

Communicating Science

Nick Melcher
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Clear San Pedro now black with runoff

It's the first sign of erosion from Bullock Fire

By Mitch Tobin
ARIZONA DAILY STAR

REDINGTON — The San Pedro River smelled like a fireplace and looked like an oil spill last week, a few days after monsoon raindrops began pelting the portion of Mount Lemmon scorched by the Bullock Fire.

The shocking change to Arizona's last free-flowing river apparently is the first sign of fallout downstream from the wildfire that burned in the Santa Catalinas during May and June.

The 30,563-acre fire affected about 40 percent of the mountain's mixed-conifer forest and has made millions of dollars worth of roads, trails, campgrounds and picnic areas vulnerable to flooding and erosion, according to a recent Forest Service damage report.

Ash flowing down the mountain during flash floods is believed



“ This is a slap in the face of the ecosystem, but the good news is that it should recover, barring any really horrendous stuff. ”

Marty Jakle
Fish and Wildlife biologist

SEE BULLOCK / A10

Perspective

Scientists

- Focus on science details
- Learning
- Probable outcomes
- Accountable to technical peers
- Tentative

Policy-makers

- Focus on big issues
- Decisions
- Yes or No
- Accountable to external forces
- Forceful



Process

Scientists

- Approach
- Incremental inferences
- Work with small science groups
- Specialized language
- Long time frame

Policy-makers

- Outcomes
- Broad implications
- Work with public
- General audience
- Quick Response



Resolutions for Scientists

- Recognition of problem
- Recognize obligations to public
- Look for training opportunities
- Audience awareness
- Learn more about the larger issue
- Awareness of conjunctive programs
- Participate in project meetings or briefings
- Ask questions
- Make presentation warm-ups
- General audience report review
- Write an executive summary



Resolutions for Policy-makers

- Recognition of problem
- Understand and appreciate scientific process
- Interrupt and ask questions
- Understand the proposal
- Make sure objectives address the issue
- Request an executive summary
- Accept uncertainty
- Give feedback
- Use local resources for interpreting science



Resolutions for Science Managers

- Recognition of problem
- Organize training
- More public exposure for scientists
- Identify role models and mentors
- Include scientists in program meetings
- Review project objectives with scientist
- Encourage interest diversity in staff
- More public exposure for scientists
- General audience report review
- Science managers as intermediators
- Proper use of skillsets



Science Presentations for General Audiences

- **First cite the broad societal issue.**
- **Provide background information on the issue. Credit earlier work.**
- **Begin to bring the broad issue down to the specifics being study in a step-wise progression.**
- **Present research emphasizing what has been learned over data and analysis.**
- **Qualify any speculative statements.**
- **Incrementally bring the research findings back up to explain how the findings address the societal issue.**