

NATURAL DISASTERS, PART 2: Danger from ICE to FIRE

Instructor: Steve Marshak

COURSE OUTLINE:

Week 1 — Winter Disasters of the Past Month

- The underlying cause — mid-latitude cyclones.
- Atmospheric rivers and the drenching of California
- The Lake Effect snow burial of Buffalo
- Ice storms in Texas

Week 2 — Extreme water: Floods

- The various kinds of inland floods and its causes.
- Consequences of flooding.
- Nuisance tides, storm surge, and coastal flooding (as sea-level rises)
- Flood-control measures.

Week 3 — The Water Crisis

- The hydrologic cycle.
- Destruction of surface water supplies (e.g., the Colorado River)
- Groundwater and its overuse.
- The global water crisis: "Day 0" in South Africa and India.

Week 4 — Scorching Calamity: Droughts, Heat Waves, and Wildfires

- The nature of droughts and factors that cause them.
- Heat waves and heat illness
- How wildfires start and spread.
- The role of climate change: making regions uninhabitable.