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Workshop on Climate
Science and Adaptation
Planning



Jonathan Powers
Federal Environmental Executive,
White House Council on
Environmental Quality



Nancy Sutley
Chair, White House Council on
Environmental Quality



Agenda

- 9:10 Agency Plans in the Context of the Climate Action Plan
- 9:30 Using Actionable Science to Plan for and Address Impacts of Climate Change
- 9:55 Q&A
- 10:10 Overview of Science Needs from 2012 Adaptation Plans
- 10:25 Break
- 10:35 Breakout Discussion: Science Needs for Adaptation Planning
- 11:05 Adaptation Science Tools Demonstrations
- 12:05 Path Forward



John Holdren

Director, Assistant to the President for Science & Technology & Director of the White House Office of Science and Technology Policy

Gary Guzy

Deputy Chair

Council on Environmental Quality



Using Actionable Science to Plan for and Address Impacts of Climate Change



Kim Magraw
Program Analyst, Office of Policy
Analysis, Department of the Interior



Climate Science and Adaptation Planning

Olga Dominguez

National Aeronautics and Space Administration

August 2, 2013



Responding to Climate Risks

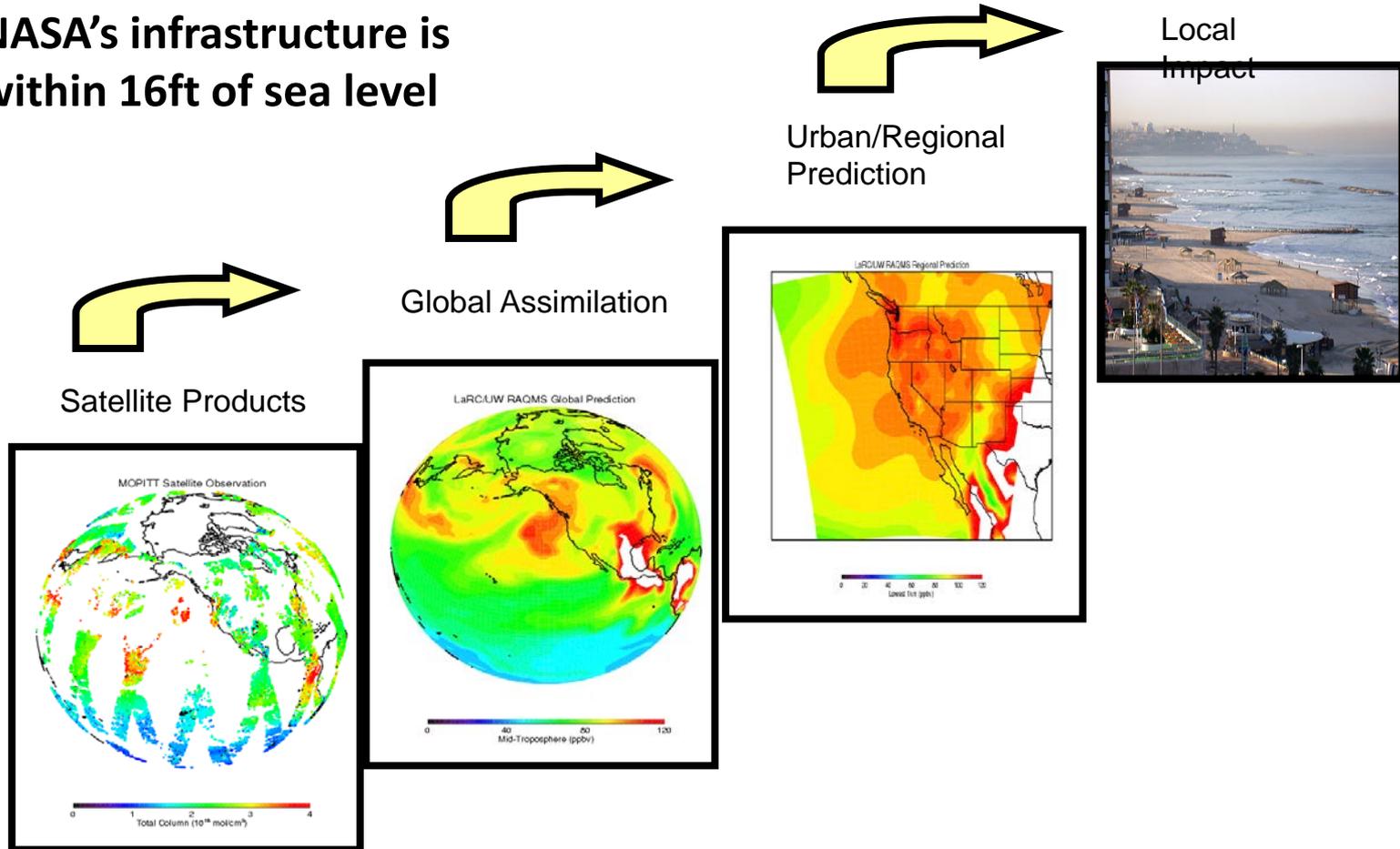
Mitigate to reduce our future impact on natural systems...
...and **adapt** to meet current program and infrastructure risks.





Localize the Data

Approximately 80% of NASA's infrastructure is within 16ft of sea level

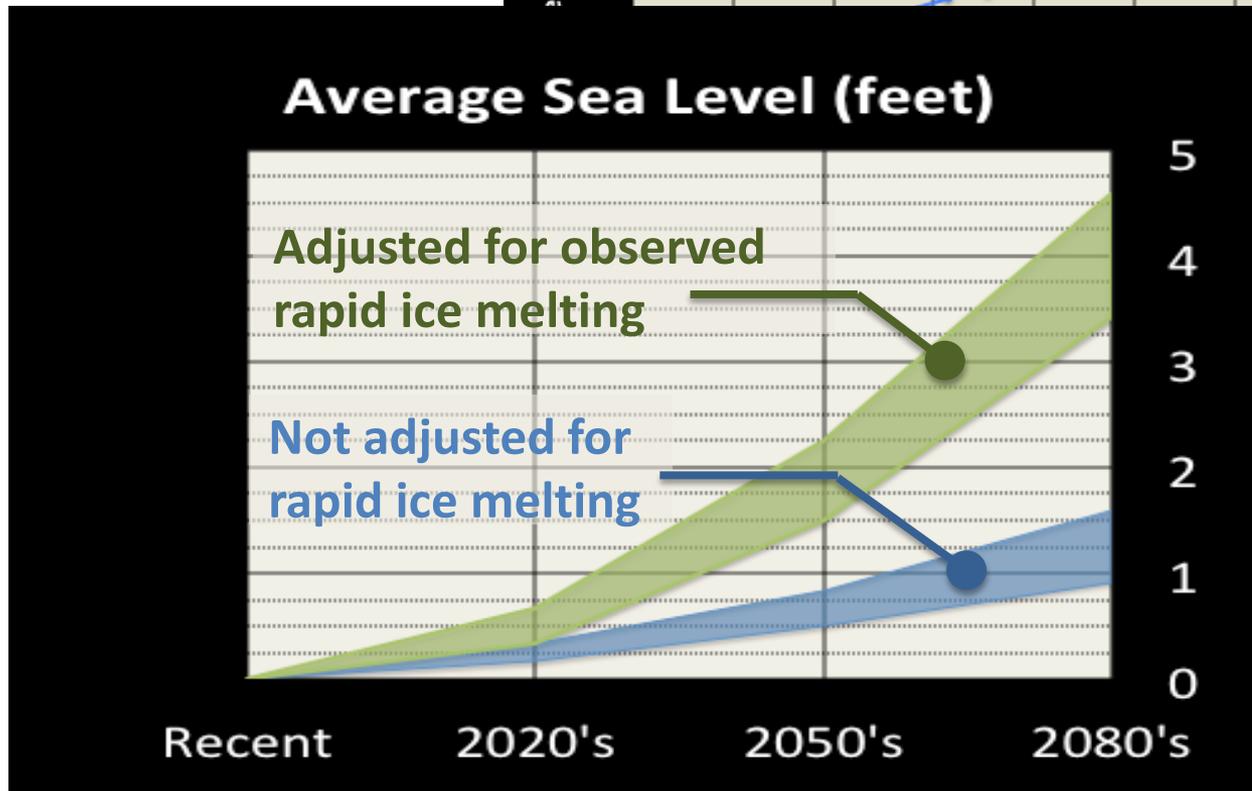
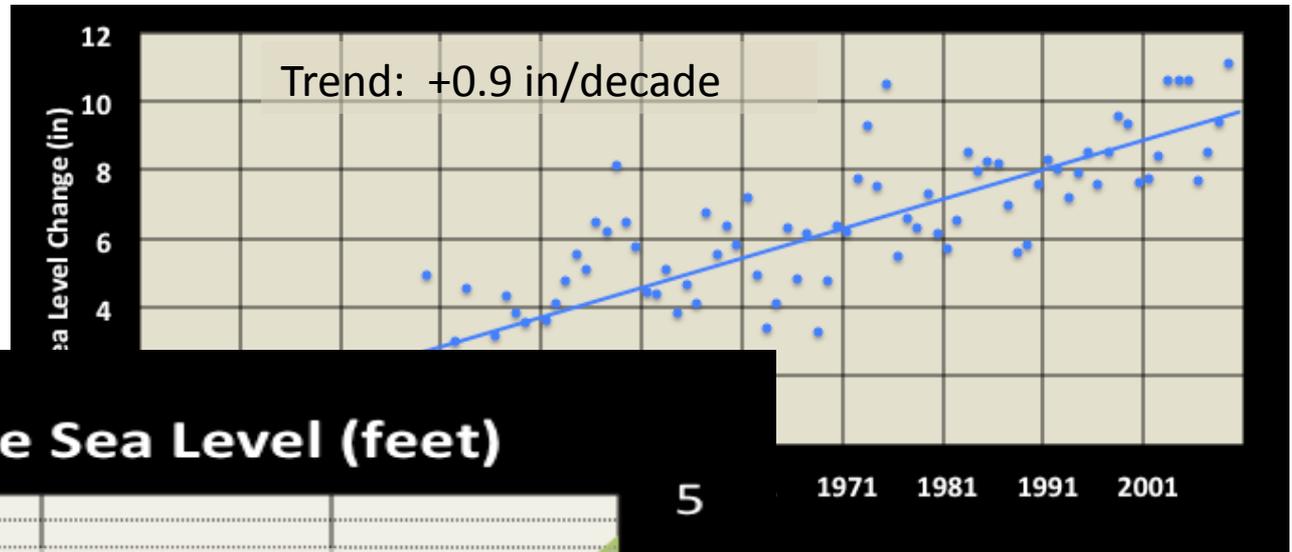




Obtain Local Risks and Impacts

Understand the threat (e.g. Eastern Shore VA data)

Sea Level
has risen over
decades, with some
annual variation...

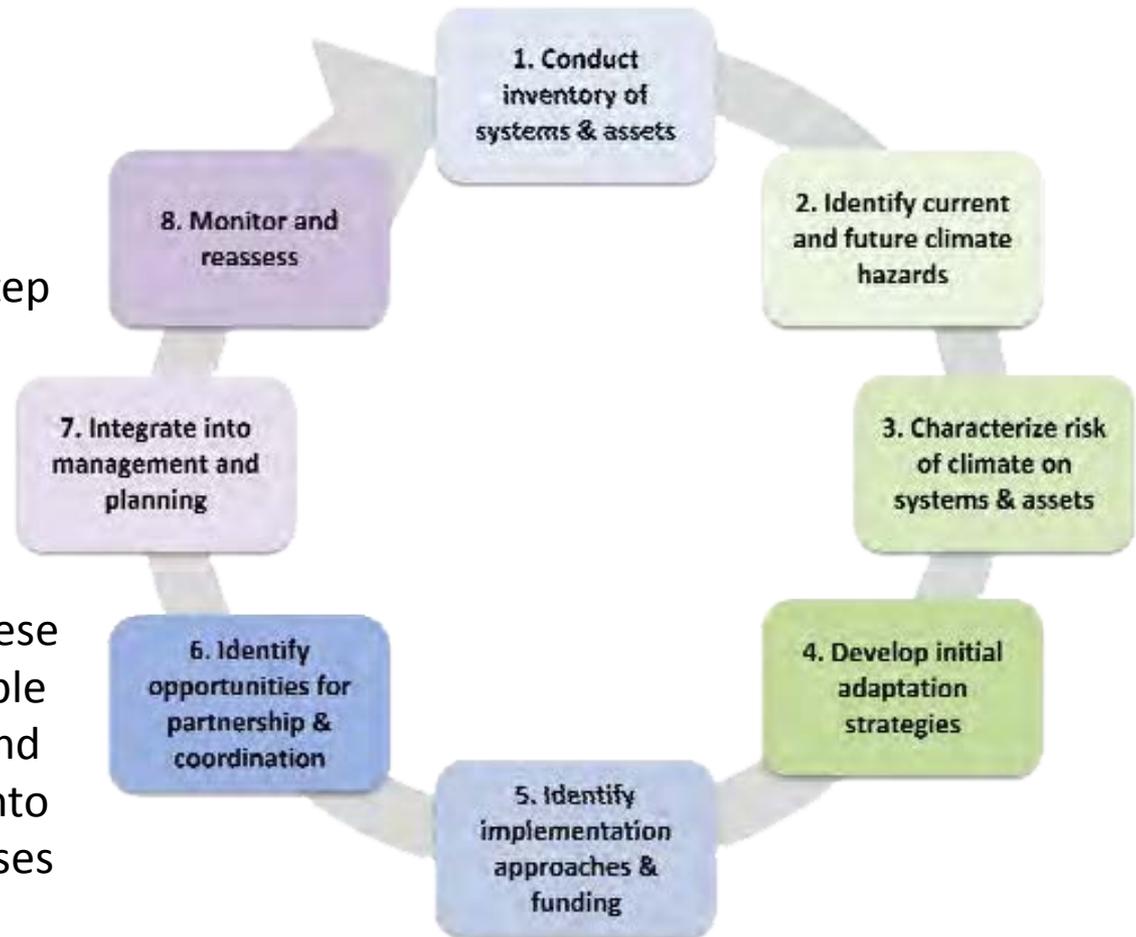


...and those patterns
are projected to
accelerate this
century



Conduct Vulnerability Assessments

Using diverse external participants, neighboring organizational and issue-based stakeholders. Work with onsite leadership and staff. Guided by NASA and external leadership, participants work systematically through an eight-step process, charting progress into supporting templates. The first process steps define and characterize vulnerabilities to current and projected climate variables. Later steps prioritize these vulnerabilities, and identify possible responses for the most serious, and plan for integrating adaptations into existing work systems and processes (planning, designing, investing, operating, & communicating)





Identification & Quantification of Risks

Built Environment

- Buildings
- Structures
- Horizontal Infrastructure
 - Natural Gas
 - Electrical
 - Steam
 - High Pressure Air
 - Water
 - Sewer / waste water
 - Roads / Parking lots
- Information Technology
- HVAC Systems
- Encroachment
-

Natural Resources

- Surface & Storm Water Systems
- Soil & Groundwater
- Landscaped Grounds
- Wooded & Natural
- Archaeology
- Wildlife
- Air
-

Stakeholders

- City Planners
- Federal/State Neighbors
- Goods Suppliers
- Energy Suppliers
- Water/Wastewater Suppliers
-

People / Community

- Civil Servants
- Contractors
- Services
 - Health & Safety
 - Emergency Response & Management
 - Security
 - Communications
- Family
- Community
-



Policy Integration/Development

1. **Integrate** into existing policies and processes; Construction, Master Planning, Risk Management...
2. **Develop** New Policy – Land Management (premise is to base the policy on an “elevation zoning” model).
 - Restrict construction and renewal assets within the 100-year flood plain to waterfront activities and assets, designed for protection against flooding, or to buffer zones, unenclosed storage, and for recreational purposes.
 - Restrict new construction and renewal of assets within the 500-year flood plain to those suitable within the 100-year flood plain; low value, re-locatable, or temporary structures containing non-essential functions; or critical assets protected against elevated flooding risk via hardening or other accommodation.
 - Designate alternate suitable area(s) for relocating critical activities and infrastructure.

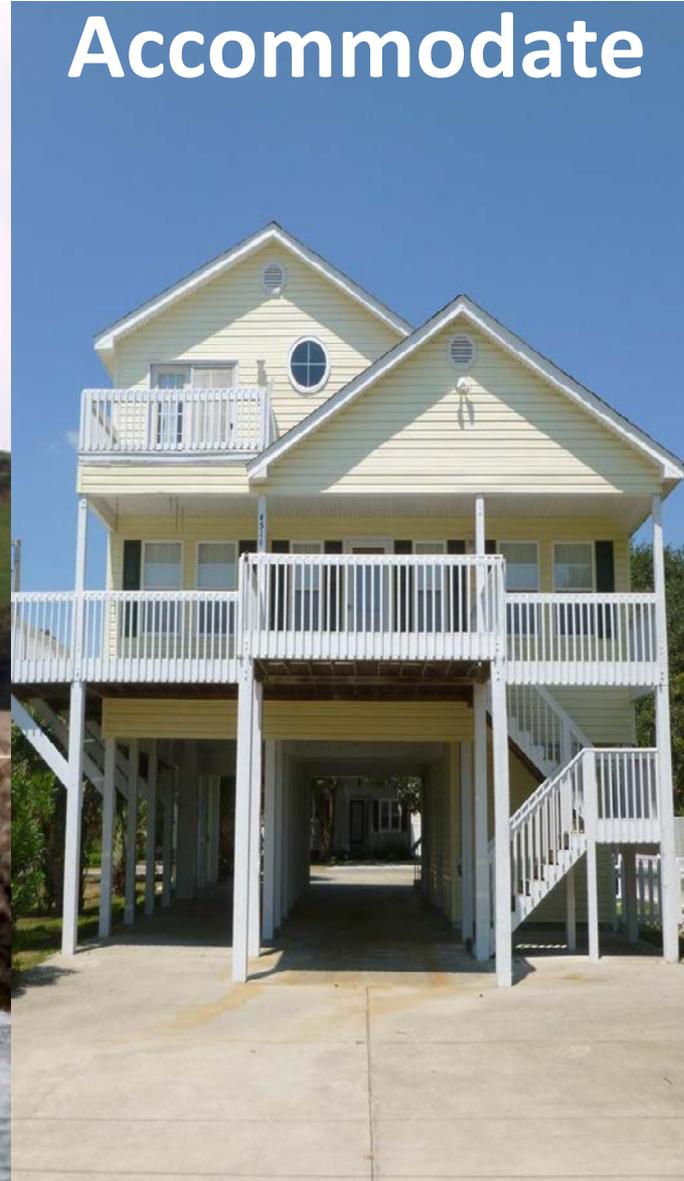


Actions

Protect



Accommodate



Retreat





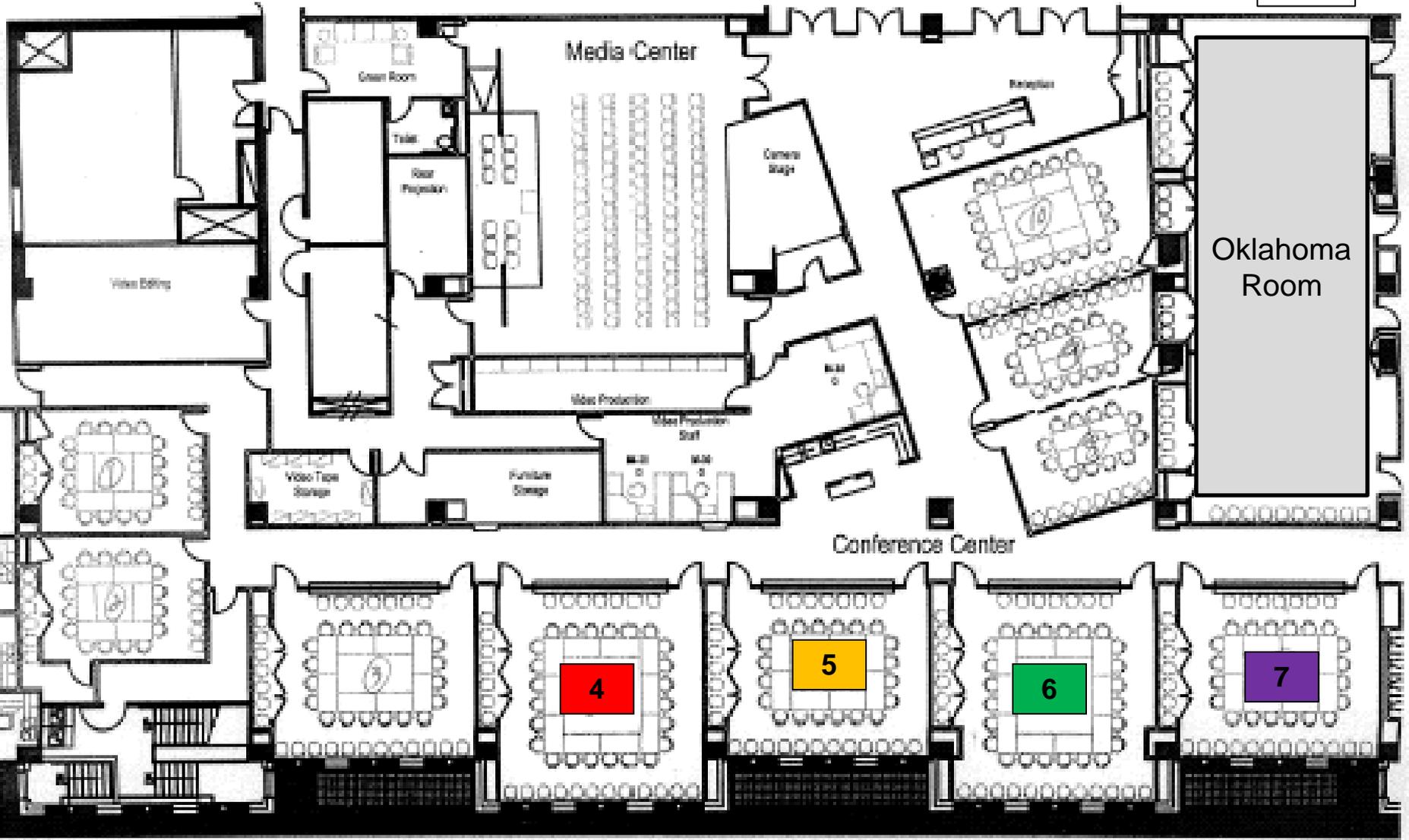
Mike Kangior
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Science Needs from 2012 Agency Adaptation Plans

DOT MEDIA CENTER AND CONFERENCE CENTER

Coffee Kiosk





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