More Resilient New York" 2013  
*Read pp.19-65 on coastal protection and climate change, [www.nyc.gov/html/sirr](http://www.nyc.gov/html/sirr/html/sirr)* **Please note that this is an important study and a reference work for several topics below, especially on rebuilding after Hurricane Sandy**

**Recommended:** New York City Panel on Climate Change Report, 2013, at <http://www.nyc.gov/html/sirr/html/report/report.shtml>,

**Recommended:** Intergovernmental Panel on Climate Change, Report on Mitigation, 2014

**Recommended:** Thurman William Mathis, "Storm Warnings", in *Gotham Gazette*, September 24, 2007, Courseworks

## **Week Five September 30** Public Policies, Institutions, Legislation, Politics: An Overview

Federal regulatory system for disaster response and recovery  
Key Legislation,  
Private Property and Government Regulation  
Legal and financial issues  
National Flood Insurance Programs

### **Readings:**

Schwab, J, 2014, Chapters 3 and 4 and Chapter 8, pp.1-38

Phillips,B. , pp.333-361, pp.465-488

Topping, Kenneth C.,2010 "Using National Financial Incentives to Build Local Resiliency",*Journal of Disaster Research*, Volume 5, No.2, pp.164-171  
(Courseworks,,on-line)

Burby, Raymond J., 2006 "Hurricane Katrina and the Paradoxes of Government Disaster Policies: Bringing about Wise Decisions for Hazardous Areas", *The Annals of the American Academy of Political and Social Science*" Vol. 604, March, 2006, pp.171-191  
(Courseworks)

Howard Konreuther 2008, "Reducing Losses From Catastrophic Risks through Long-term Insurance and Mitigation" *Journal of Disaster Research*, Volume 5,No.2, 2010, pp.905-930 (reading packet or Courseworks)

**Week Six October 7** Hazard Mitigation in New York: guest Speakers Heather Roiter Damiano , Director of Hazard Mitigation, NYC Office of Emergency Management and Carrie Grassi, Policy Advisor at Mayor's Office of Recovery and Resilience

**Readings**, NYC Hazard Mitigation Report, 2014, [nyc.gov](http://nyc.gov)

**Week Seven, October 14** Identifying and measuring vulnerability: social, cultural, economic, psychological, spatial components

Class, race ,ethnicity, age, gender, and vulnerability to disasters

Spatial vulnerability and planning

Community vulnerability assessments

Fear, terrorism and spatial vulnerability

Social and political equity issues

**Readings**

Phillips,B. pp.-56, pp.291-326

Savitch, H.V, pp.26-45

Sandy Regional Assembly Research Agenda, a gathering of environmental justice advocates; 2013, Courseworks

New York Academy of Medicine, *Resilient Communities, Empowering Older Adults in Disasters and in Daily Life*, July, 2014, Courseworks

Columbia University Planning Studio on Vulnerable Populations in Lower Manhattan After Hurricane Sandy, Fall 2013

Some essays on vulnerable populations in New Orleans, to be selected

**Week Eight October 21 Emergency management and response**

Visit to NYC Office of Emergency Management in Brooklyn

**Readings:** Phillips, B, pp.70-76, pp.97-127, 291-330

**FEMA, 2007**, Principle of Emergency Management Supplement, <http://training.fema.gov>

**NYC OEM**, [nyc.gov](http://nyc.gov), web site

**Week Nine: October 28** Hurricane Sandy, 2012

Sandy and its Impacts

**Readings: (many reports, we will sample)**

SIRR Report, PlaNYC, [nyc.gov](http://nyc.gov)

Good Jobs New York, Newsletters (published each week since about 2013, summary of responses, advocacy, programs, funding) [goodjobsny.org/hurricane-sandy](http://goodjobsny.org/hurricane-sandy)  
 NYU Furman Center *Sandy's Effects on Housing in New York City*, 2013, [furmancenter.org](http://furmancenter.org)  
 Hurricane Sandy Rebuilding Strategy Report, 2013, [http://portal.hud.gov/hudportal/HUD?src=/press/press\\_releases\\_media\\_advisories/2013/HUDNo.13-125](http://portal.hud.gov/hudportal/HUD?src=/press/press_releases_media_advisories/2013/HUDNo.13-125)

No class meeting on November 4, Election Day (unless some want to meet)

**Week 11, November 11** Long Term Planning after Sandy for Resilience and Recovery

**Readings(many reports , we will sample)**

SIRR Report, PlaNYC, [nyc.gov](http://nyc.gov)  
 ULI Report, After Sandy, October, 2013  
 H209's Final Report [H209 Public Post-Conference Materials](#)

Citiwire report "Two Storms, Two Cities" Roberta Gratz, 1/17/2013, Courseworks  
 (Below is a reference list of reports)

- "Designing For Flood Risk" by City Planning
  - [http://www.nyc.gov/html/dcp/html/sustainable\\_communities/sustain\\_com6.shtml](http://www.nyc.gov/html/dcp/html/sustainable_communities/sustain_com6.shtml)
- "Urban Waterfront Adaptive Strategies" by City Planning
  - [http://www.nyc.gov/html/dcp/html/sustainable\\_communities/sustain\\_com7.shtml](http://www.nyc.gov/html/dcp/html/sustainable_communities/sustain_com7.shtml)
- "New Flood Zones / Evacuation Zone Maps - FEMA / NYC-OEM
  - <https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1&userType=G>
  - <http://maps.nyc.gov/hurricane/>
- "Risk and Resiliency After Sandy " NY Building Congress Report
  - <http://www.buildingcongress.com/research/sandy/01.html>
- "Urban Green Council / USGBC Report to the Mayor" - UGC/NYC
  - <http://www.urbangreencouncil.org/BuildingResiliency>
- The NYC Planning Commission Report
  - [http://www.nyc.gov/html/dcp/html/sustainable\\_communities/sustain\\_com6.shtml](http://www.nyc.gov/html/dcp/html/sustainable_communities/sustain_com6.shtml)
- CDBG
  - <http://www.nyc.gov/html/cdbg/html/plan/read.shtml>
- NYC: Department of Housing Preservation & Development (HPPD) Request for Qualifications
  - <http://www.nyc.gov/html/hpd/html/developers/rfp.shtml>
- CFA compiled resources "Designing For Flood Risk" by City Planning



- [http://www.nyc.gov/html/dcp/html/sustainable\\_communities/sustain\\_com6.shtml](http://www.nyc.gov/html/dcp/html/sustainable_communities/sustain_com6.shtml)
- "Urban Waterfront Adaptive Strategies" by City Planning
  - [http://www.nyc.gov/html/dcp/html/sustainable\\_communities/sustain\\_com7.shtml](http://www.nyc.gov/html/dcp/html/sustainable_communities/sustain_com7.shtml)
- "New Flood Zones / Evacuation Zone Maps - FEMA / NYC-OEM"
  - <https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1&userType=G>
  - <http://maps.nyc.gov/hurricane/>
- "Risk and Resiliency After Sandy" NY Building Congress Report
  - <http://www.buildingcongress.com/research/sandy/01.html>
- "Urban Green Council / USGBC Report to the Mayor" - UGC/NYC
  - <http://www.urbangreencouncil.org/BuildingResiliency>

### **Week 12 November 18 Rebuild by Design**

An unusual example of a design competition post-Sandy for long term mitigation post-Sandy, and sponsored by HUD,

Speaker will be Justine Shapiro-Kline and possibly some of the winning designers

#### **Readings:**

Topping, Kenneth, 2009, "Toward A New Era of Response: Smart Growth and Sustainable Community Design", (PowerPoint, Courseworks)

Rebuild by Design, website

### **Week 13 November 25, Security, Human-Caused Disasters, Safe Streets and Neighborhood Character**

**Spatial design and surveillance,**

**Recovery and Rebuilding Lower Manhattan**

**Reading:** Savitch, H.V, pp.123-170

**Readings: (we will select from the following and from some current literature on rebuilding after 9/11) all on line**

New York New Visions 2002(digital reprint and Courseworks)

Civic Alliance, 2003 Listening to the City (digital reprint and Courseworks)

Lower Manhattan Development Corporation and Port Authority of New York and New Jersey web sites (selections)

Selected current reports on progress and controversy at "Ground Zero" and in downtown Manhattan

### **Week 14, December 2 Pre-and Post disaster Planning and Community Participation**

**Readings:**

Berke, Philip, R. & Campanella, Thomas, J., "Planning for Post-Disaster Resiliency" *The Annals of the American Academy of Political and Social Science*, vol. 604, March, 2006, pp. 192-207 (Courseworks)  
Schwab, J. 2014, Chapters 5, 6, 7