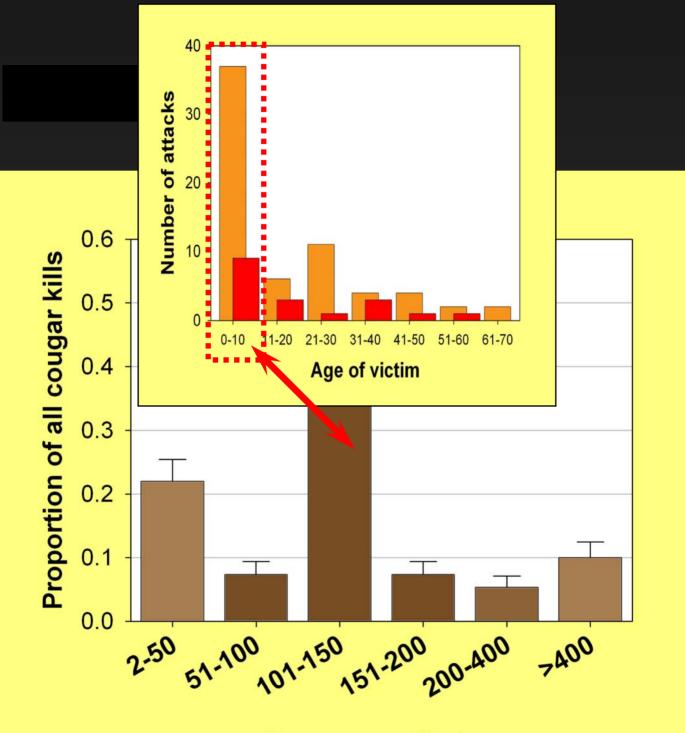


#### A Window on Scientific Management

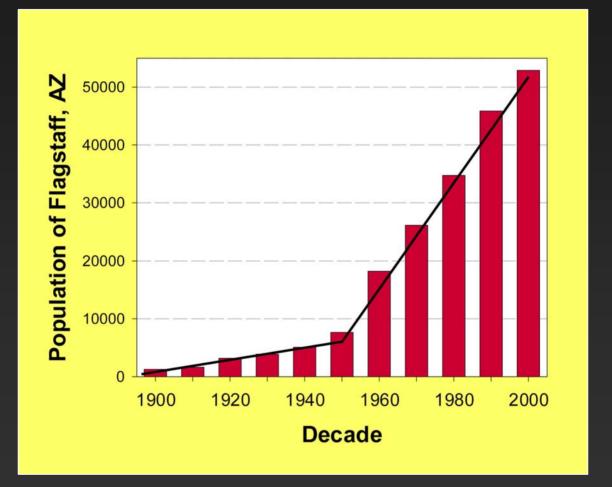
**David Mattson** USGS Southwest Biological Science Center

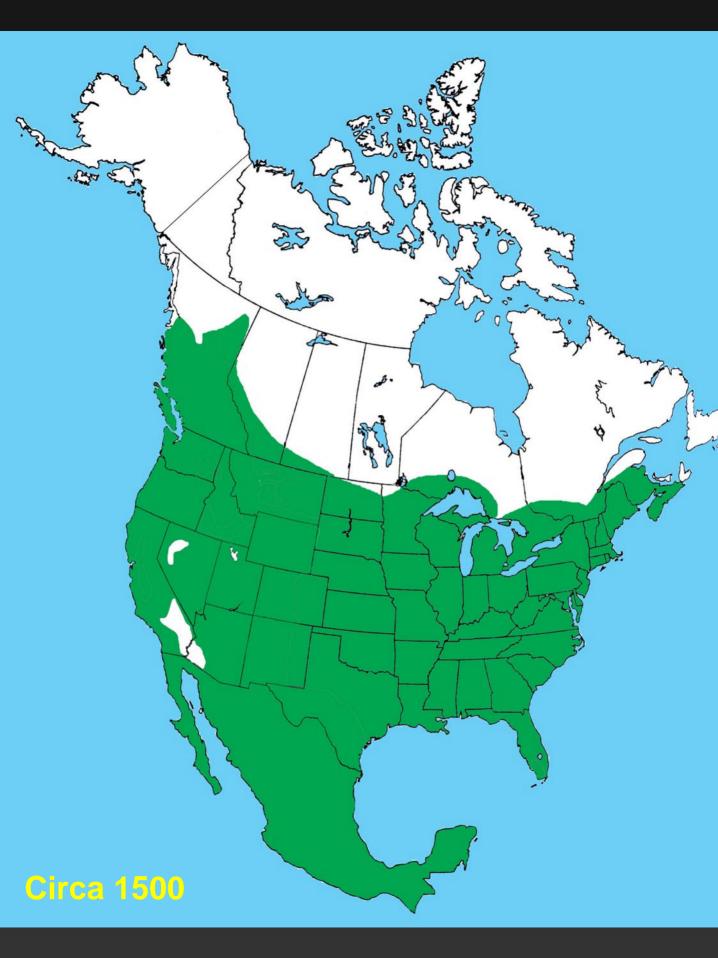
#### Size of cougar kills...



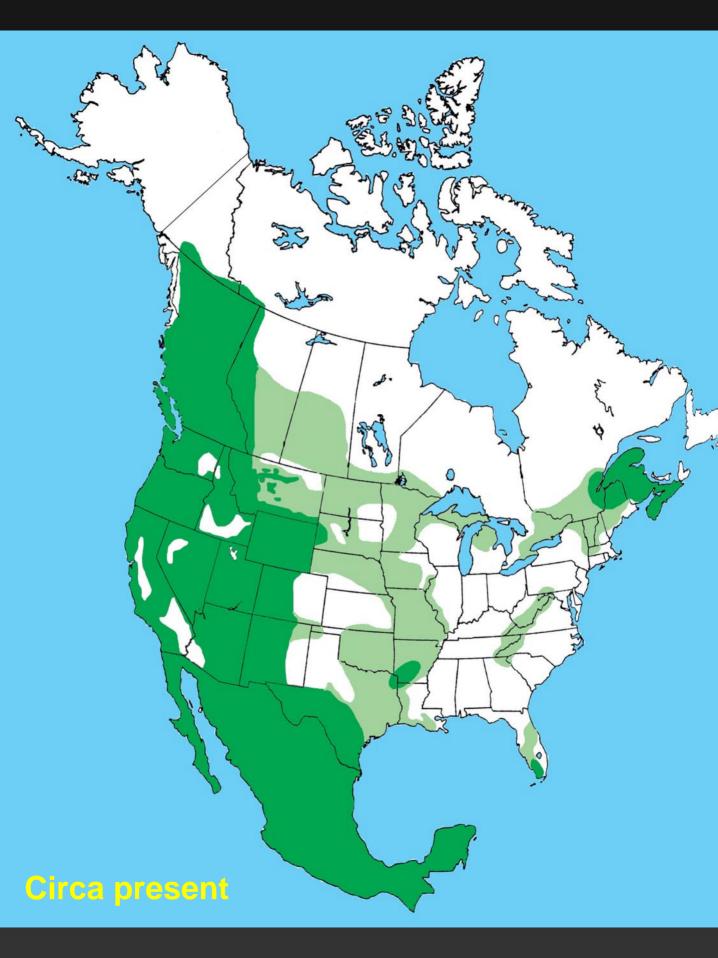
Prey mass (lbs)

## Trends

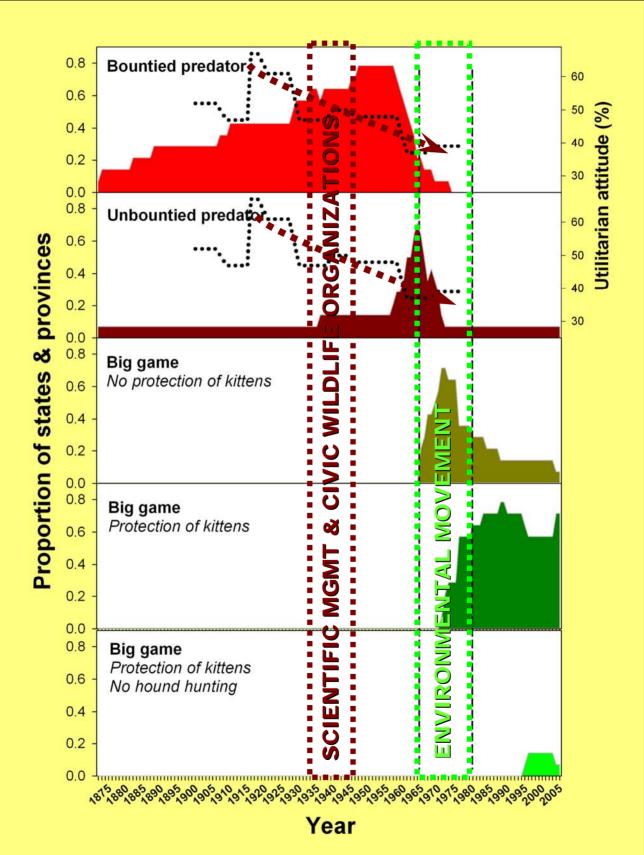




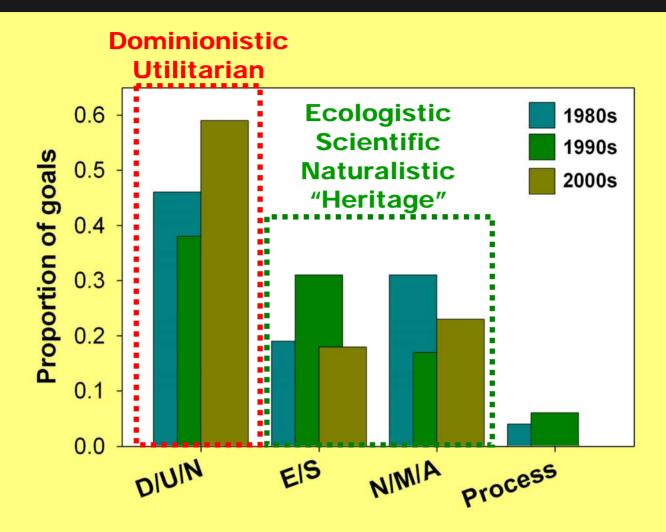




#### Changes in management

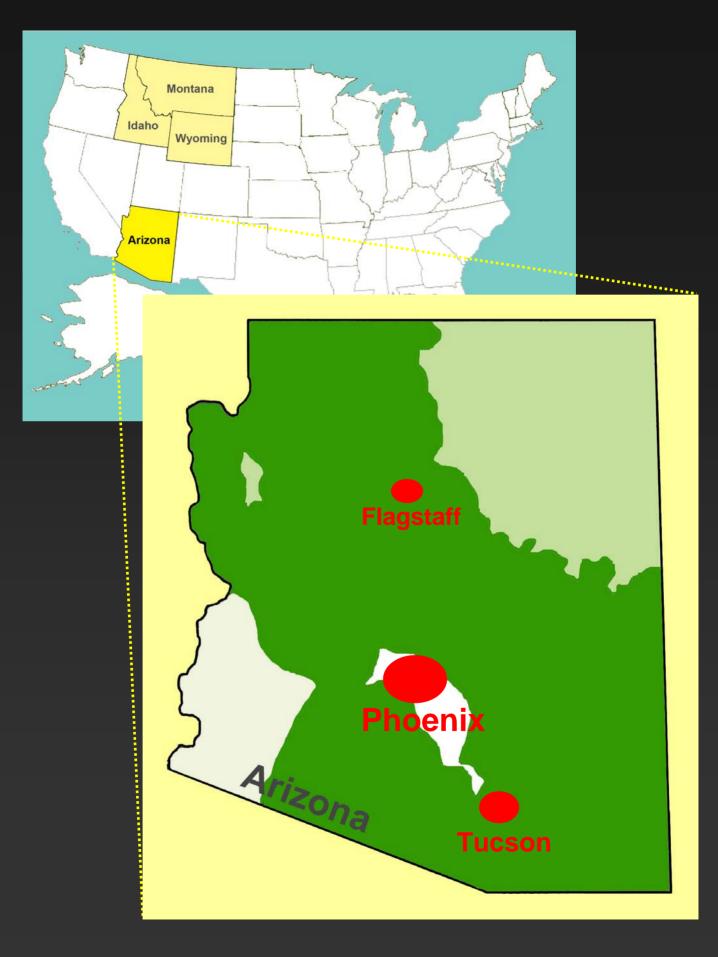


# Persistence of goals 1980-present

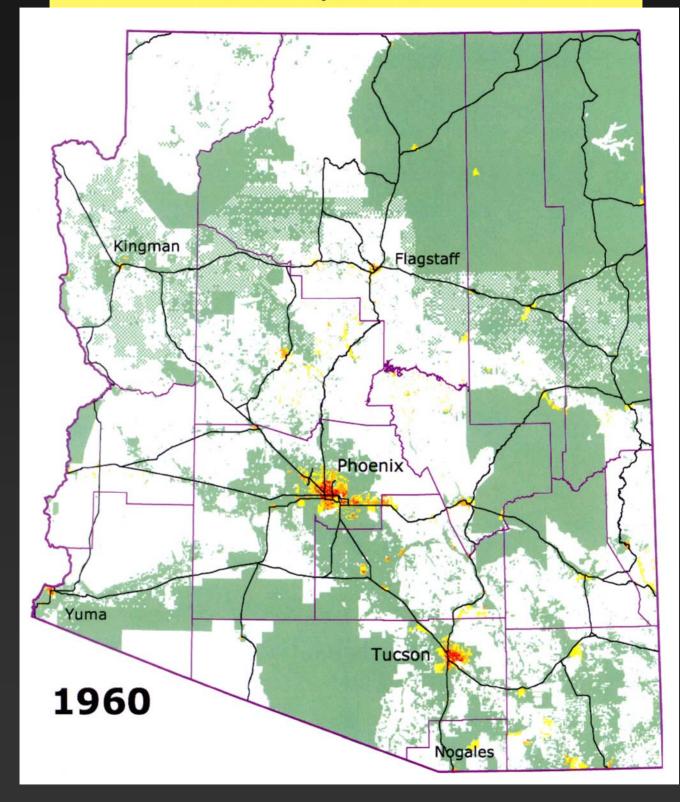


**Classification of goals** 

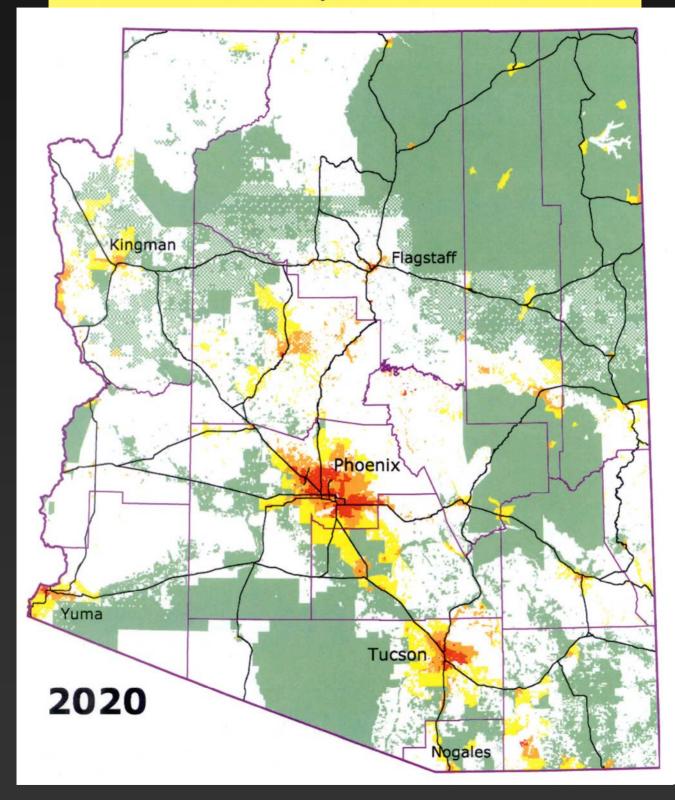
Provision of sport-hunting Depredation control Human safety

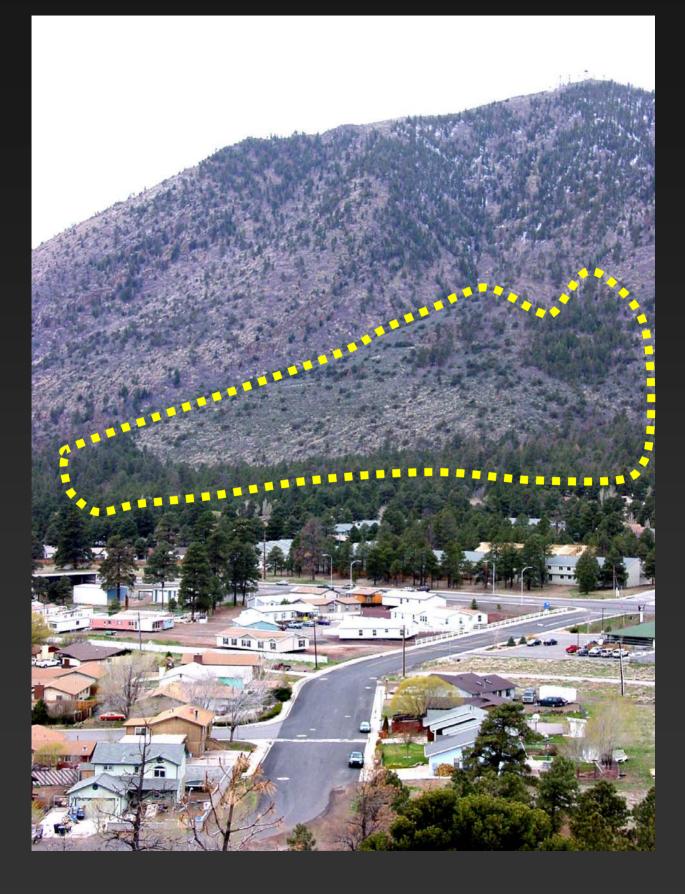


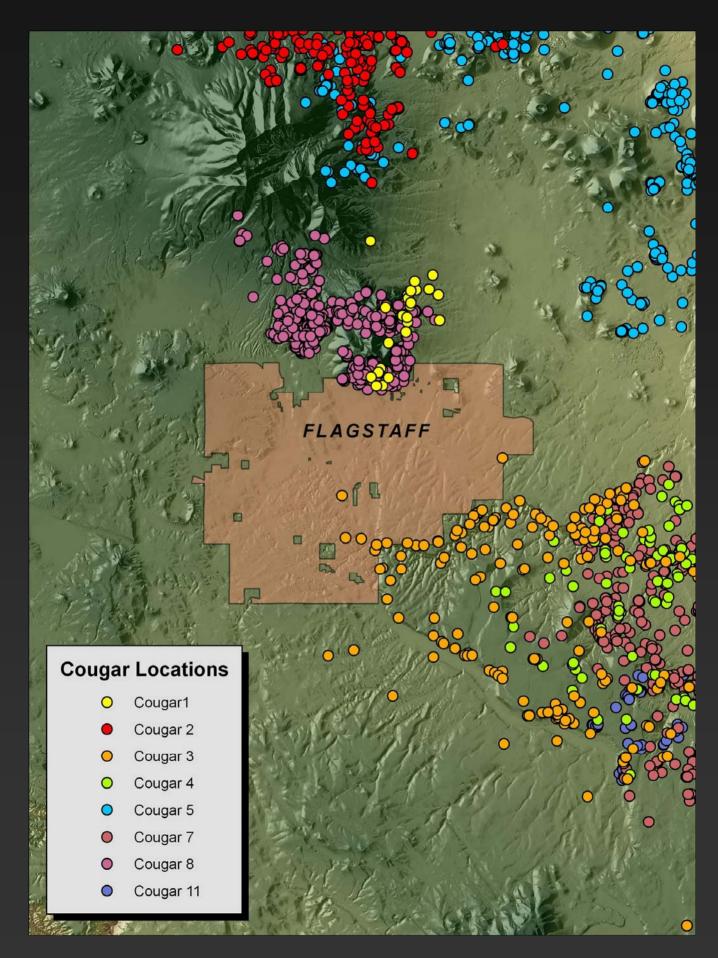
#### Arizona Population, 1940 to 2025



#### Arizona Population, 1940 to 2025

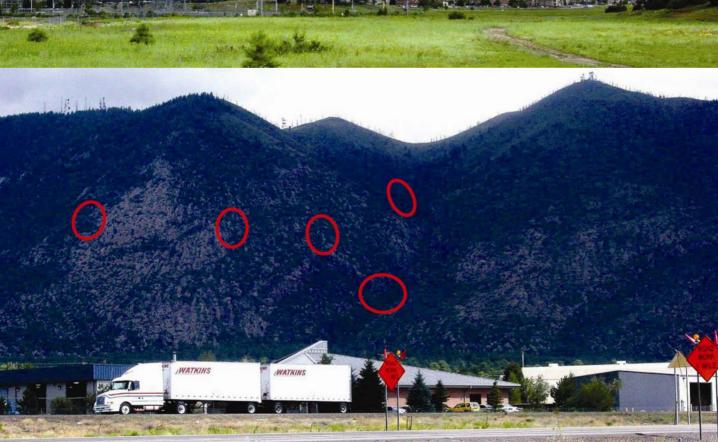






#### Known sites of cougar predation

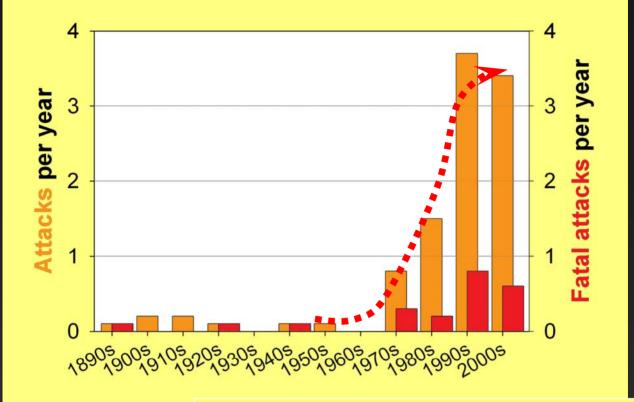
0

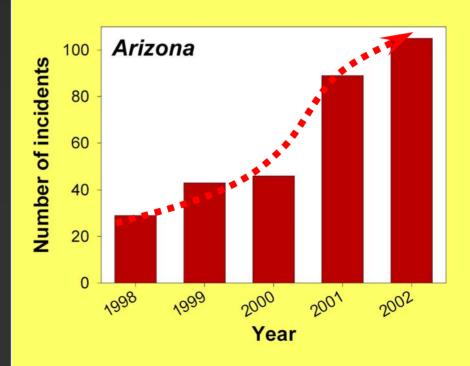


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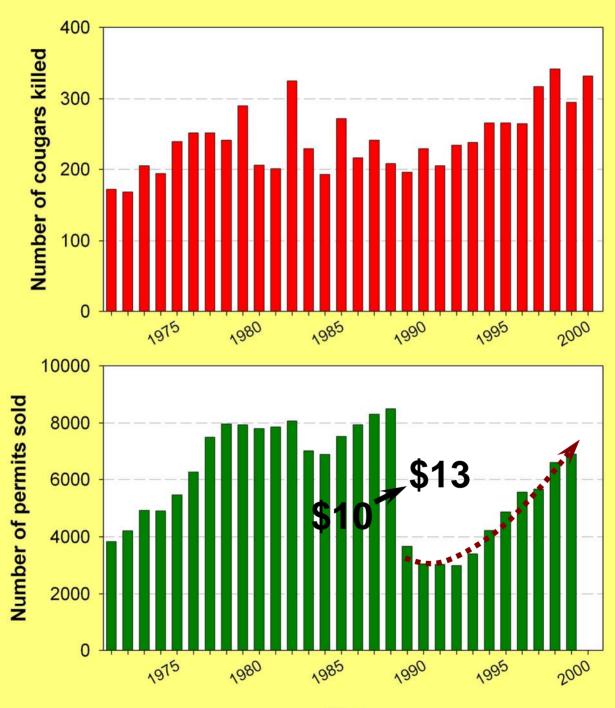
The "Normal" Regime of Rule-Making & Implementation





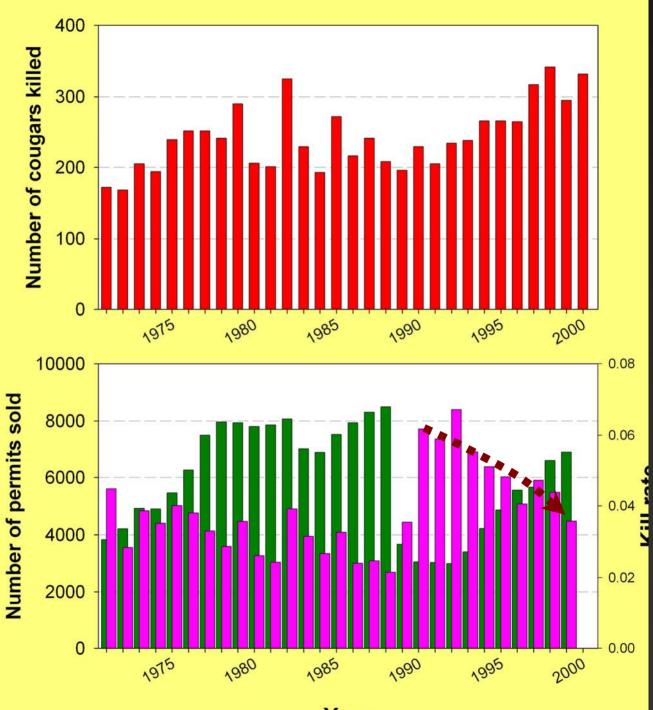
9 month season
No area limits
Until recently, no limit on type of animal
Hunter reports kill within 10 days
1 lion/resident/year, with some exceptions

# Monitoring the lion population & managing the harvest



Year

# Monitoring the lion population & managing the harvest



Year

## **A Regime Shift**



#### ADLA and The Fund are <u>unalterably opposed to the sport hunting</u> of any wildlife species. While the Commission/AGFD admittedly do not share my clients' perspective on sport bunting, both have an obligation to consider

The first se summarizes and objectiv lion kill data critique idea provided. T Arizona

quacy

Animal Funding Black Beauty Ranch Canned Hunts Donate Learning Zone Library / Info Center Links News Room Neiman Carcass Online Store Sanctuaries and Service

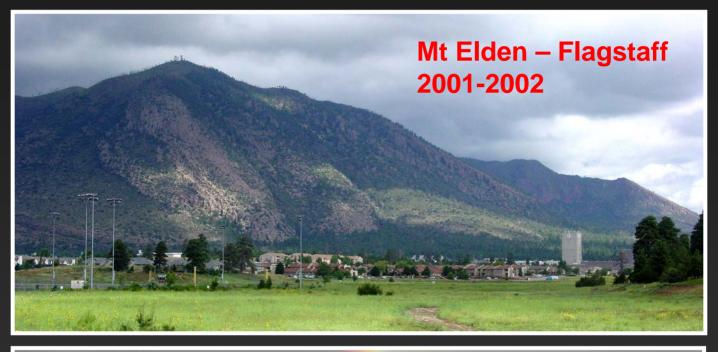
Mr. Duane Shroufe, Director Arizona Game and Fish Department 2221 W. Greenway Avenue Phoenix, AZ 85023-4312

Dear Chairman Golightly, Commission Members, and Director Shroufe:

As is clear from the foregoing evidence, the AGFD has engaged in a game. of statistical chicanery (by artificially increasing the estimate of high quality lion habitat and by using inaccurate lion density estimates) to create "paper lions" that don't actually exist. Indeed, other than the AGFD's paper data sheets, my clients are aware of no other data to substantiate the alleged increase in the GMU-specific lion population estimates. By purposefully manipulating the data to make it appear that more lions exist in the state than actually do, the AGFD is able to: 1) increase lion hunting opportunities and the number of lions killed while claiming that the lion population continues to expand; 2) increase the number of lions killed to reduce lion predation on more popular and financially-valuable game species and livestock; and, 3) placate its hunting constituents who consistently complain that lions are responsible for the decline in certain big game species and who refuse to consider other factors (i.e., drought, disease, over-hunting, harassment) that are more probable explanations for the documented decline.

In short, the AGFD's statistical game-playing is likely a purposeful effort to increase lion hunting opportunities and reduce lion numbers and their alleged impact on big game species and livestock while claiming that the lion population is healthy and viable. <u>In reality, the AGFD has no earthly</u> idea how many lions live in Arizona, how many lions are killed each year in Arizona (by sport hunters or under depredation policies), or the ecological impact of lion hunting on lion populations and the ecosystems in which lions live. By creating a false sense of security by manufacturing "paper lions," the AGFD is able to downplay the real impact of sport

## "Incidents"





## "Incidents"

"Opening the door to public input only gives voice to the animal rights nuts who will never be satisfied with less than a complete no kill policy."

> "The governor is mightily displeased."

### A Regime Shift Some symptoms

Existential anxiety

Public discontent

Incivility

### A Regime Shift Some symptoms

Great difficulty identifying & securing the "common interest"

## An Analysis

#### Problem orientation Decision process (Psycho-) Social process

Kellert's schematic of worldviews

World Views (Kellert 1996, Ruther 2005)

Negativistic

**Utilitarian/Dominionistic** 

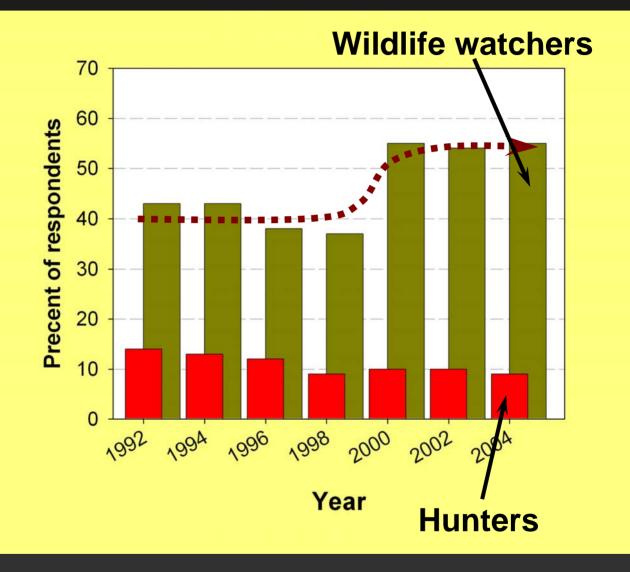
**Ecologistic/Scientistic** 

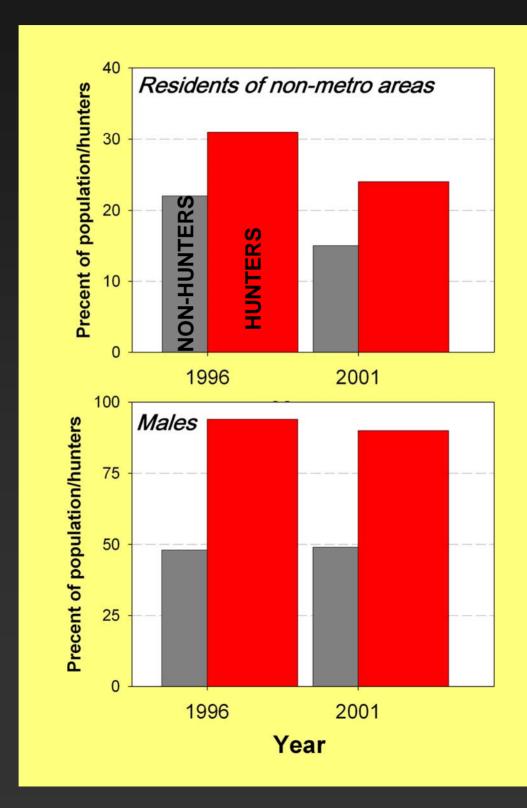
Aesthetic/Naturalistic

Humanistic/Moralistic

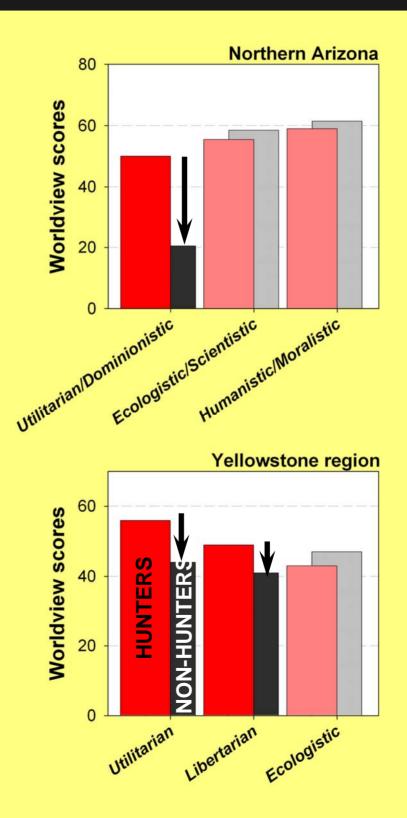
## The Ingroup

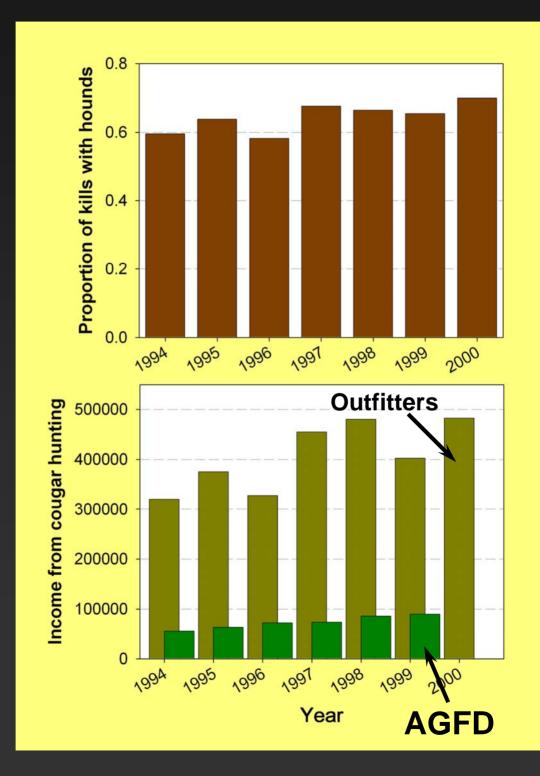
The Dominionistic/Utilitarian Subsystem



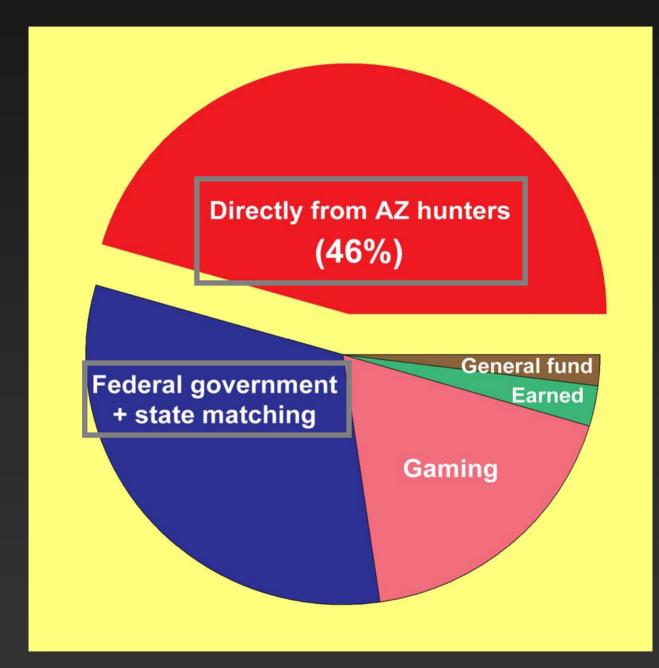


**Non-hunter worldviews** 





### Agency wealth



### Agency 'governance' Commission

#### Set policy Hire/fire the Director

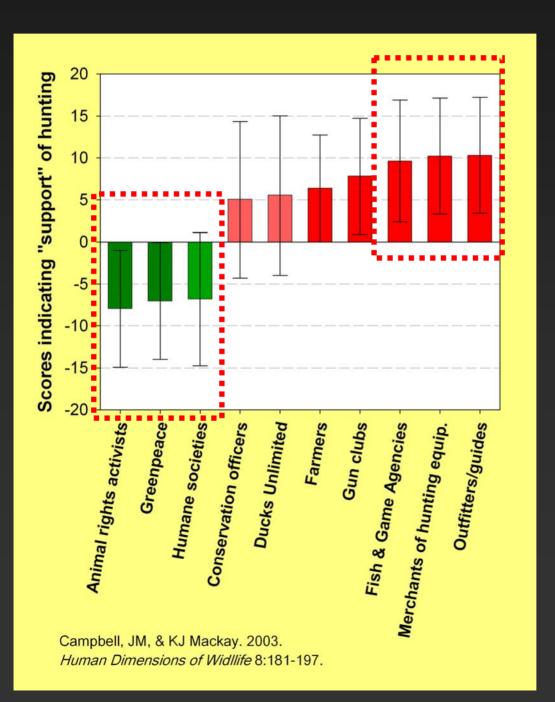
Safari Club International

Yuma Rod & Gun Club Safari Club International

Boone & Crocket records; North American bighorn sheep Grand Slam

Veteran of game management agencies

#### Agency culture





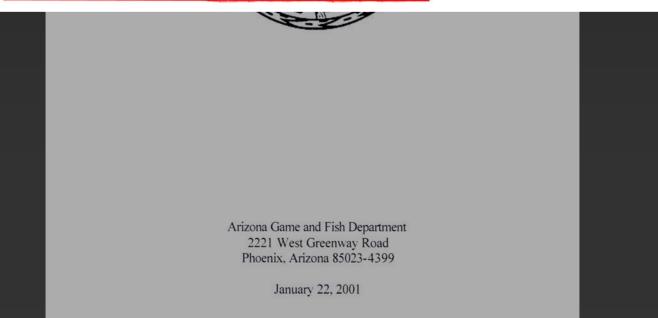
## Wildlife 2006

The Arizona Game and Fish Department's Wildlife Management Program Strategic Plan for the Years 2001-2006

The Department must manage Arizona's wildlife resources as a public trust, through activities that are efficient, effective, well-planned, collaborative, and appropriately funded, with ample opportunities for public participation in planning, implementation, and evaluation.



In other words, a commitment to partnerships means that we will try our best to find "win-win" solutions to problems, and we will be respectful, forthright, and honest. It means that if we do fail to find common ground, it will not be for lack of effort on our part.



## Agency plans

# Wildlife 2006

### Mission, Goals, and Objectives

Mission: Protect and manage game wildlife populations and their habitats to maintain the natural diversity of Arizona, and to provide game wildlife oriented recreation opportunities for present and future generations.

#### Goals:

- 1. Maintain, enhance, and restore (when appropriate and economically feasible) populations of game wildlife to provide for recreation opportunities, including wildlife viewing.
- Minimize adverse impacts to wildlife and wildlife resources, and strive to resolve human/wildlife conflicts.
- Increase public awareness of Arizona's game wildlife, its management, and hunting and viewing opportunities.

#### Objectives:

- 1. Provide hunting recreation for 190,000 or more <u>hunters</u> annually (190,000 combination licenses and hunting licenses were sold to Arizona resident, junior, and non-resident hunters in 1998, the most recent year for which records are complete).
- 2. Achieve a 60 percent satisfaction rating among Arizona's <u>hunting public</u> (i.e. 60% of Arizona's hunters indicating they were satisfied with their <u>hunting experience</u> over the past year).
- 3. Provide Arizona's diverse publics with information and education about game animals and hunting.

Arizona Game and Fish Department 2221 West Greenway Road Phoenix, Arizona 85023-4399

January 22, 2001

## Agency plans

#### Game Management Subprogram

In America's past, hunting was a widespread recreational pursuit, and sometimes a necessity. Today, <u>hunting</u> provides a unique link to our past. As our society becomes increasingly urban, outdoor recreation patterns are changing. During the last quarter of a century, even though the total number of hunters has increased, the percentage of the population that hunts has decreased. An understanding of demographics and preferences of Arizona hunters is crucial to establishing hunt objectives and guidelines. Equally crucial is offering diverse opportunities to all Arizona residents to experience and appreciate Arizona's <u>hunting heritage</u>.



Encourage participation by youths, females, and other under-represented groups in hunting, fishing, other wildlife recreation programs, and shooting sports.

### 

#### Mountain Lion

#### Status and Use

Estimates for the statewide population in 1999 are as follows: 2500 mountain lions; 62,000 mi<sup>2</sup> of occupied habitat, including 10,700 mi<sup>2</sup> classified as high quality habitat; and 6826 permits sold and 246 animals harvested (Fig. 18).

Note: these estimates do not include tribal lands or National Parks.

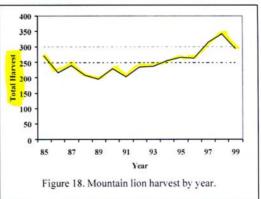
#### Goal

C.

Manage the mountain lion population, its numbers and distribution, as an important part of Arizona's fauna. Provide mountain lion hunting (including hunting with dogs) and other related recreational opportunities.

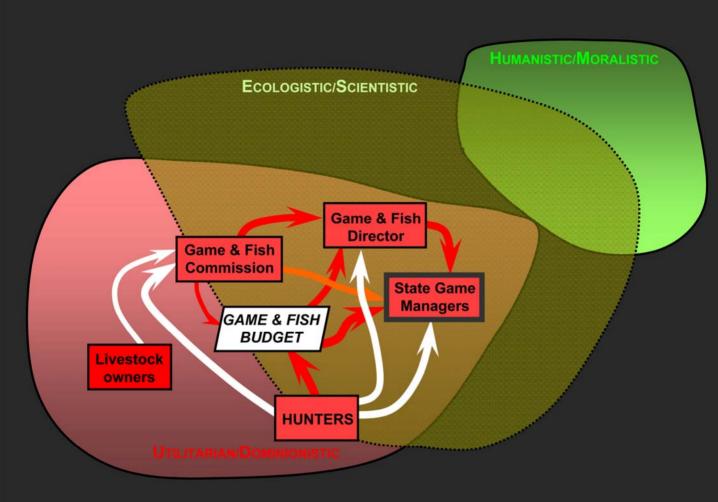
#### Objectives

- 1. Maintain annual harvest at 250 to 300 mountain lions (including depredation take).
- 2. Provide recreational opportunity for 3000 to 6000 hunters per year.



 Maintain existing occupied habitat and maintain the present range of mountain lions in Arizona.

### The Dominionistic/ Utilitarian Subsystem



Legitimacy and wealth are largely generated within the subsystem through provision of the "wildlife product."

## **MODELS OF GOVERNANCE &** MANAGEMENT

## A Government Manager's Guide 2 to Quality Management

Doing what's right isn't the problem. It's knowing mhat's right

Some critics worry about the new roles assigned to the empowered co-worker in a quality management organization. Worker involvement and continuous process improvement are the basic sources from which quality flows. Every co-worker in a quality management organization has one central and common purpose-that is, to improve the quality of the organization's services and products in order to satisfy the customer.

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array of practices and techniques designed to implement these organizing principles. In other words, quality management is both a comprehensive m

through provision

### a radical tic focus the wildlife product. her than

function or produce. Joine question quarty managements a movement that the customer is best equipped to define the quality of your work.

Some critics worry about the new roles assigned to the empowered co-worker in a quality management organization. Worker involvement and continuous process improvement are the basic sources from which quality flows. Every co-worker in a quality management organization has one central and common purpose-that is, to improve the quality of the organization's services and products in order to satisfy the customer.

## MODELS OF GOVERNANCE & MANAGEMENT

The over-riding goal of this Strategic Plan is to best meet the needs of the biological resource, while remaining in balance with many different, often conflicting, public desires and the Department's limited resources. Not everyone's desires or comments will result in changes to this plan, but everyone's comments were fully considered before the final plan was adopted.

"Let Arizona Game & Fish manage wildlife, using scientific and statistical methods, rather than having to be concerned about the public, political, and media reaction."

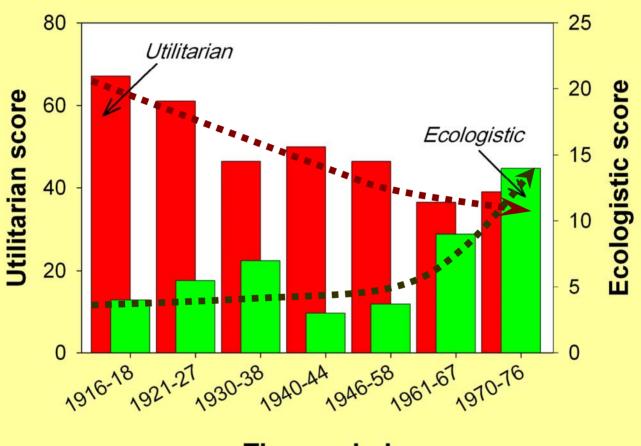
"No commissioner should ever have to bow to the wishes of emotional masses when science proves them wrong...politics should never interfere in their decisions."

"Problems" are of a technical & biophysical nature to be defined and solved by the experts (i.e., AZGF) Virtually no concept of governance related to liberal democracy & civility.

Essentially no way to conceptualize "management" as fundamentally about identifying & securing common interests.

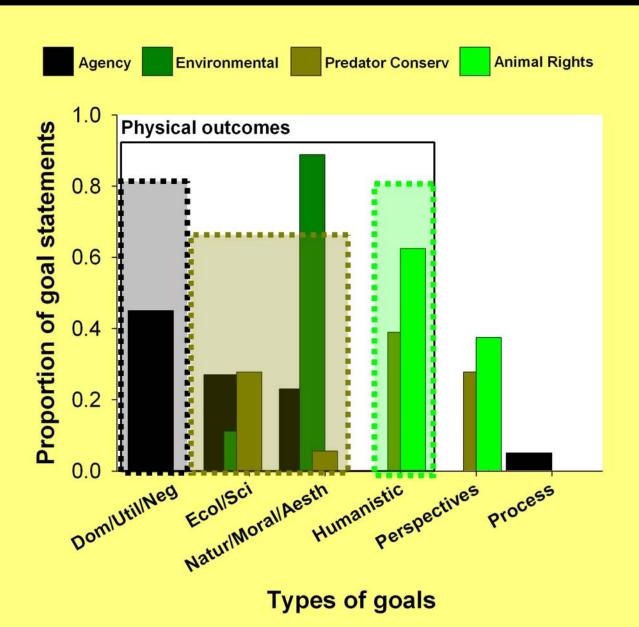
# A Dynamic Environment

## World Views (Kellert 1996)



**Time period** 

## World Views (Kellert 1996)



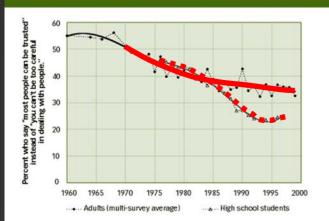
Capacity for Civility

### **Organizational Involvement**



### Trust

Four decades of dwindling trust Adults and teenagers, 1960-1999



### **Club attendance**

Club meeting attendance dwindles, 1975-1999

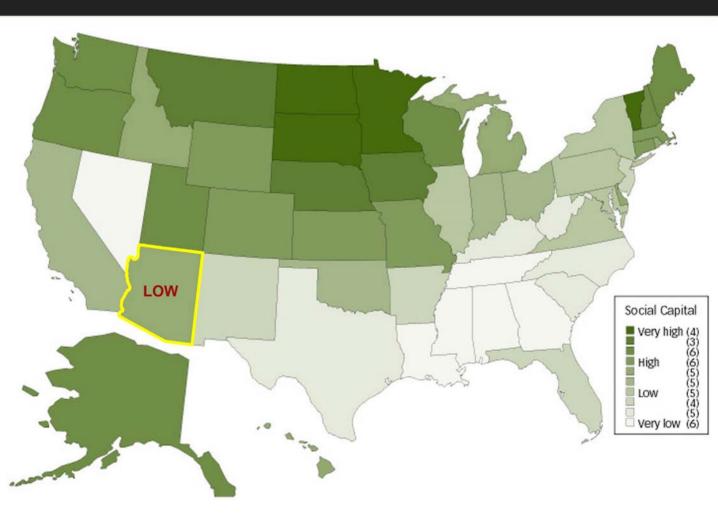


### Philanthropy



The rise and fall of philanthropic generosity, 1929-1998

Capacity for Civility

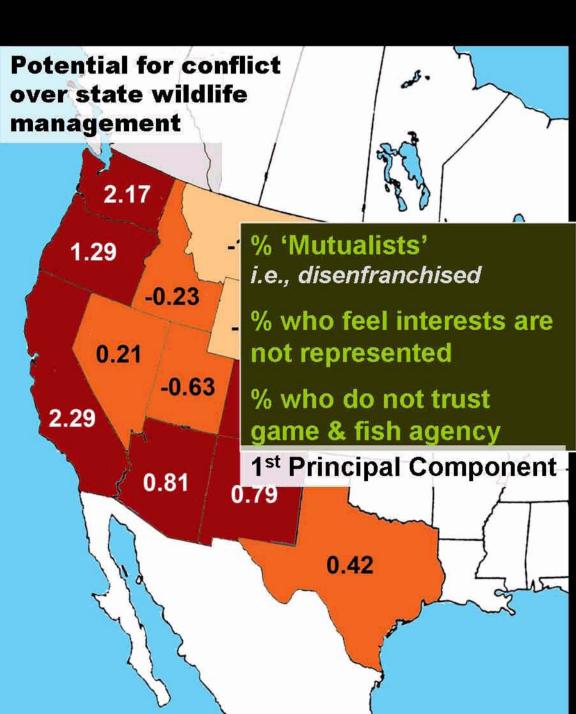


Capacity for Civility

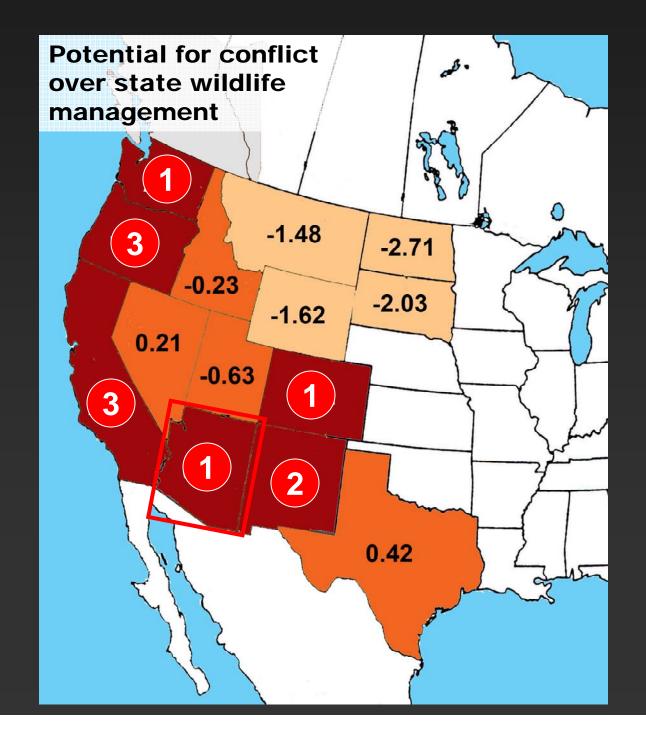
**Attentiveness of goals** to emerging values J. in the second н M н н н Μ L н M М M Index of social capital (Putnam 2000) Weighted summary of goal statements

*r* = 0.63

# Social Capital & Public Trust Capacity for Civility



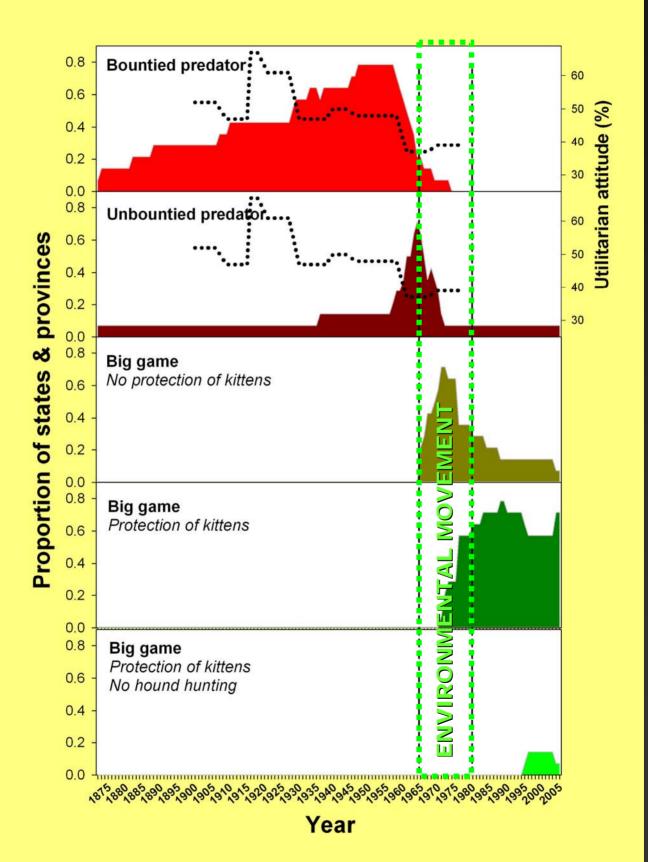
Capacity for Civility

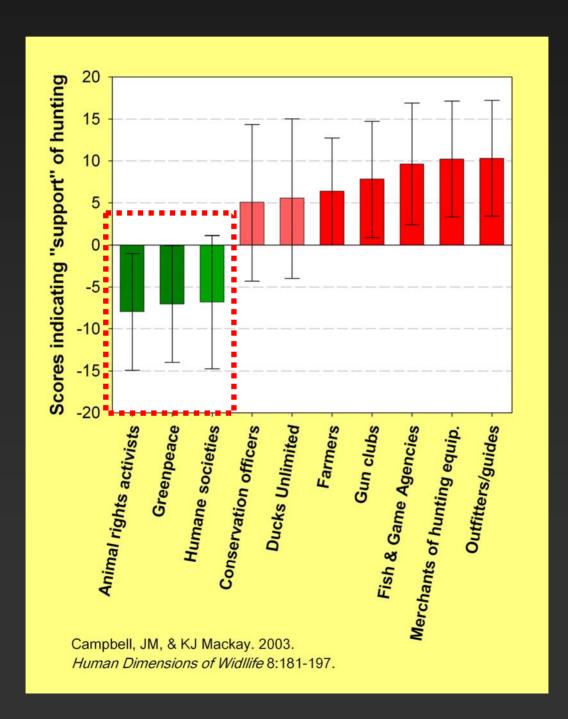


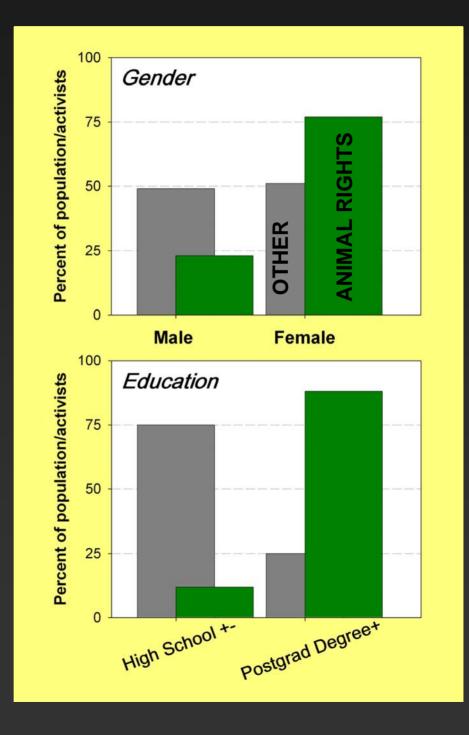
# The Outgroup

## Animal Rights & Animal Welfare Activists

# The Outgroup

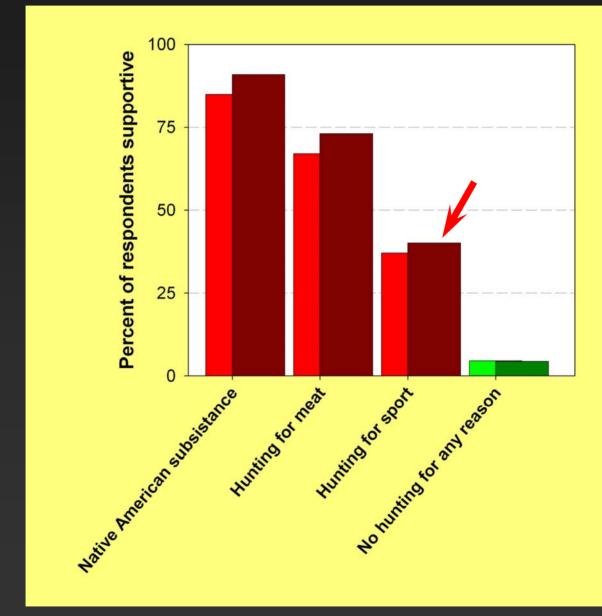




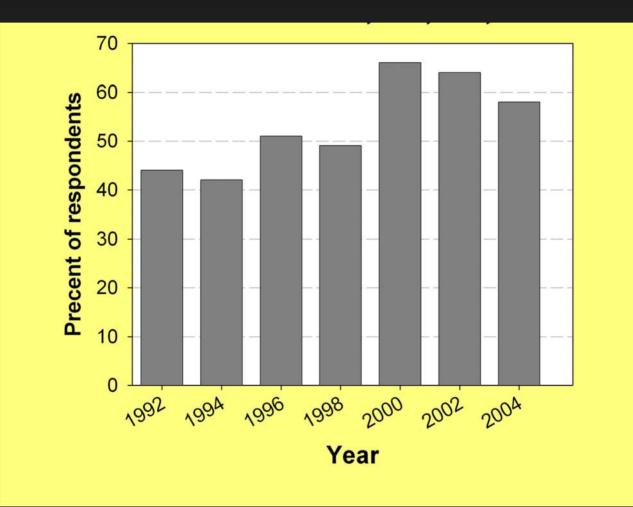


# "...a religious fervor..."

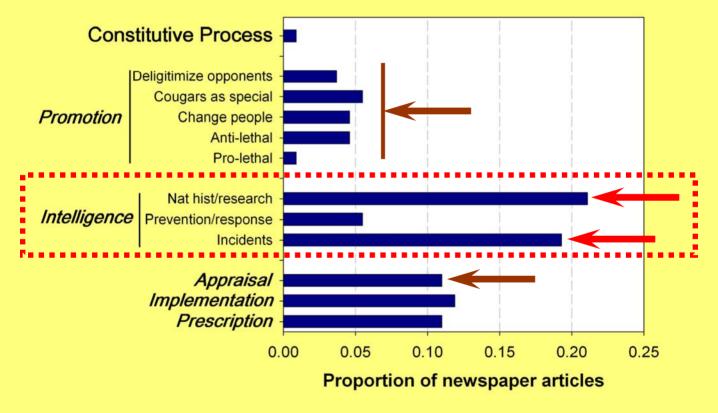
# RECTITUDE



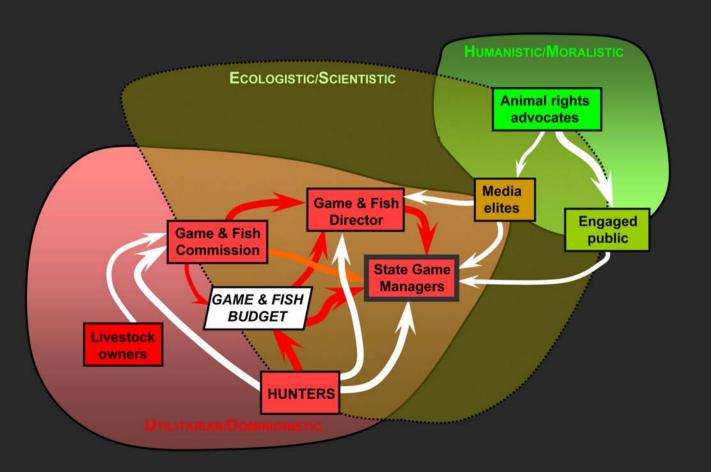
## 1978 1995



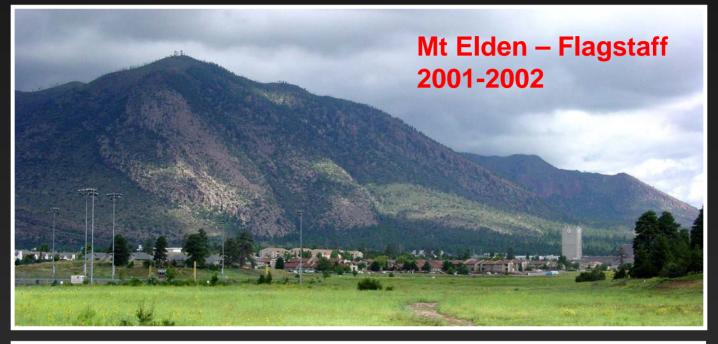
Percent of AZ residents who did not know who manages AZ wildlife



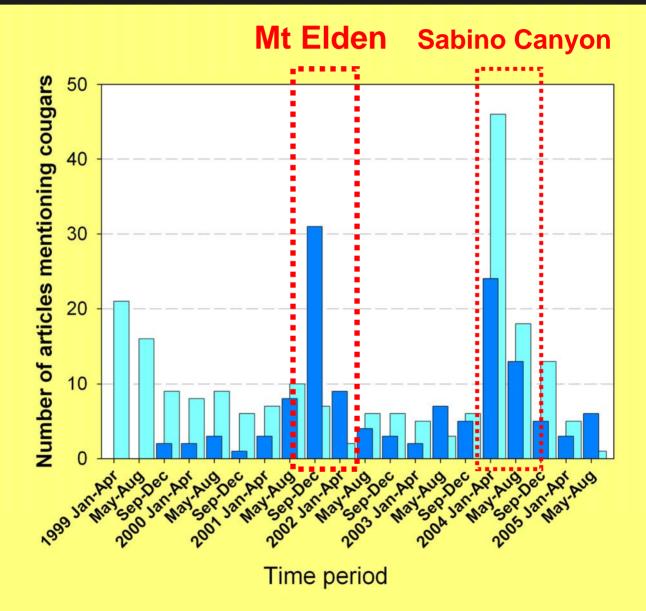
Foci of articles in the Flagstaff, AZ, *Daily Sun* during "normal" periods, 1999-2005



# Perturbations (continued)

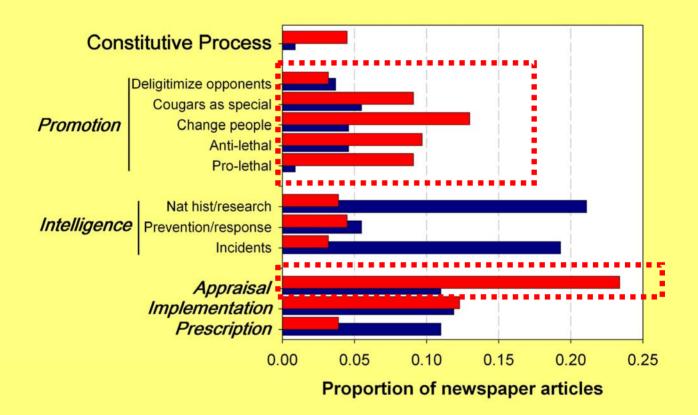




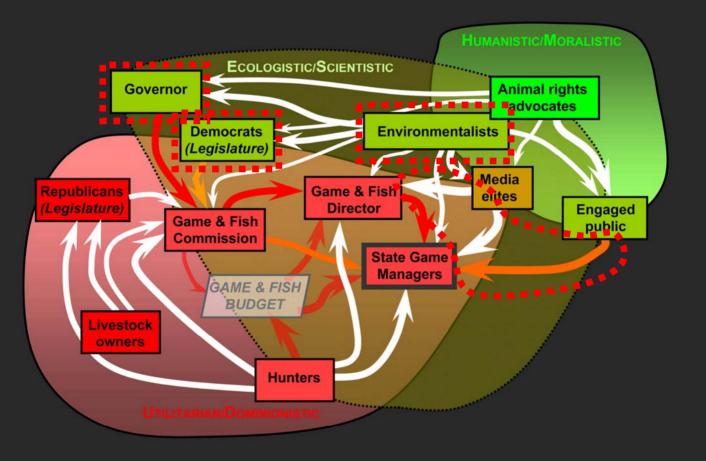


**Tucson** Daily Star

Flagstaff Daily Sun



Foci of articles in the Flagstaff, AZ, *Daily Sun* during perturbations, 1999-2005

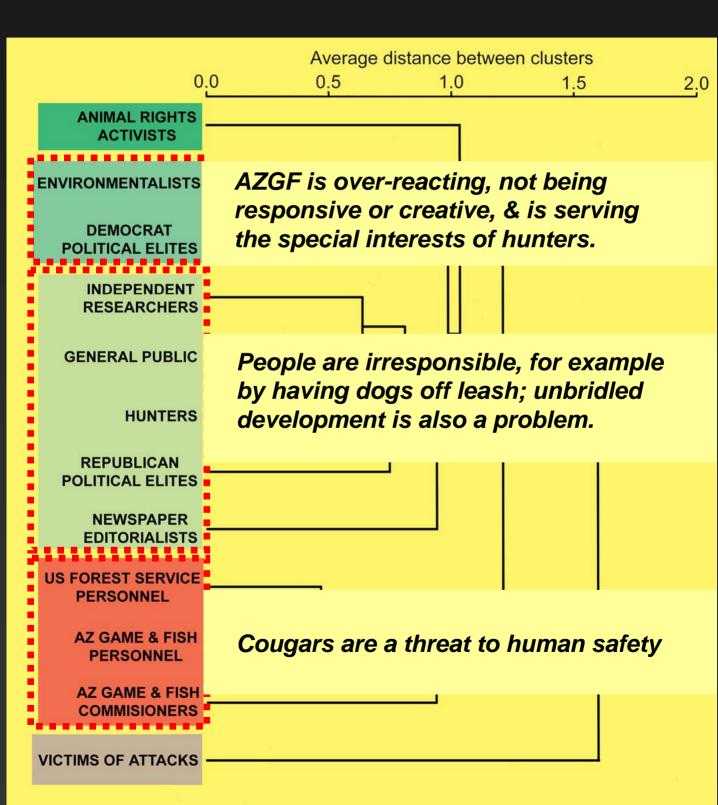


"The governor is mightily displeased."

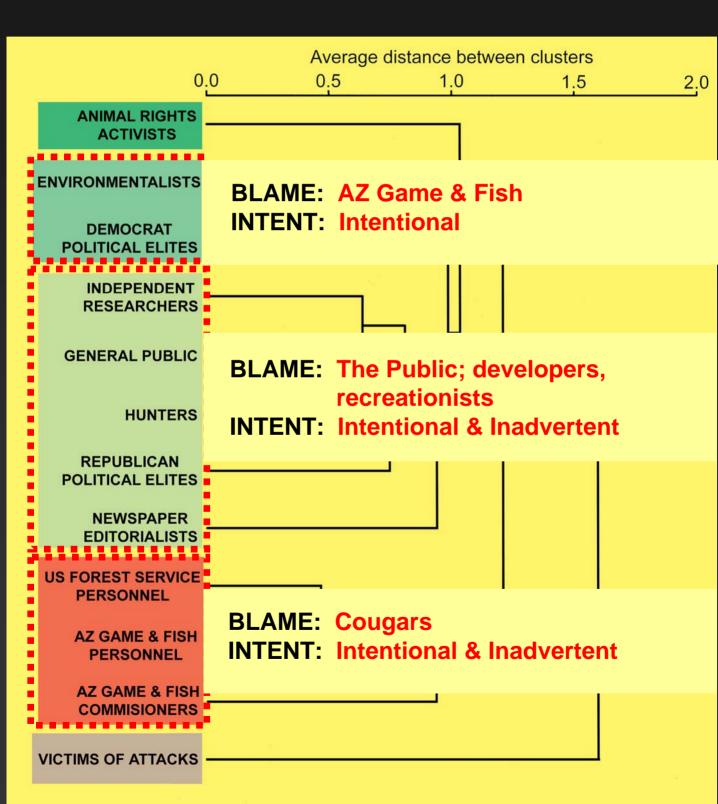
## AZGF defends its legitimacy...



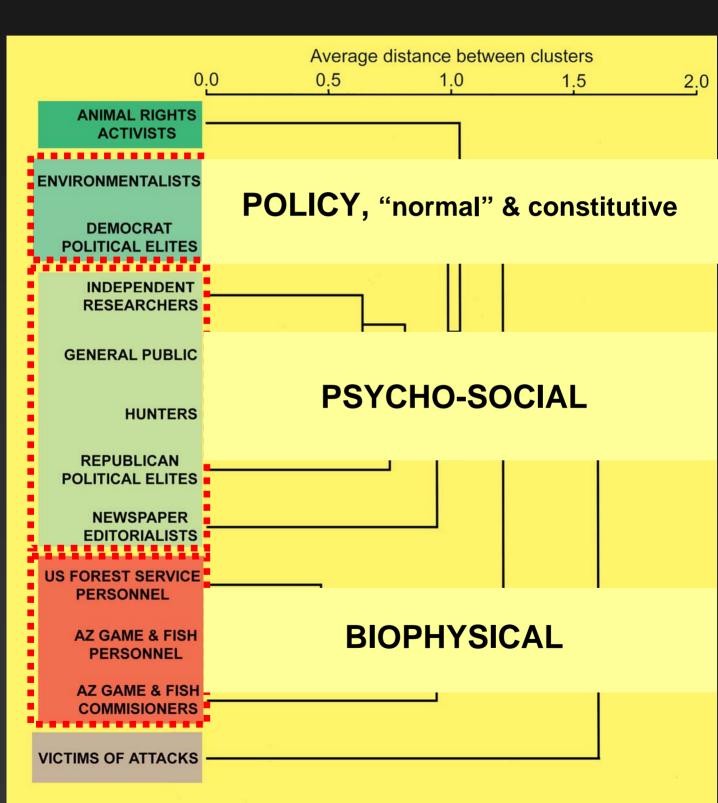
# **Discourse content** "The Problem"



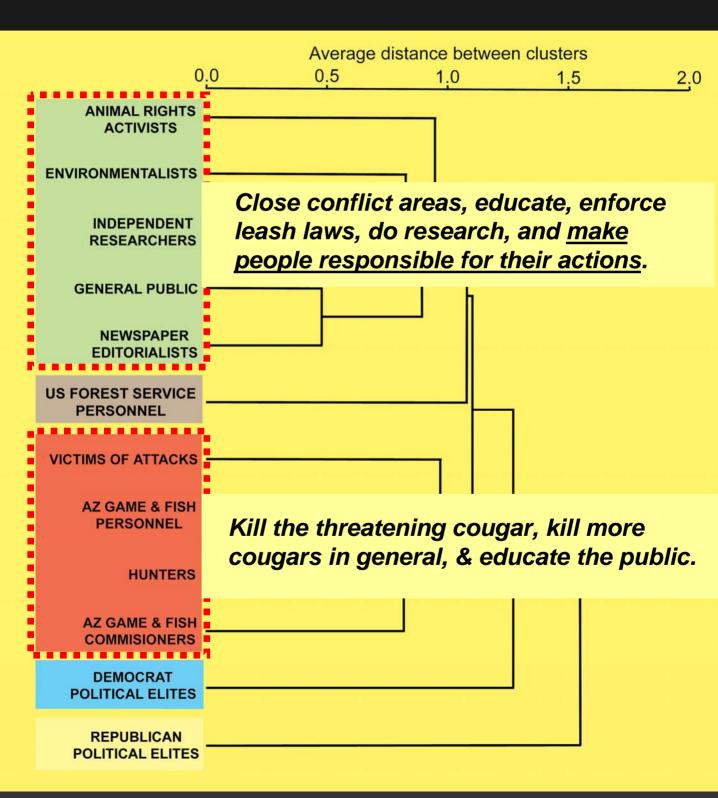
# **Discourse content** "The Problem"



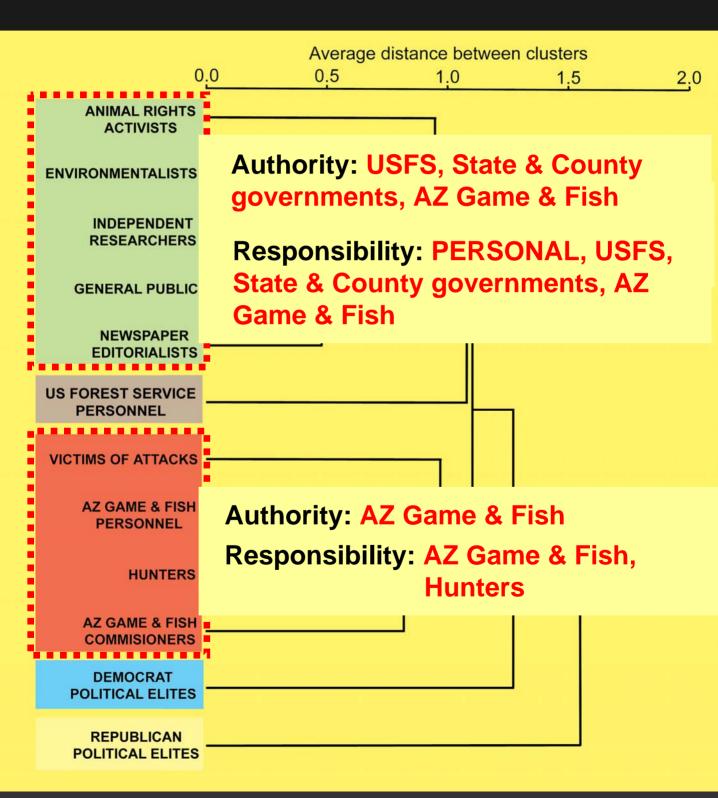
# **Discourse content** "The Problem"



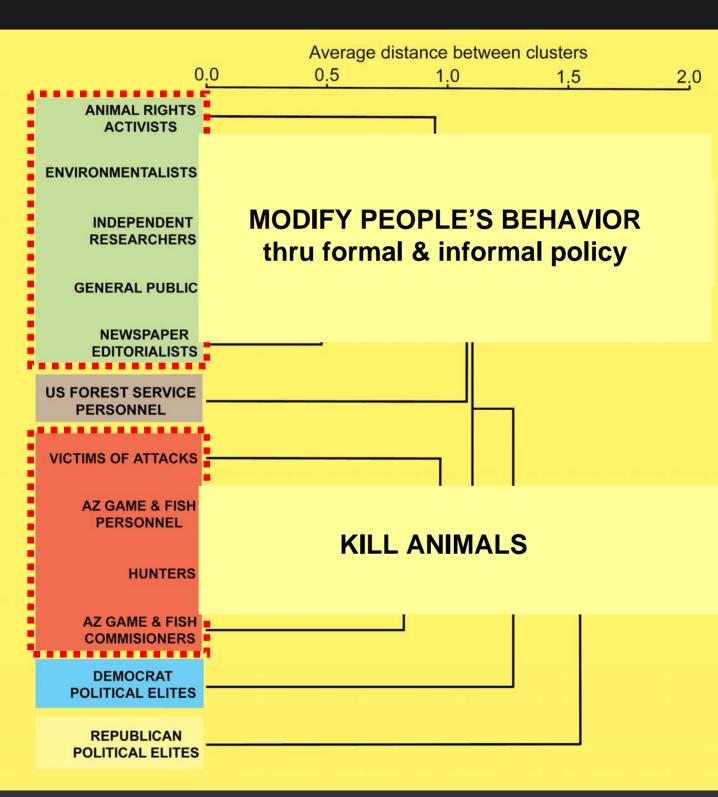
# **Discourse content** "The Solution"



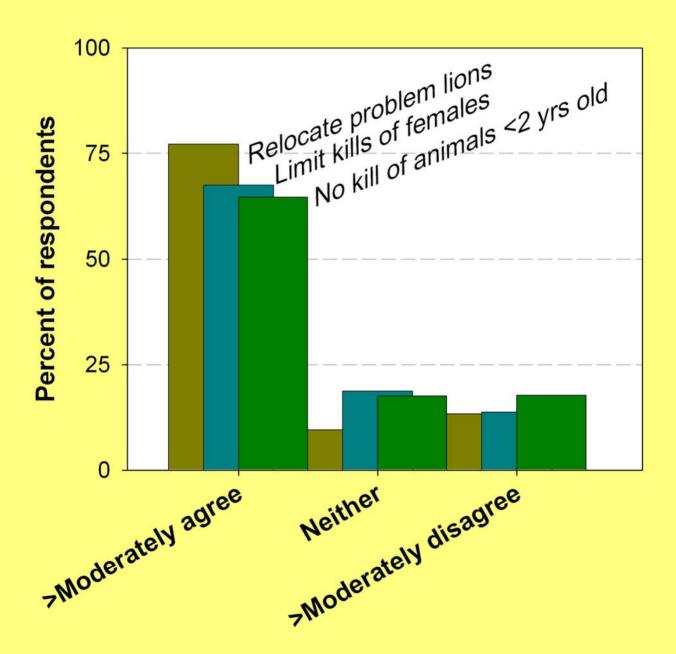
# **Discourse content** "The Solution"



# **Discourse content** "The Solution"



#### "The Solution"?



### Workshops to develop a standard protocol for responding to "incidents."



#### **REPORT OF THE MOUNTAIN LION WORKSHOP**



Several major clusters emerged from participant discussion during the four sessions: (1) The communication/decision making process of Game and Fish, (2) networking and collaboration with interested stakeholders, (3) educational outreach, and (4) funding efforts. These categories and their sub-themes are detailed below and in **Chart 12**, p. A-19). Several additional recommendations and next steps are outlined in **Chart 14**, p. A-25).

#### Agency Communication and Decision-Making Process

Many participants felt AGFD mishandled the communication and decision making process during the Sabino Canyon incident that inspired this public workshop. Participants agreed that there may have been an increased effort to educate people about the agency's protocol but that it was done too close, even after, the decisions were made. Some participants highlighted the need to create a new relationship with the media that will get education and decision processes to the public with plenty of notice. There is currently a communication gap between the public and the agency, although workshops, similar meetings to be held in the future, will close the gap.

Many participants did not fully understand the role of AGFD and stressed public misunderstanding about the agency's roles and responsibilities. A theme in this discussion was the need for AGFD to reach a larger constituency. Participants repeatedly suggested AGFD expand their constituency and adjust to take in the views of all (see below). Many participants stressed that AGFD needed to expand its constituency from a primary focus on hunters and anglers to the larger population that has an interest in wildlife and the outdoors. Game and Fish officials, when asked by participants, agreed on the need to incorporate anyone who enjoys wildlife in their educational outreach. Participants discussed a possible name change for the agency to reflect this larger constituency.

#### **REPORT OF THE MOUNTAIN LION WORKSHOP**

May 1, 2004

#### The Commission

#### Legislation **?**

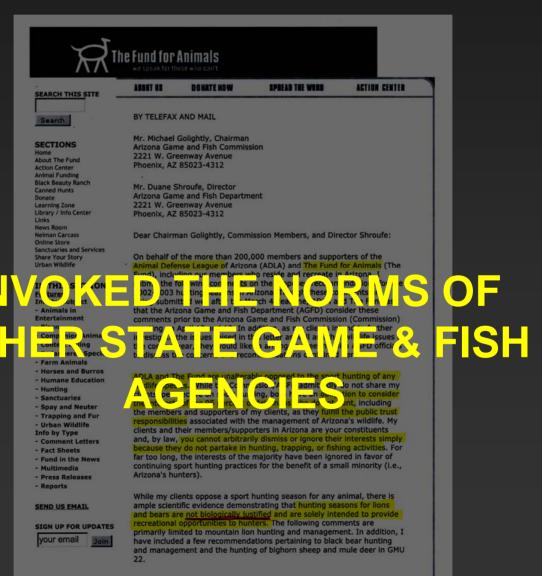
There is much passion on this issue from both the consumptive and nonconsumptive communities. The key points of debate are around representation and whether public-user groups are or are not represented. Participants generally disagreed about Commission members' expertise, experience, and accountability. The nonconsumptive community feels like they have no voice on the Commission at the present time (Chart 18, p. A-32).

#### Habitat Protection and Management

This issue was identified throughout the sessions as an area that needs more attention and consideration in the context of wildlife in the urban interface, public safety and wildlife management (**Chart 19, p. A-32**). Growth and development are tied to the destruction/disruption of wildlife habitat, and habitat protection and management is directly connected to the policy and practices associated with state land exchanges. Several participants spoke for retaining high quality trust land for wildlife habitat, with

### Change in hunting regulations & development of a management plan

(Stabilize expectations & increase legitimacy)



My clients are particularly concerned about the management of mountain lions in Arizona. As described in greater detail below, the AGFD has no idea as to how many lions exist in the state, has no mechanism to accurately track the number of lions killed annually by sport hunters and/or through depredation kills, uses incorrect density factors when estimating unit-specific lion population numbers, has never assessed the

#### Modal Value Profile of Game & Fish Employees

# SKILL ← RESPECT ← POWER

Demands by Animal Rights Activists

- Stop all cougar hunting
  - Stop hunting females
    - Stop using hounds
      - Curtail the hunting season
        - Require inspection of kills
          - Require closure of hunt in GMUs meeting quota
            - Prepare & implement management plan
              - Revise & justify cougar density estimates

lo effect on harvest

Demands by Animal Rights Activists

- Stop all cougar hunting
  - Stop hunting females
    - Symbolic rather
       than substantive

Require inspection of kills

### Designed to conform state with broader norms

 Revise & justify cougar density estimates

## **Alternatives?**

Substantive reorientation toward civility and liberal democracy will require:

Restructured funding to represent a broader spectrum of stakeholders.

Rules for Commission composition that insure broader stakeholder representation.

Change in agency culture to engender democratic & civil ideals of governance.

Change in societal norms & expectations...?

# **Alternatives?**

### **Nearer term:**

Develop parallel institutions of wildlife management...

involving a broad spectrum of stakeholders...

dealing with concrete rather than symbolic issues.