This presentation – Five parts

1. My career journey from grad student to WAS*IS crusader (1976-2005)

2. Justification for WAS*IS

3. Potential group questions

4. Barriers we will overcome

5. WAS*IS measures of success

Changing from what WAS to what IS the future of integrated weather studies
My role – applied geographer

- Social scientist in world of engineers & physical scientists

- Career started in Boulder with Big Thompson Flood

- Focus: Flash floods & warning systems

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The Big Thompson Flood in Colorado
July 31, 1976

- 140 lives lost - 35 miles northwest of Boulder
- Studied the behaviors that night
  - Who lived?
  - Who died?
  - Led to detection & response systems

You can’t outrun the flood in your CAR, climb to safety

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The Big Thompson Flood

New focus for next generation of policy makers & scientists involved in flood mitigation – especially in Colorado

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Nearly 30 years later

- Signs
- FLASH FLOODS are recognized as different from slow rise floods
- Real-time detection, some response

- More federal agencies do flood “warning”
- Vulnerability increases

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2005

• National Weather Service overpromises

• Dams/infrastructure aging

• Development pressure on open space

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25 years as geography professor - Great opportunities - local, national, global

• Multi-disciplinary Partners- Hydrologists, meteorologists

• Active involvement with User Groups
  – National Hydrologic Warning Council
  – Association of State Floodplain Managers
  – Cooperative Program on Operational Meteorology, Education & Training (COMET)
  – NATO conference, Work in Australia, India, France, Italy, England

• National Academy of Sciences Committees

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WAS*IS succeeds if you are NOT

- Frustrated at being a social science ADD - ON
  - (good to hear from once a year or so) but ... no enduring impacts

- Left out of major scientific initiatives

- Being encouraged but kept separate & unequal

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Some people dream of...

Skiing in powder (Joel Gratz)

A most delightful red Italian wine (Julie Demuth)

My dream:

Social Science is MORE integrated in METEOROLOGY

WAS*IS

Changing from what WAS to what IS the future of integrated weather studies
WAS*IS Justification

- Making Culture Change happen -
  – Now & in sustained ways

- B I G WAS*IS idea lists to GROW by Friday & by March

- Large undisputable list of possibilities & priorities

   We have idealistic positive outlooks

   We are not defensive

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You are the ELITE!

200+ inquiries -- 100 applications

Senior officials, Grad students
International folks (13 countries!)
Practitioners, Researchers
Consultants, Federal officials

WAS*ISers demonstrate significant commitment to culture change

Changing from what WAS to what IS the future of integrated weather studies
Eight barriers WAS*ISers overcomes

1. POWERlessness: I want to do it but I don’t know how

1. Social science methods are a mystery

2. Surveys are not encouraged

3. Disciplinary blinders - “I’m not a meteorologist, I’m an engineer” & vice versa
Barriers WAS*IS confronts

5. I can’t do it right so I won’t do it at all – Need for “Satisficing”!

6. It’s not in my job description

7. Old-fashioned metrics - why are forecasts valuable now?

---------------------------------------------

Perceive yourself as a charismatic policy entrepreneur

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WAS*IS is part of a movement -- Moving beyond rhetoric to action

- CASA (Collaborative Adaptive Sensing of the Atmosphere)
- Research Experience for Undergraduates – hazard social science
- Bill Hooke’s American Meteorological Society policy program
- International efforts?! Learning from elsewhere
WAS*IS ground rules ...

• New partners -- unknown territory!

• NEW parameters & vocabularies

• ACTIVE & RESPECTFUL listening & talking

• No acronyms

• All ideas are welcome

The first problem for all of us is not to learn, but to unlearn.

-- Gloria Steinem

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SYNERGIES of WAS* IS

Invent creative, previously unimagined new tools, case studies, & implementation strategies

Life-long commitment from many vantage points – researchers, practitioners, various backgrounds, public & private

Team building – new comrades

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Four options for group projects

1. **DOABLE in our time frame**  
   Your most appropriate scale(s), locale

2. **Initiations of long term, longitudinal studies**

3. **Powerful post-audits - Examples of quick response research**

4. **Weather & Society digital library update since 2001**

More about projects - **Julie** - **Tuesday AM**

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Nine questions for consideration

1. How can we convince people that they’re better wet than dead?

CLIMB to SAFETY

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2. How do people interpret probabilities &/or uncertainties?

Cones/no cones  lines/no lines

Officials, publics, tourists, elderly

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3. Which graphical images are most effective? How local? How real-time? Just because we can provide these data, how do they help?
4. How can we assure robust communication on many levels?
   – Where were maps & GIS, even telephones after Katrina?

5. Is there a BEST lead-time?
   – Katrina, Rita, & Wilma forecasts were very good but so many died or did not heed

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Since not all meteorological hazards are created equally...

6. What are acceptable levels of risk?

7. How do we address nuisance events vs catastrophic events?

8. How do we measure warning success?

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9. Can we reduce vulnerability with monstrous development pressures? Will the rebuilding cycle be stopped?

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Highlights: Distinguished WAS*IS guest speakers

- Pielke, pioneer of weather & society

- Philips & Rodriguez, CASA (to take advantage of WAS*IS brainpower)

- Lazo, economist

- Rice, decision analysis expert

- Hayden & Zielinski-Gutierrez, qualitative research

- Kelsch & Henson, UCAR’s flash flood & media wizards

- Morss & Wilhelmi, our own WAS*ISers – qualitative research & GIS exercise
Highlights: Fort Collins field trip

5 died in 1997 flood

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Who or what warning agency was most credible during the 1993 Midwestern U.S. floods?
End users 1993

W A S

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End users 2005 IS

Changing from what WAS to what IS the future of integrated weather studies
What did the most influential players look like in meteorology prior to 2005-06 WAS*IS?

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Changing from what WAS to what IS the future of integrated weather studies
WAS * ISers are NOT the same old guys with new toys

Changing from what WAS to what IS the future of integrated weather studies
The new fiesta – WAS * ISers!
WAS*IS Objectives

- Provide toolkit to integrate social science with meteorology & engineering
- Identify barriers & ways to break them down
- Use case studies & examples to be sure WAS*IS lives on

Changing from what WAS to what IS the future of integrated weather studies
Seven WAS*IS measures of success -- Toward culture change

1. A new community of scholars & practitioners – use each other’s materials! You are the EXPERTS

2. Examples of new alliances/removed barriers

3. Practical new & tried methods
WAS*IS measures of success

4. Developed case studies & projects for presentation, publication, & other ways of dissemination

5. General themes for identity – can we all use the same language - & communicate effectively --- no jargon!!!!!! Trademarks?


7. Diffusion of our messages
Fairy tale comes true

Thanks to

US Weather Research Program
The National Oceanic & Atmospheric Administration (NOAA)

The National Center for Atmospheric Research

JEFF LAZO & the Societal Impacts Program (SIP)

Institute for the Study of Society & the Environment (ISSE) & the Research Applications Program (RAP) &

all the PEOPLE who have inspired & assisted to make WAS*IS a reality
Looking ahead to March workshop

• New leadership
• New effective methods
• New experiments
  – Specifically how do we bring social science into existing programs & research efforts & in sustainable ways -- NOW not sometime

• Tired of going to workshops where NOTHING lasts- - -Young & energetic WAS*ISers... it’s up to YOU

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If you have always done it that way, it is probably wrong.

-- Charles Kettering
Launching WAS*IS – R E C A P

- Two meetings – one workshop
- Commitment to Change!
- The BEST & the BRIGHTEST

MODEST GOAL –

CHANGING the missions of meteorological research

Changing from what WAS to what IS the future of integrated weather studies
Remember Margaret Mead’s words:

Never doubt that a small group* of thoughtful, committed people can change the world.

Indeed, it is the only thing that ever has.

(* of WAS*ISers)
WAS*IS WORKSHOPS

weather & society * integrated workshops

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Now, let’s get to work