



Visitor Injury in National Parks

American Public Health Association
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- Are injuries a problem?
- What is NPS doing about it?
- What's the future direction?

NPS Mission

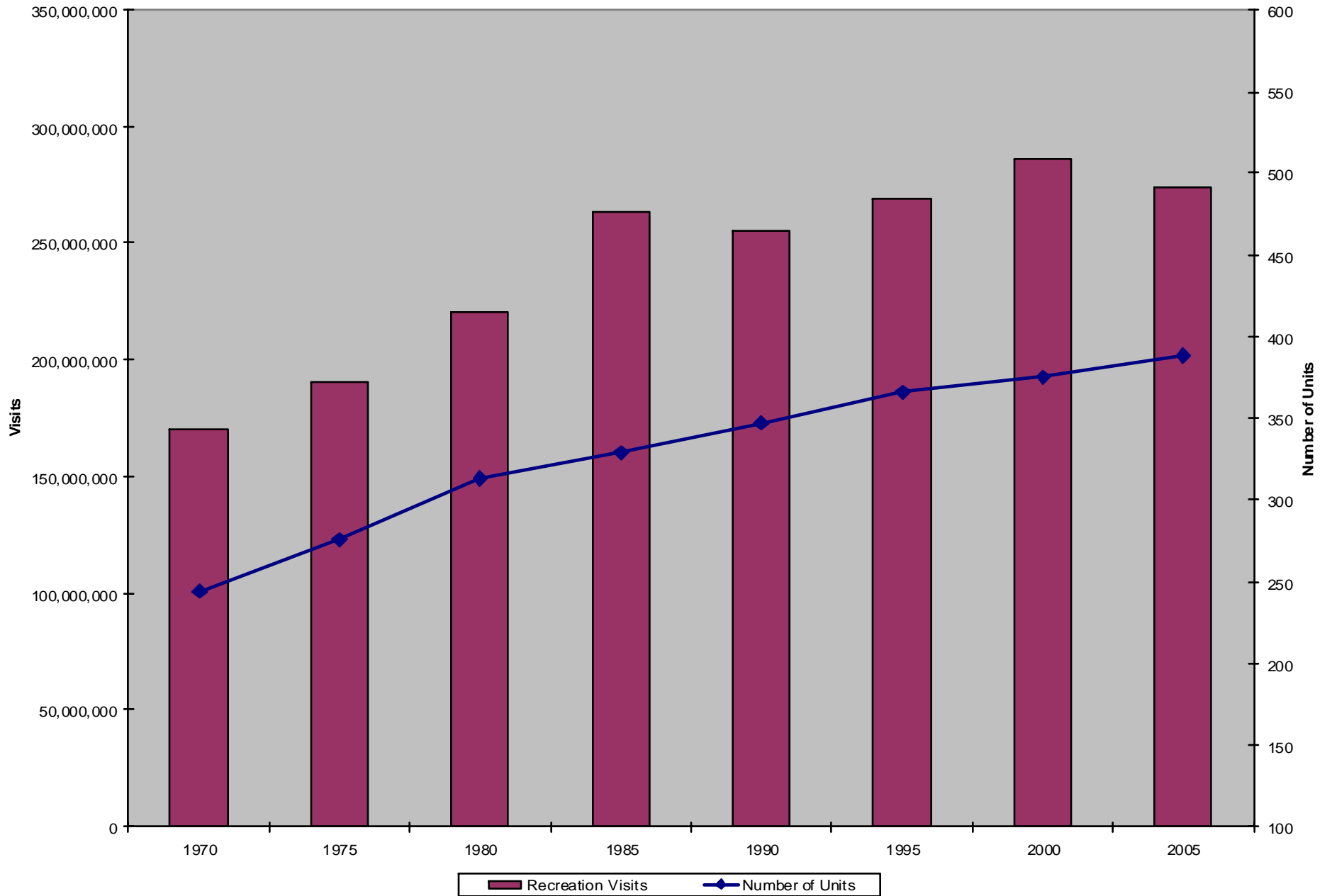
“ ..to conserve the scenery and the natural and historic objects and wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

Title 16 Chapter 1, Section 1

Background

- National Park Service created 1916 by an Act of Congress
- 392 units in the National Park System
- 84 million acres
- 2006 visitation of 272 million with
 - 11 billion visits since 1916

NPS Recreation Visits and Units, 1970 - 2005

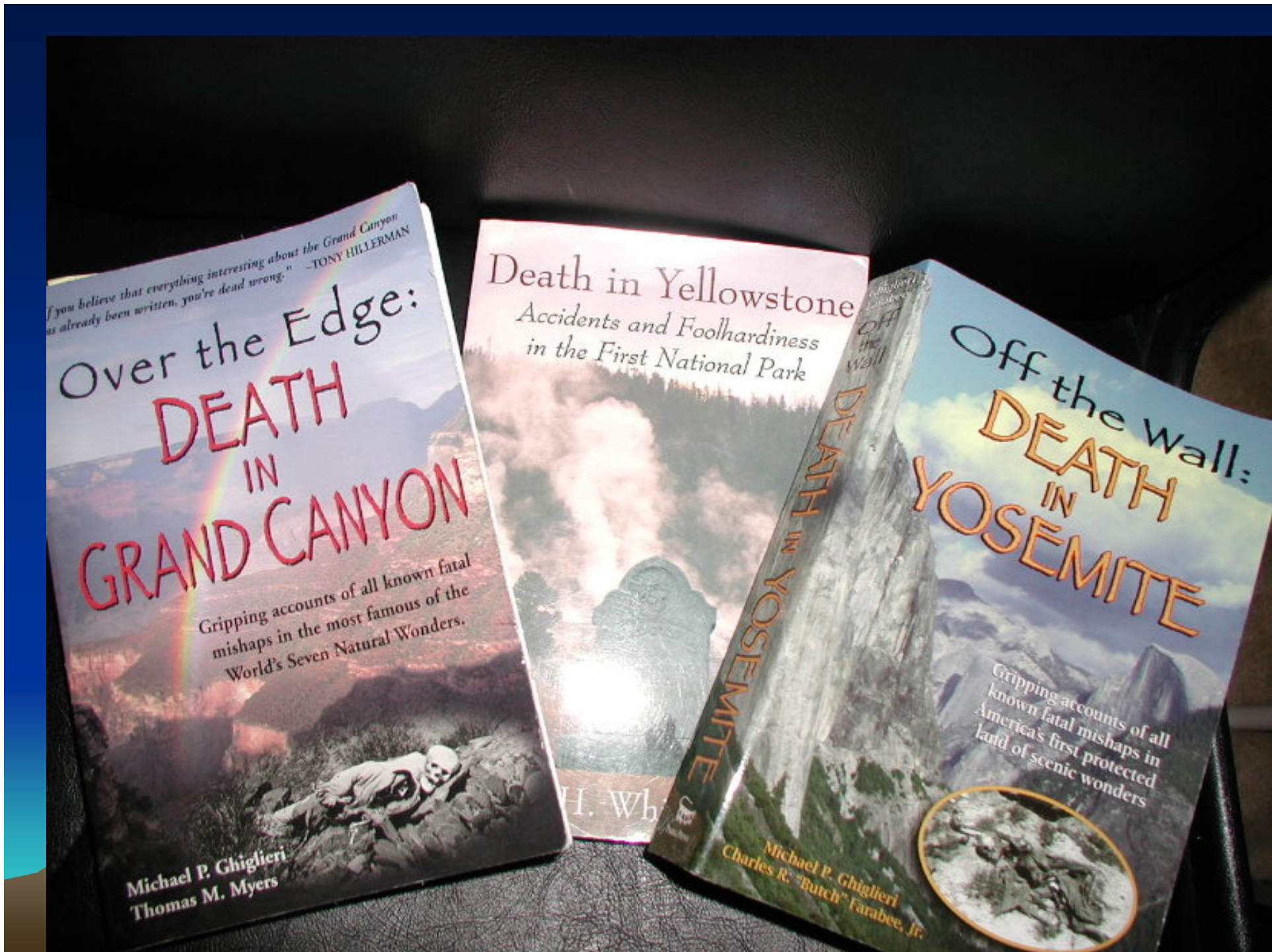


NPS Management Policy

Section 8.2.5.1, 2006

The saving of human life will take precedence over all other management actions as the Park Service strives to protect human life and provide for injury-free visits

Are Injuries a Problem in the NPS?



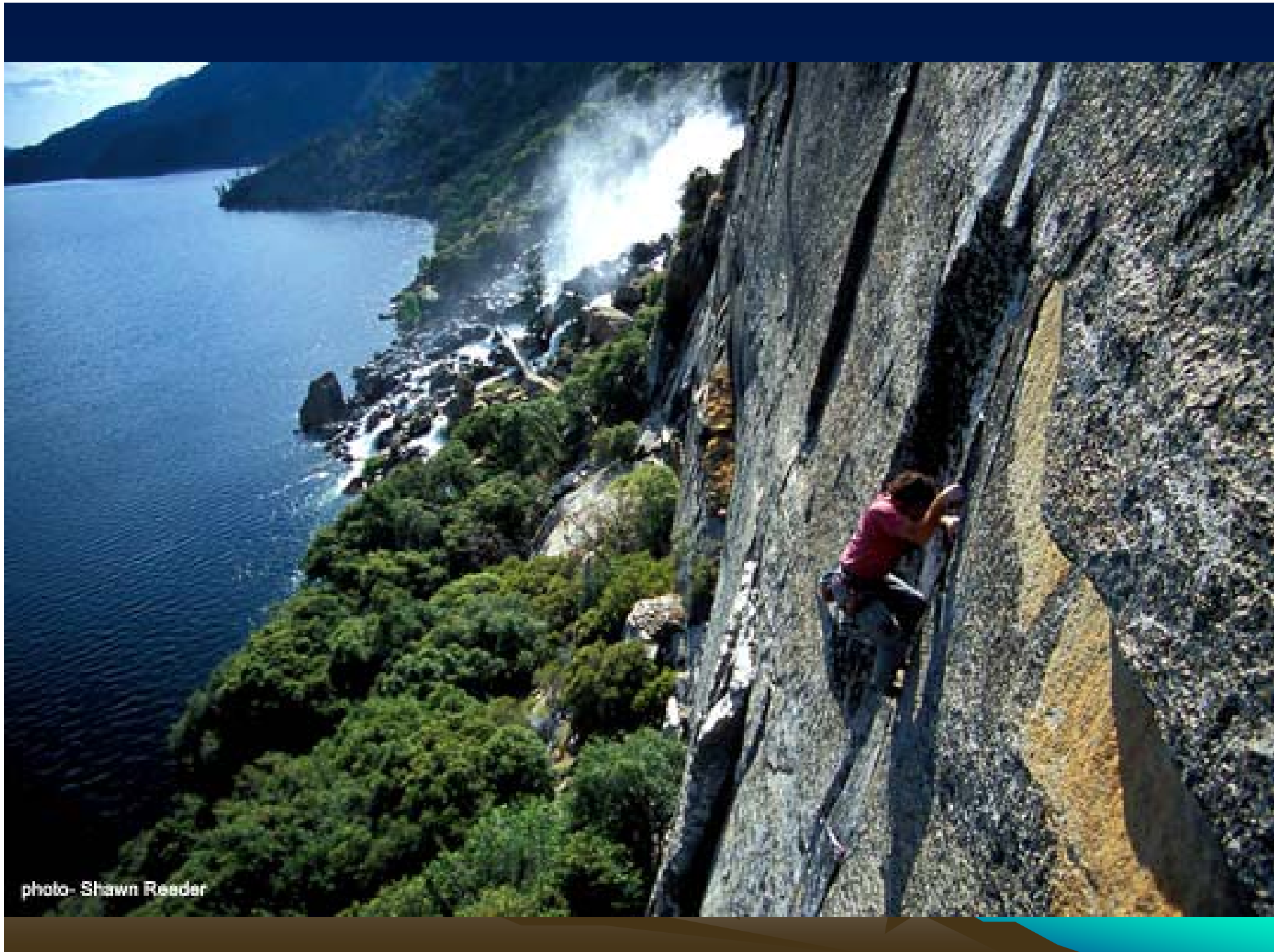


photo- Shawn Reeder



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Methods

- Unintentional serious injuries and fatalities among park visitors in 2005 and 2006
- Fatally injured visitors between Jan 1, 2007 and Sept 30, 2007
 - By activity, cause, demographics
- Search and Rescue events in 2006
 - By activity, cost, location

Methods

NPS DATA SOURCES

- Performance Management Data System (PMDS)
- Morning Report
- Search and Rescue Data
- Emergency Medical Services Data

Results

- Average of 5100 serious injury events per year (since 2005)
- Average of 150 fatalities per year (since 2005)

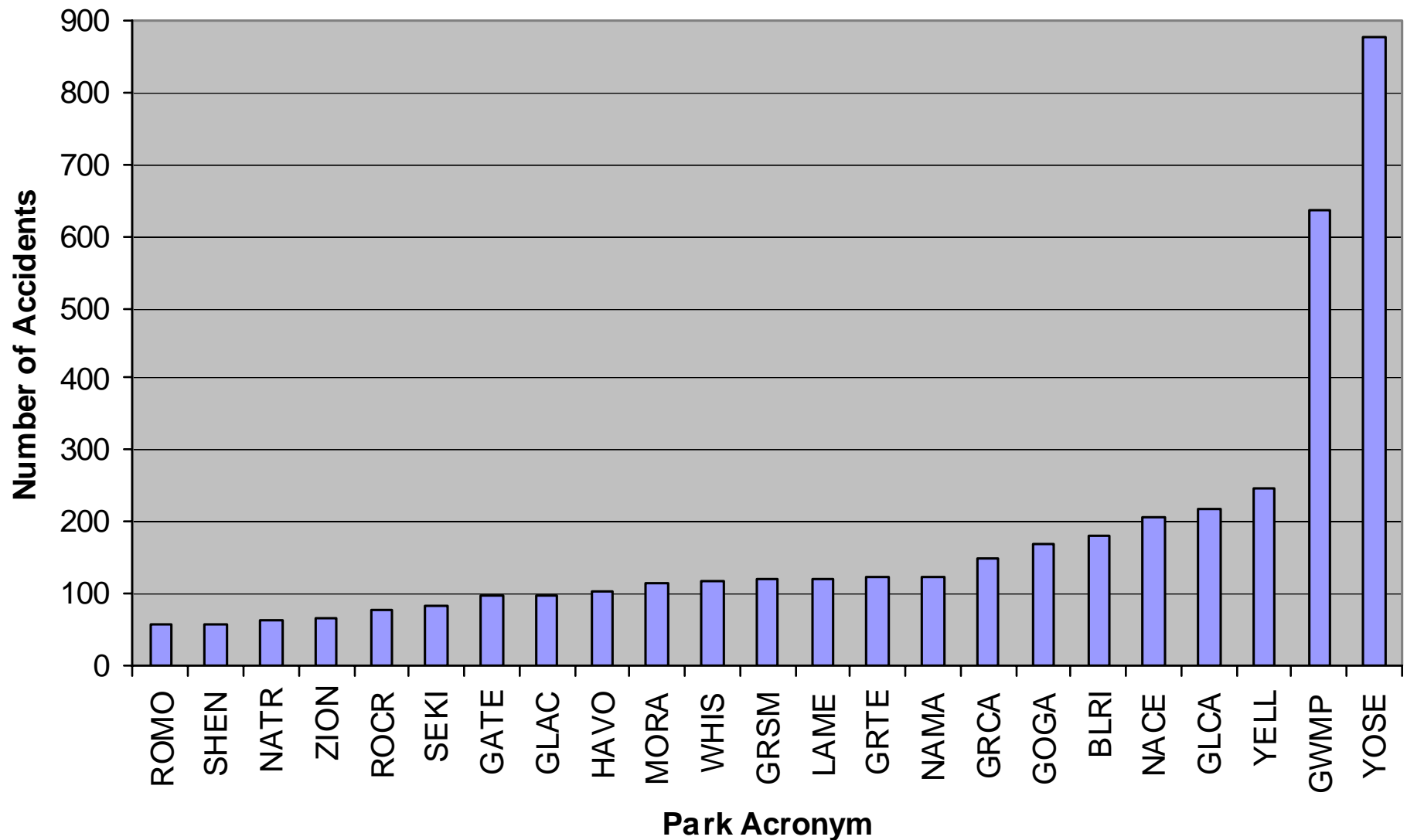
* Only unintentional injuries (PMDS)

Results

- On average a visitor dies in a NPS unit every 2.5 days*
- An average of 15 people are seriously injured in a NPS unit everyday
- Most injury events (90%) are reported by ~50 parks

Source: GPRA 2005 and 2006 * Due to Unintentional Injuries

23 Parks Reported >50 Injury Events in 2006

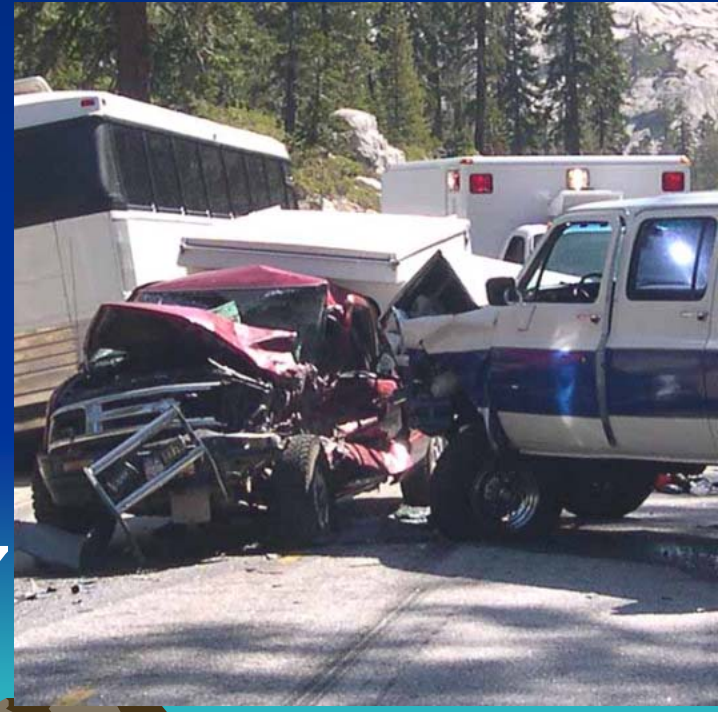


Morning Report Fatality Data From January 1- Sept 30, 2007

Total Unintentional Fatalities*: 112

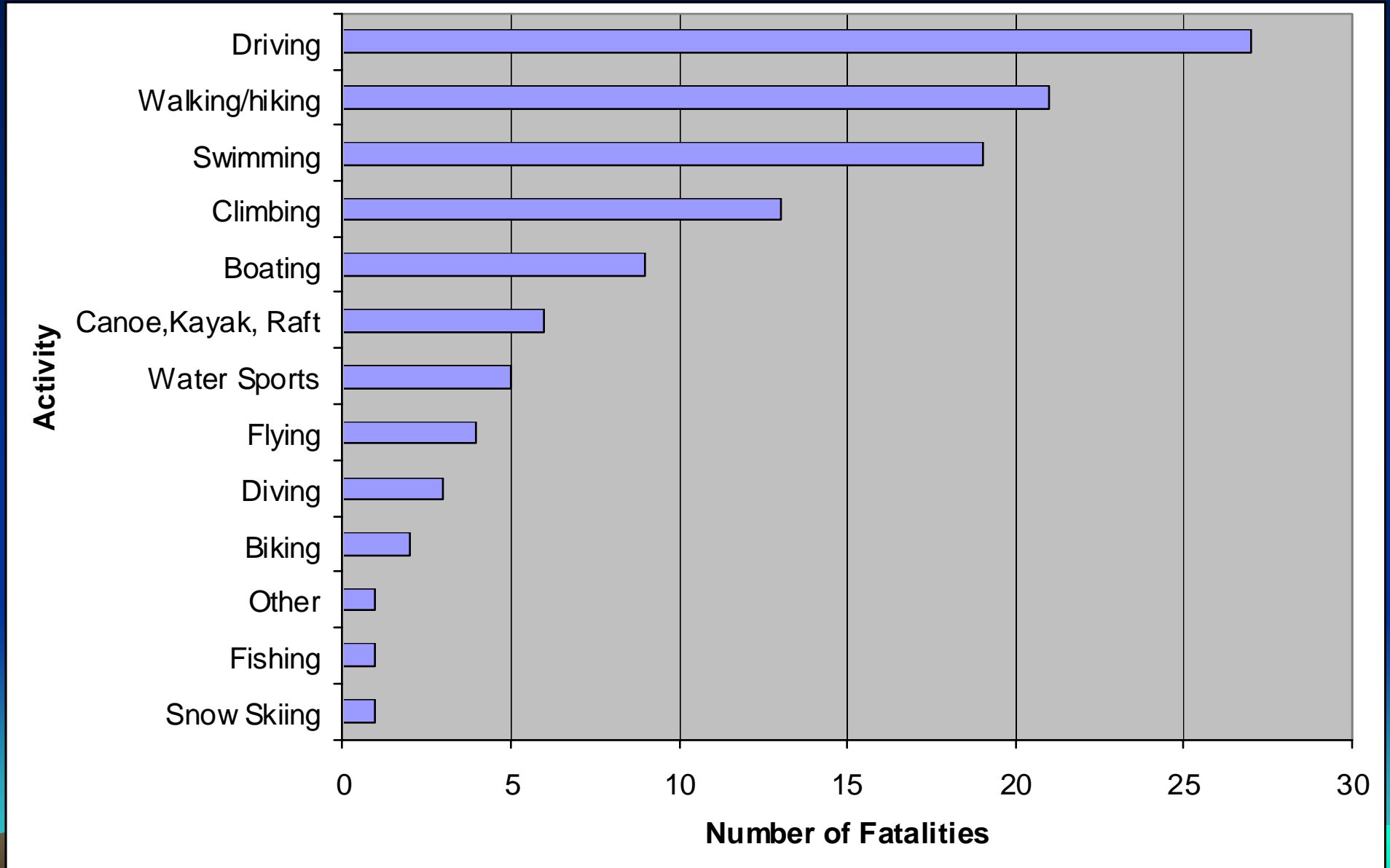
- Recreational Fatalities: 85
 - Male: 78% Female: 22%
 - Median Age: 38 years
 - Range: Age 5 to 80

- Motor Vehicle Fatalities: 27



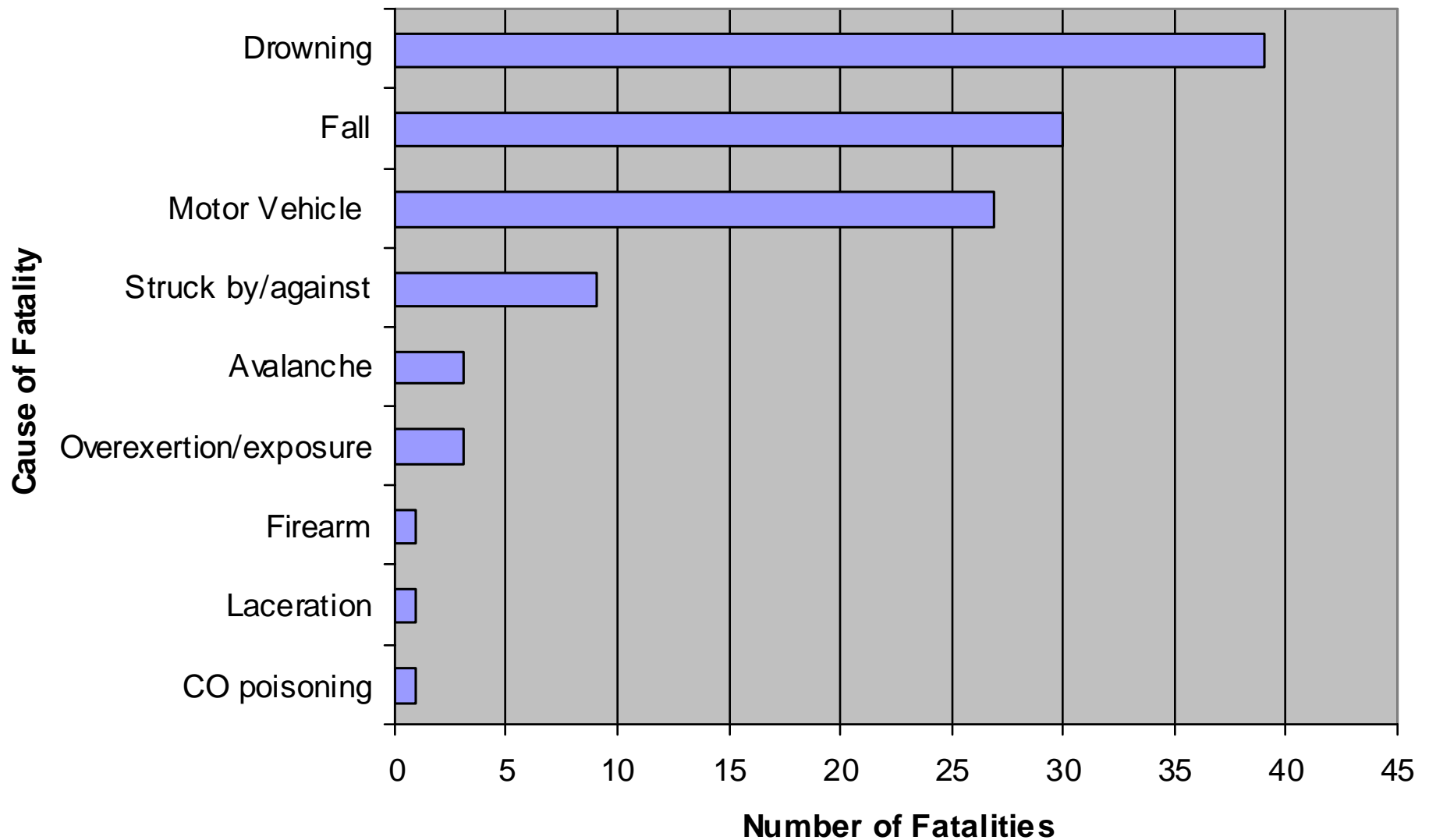
*Extracted from *Morning Report*. Excludes intentional injuries (i.e. suicides, crimes), fatalities due to pre-existing condition

Number of NPS Fatalities by Activity Reported from January- October 1, 2007*



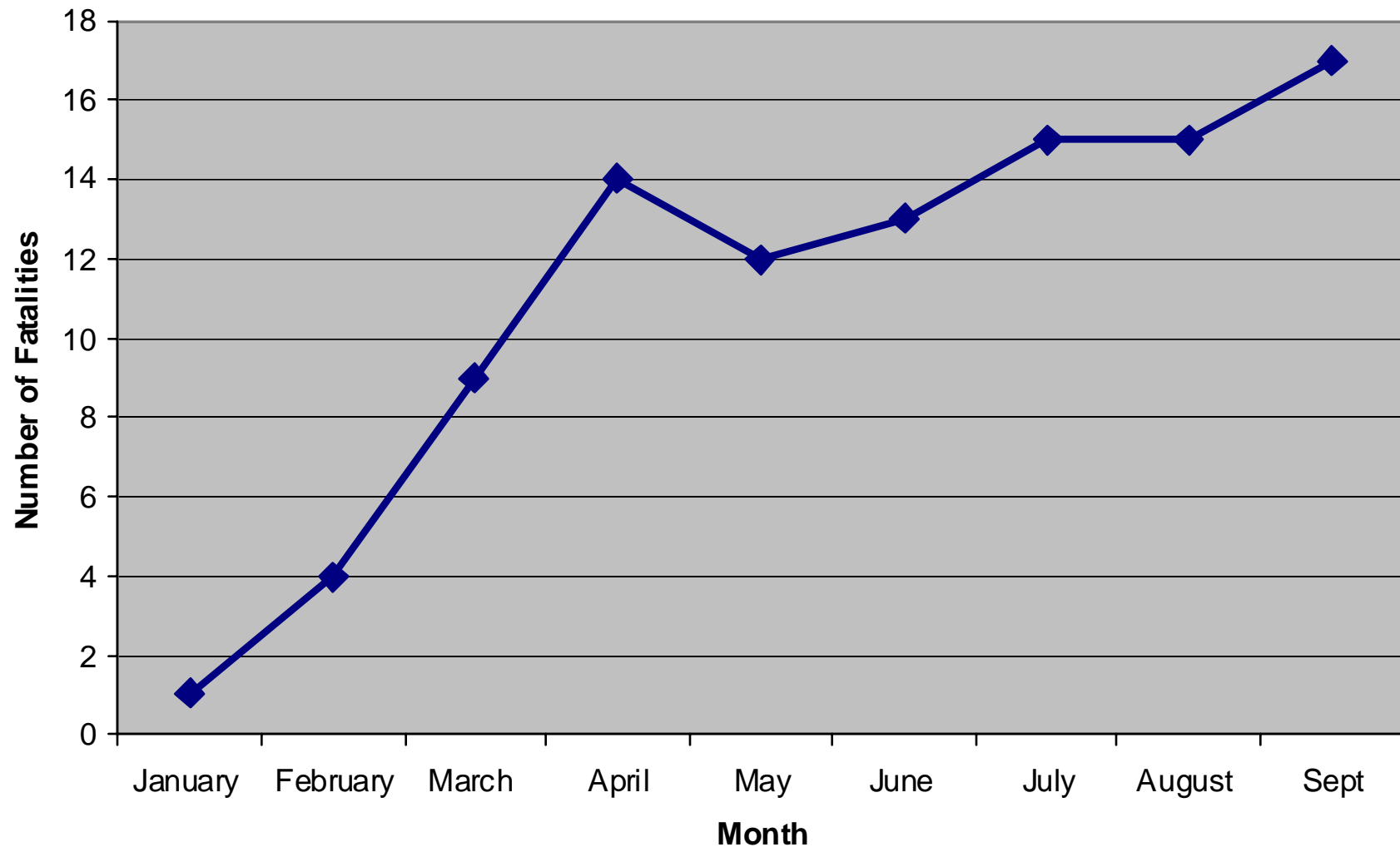
*Reported in Morning Report- extracted from Inside NPS Incidents

Number of NPS Fatalities by Cause Reported from January- October 1, 2007*



*Reported in Morning Report- extracted from Inside NPS Incidents

Fatality Trend from Jan-Sept 2007



*Reported in Morning Report- extracted from Inside NPS Incidents

Emergency Medical Services Search and Rescue - 2006

- 24,559 EMS responses
 - 2606 Advanced Life Support cases
 - 299 Fatalities (207 traumatic)
- 3623 SAR Incidents
 - Fatalities 119
 - Injured 1445
 - Lives saved 1211



Data from Law Enforcement/Emergency Services, Annual Report, 2006

SAR Causes - 2006

- Hiking 36%
- Swimming 17%
- Boating 15%
- Rock climbing 5%



Data from Law Enforcement/Emergency Services, Annual Report, 2006

SAR Locations - 2006

- Beach/Surf Zone 20%
- Ocean 17%
- Lake 6%
- River 6%
- High elevation 17%
- Other mountain terrain 22%



Data from Law Enforcement/Emergency Services, Annual Report, 2006





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Limitations

- Parks may under report if injury is not documented by park
- Parks may define “serious” injury differently.
- Parks do not have an adequate data collection system
- Parks have different data collection systems in place that aren’t linked

What is NPS doing about it?



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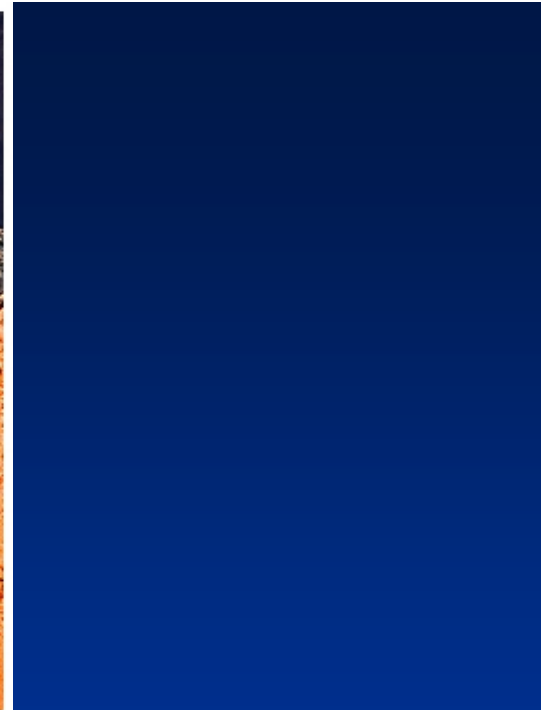




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Taking Action in our Parks...

Blue Ridge Parkway

Oversized and Eye-catching





- Each year over 450 motor vehicle accidents occur on The Blue Ridge Parkway.
- Over 250 of these result in serious injury.
- Beware of rapidly changing road character and environmental conditions.
- The speed limit is strictly enforced for your safety.



The Blue Ridge Parkway

**Some wonderful
things to observe:
the mountains,
the trees, the flowers,**



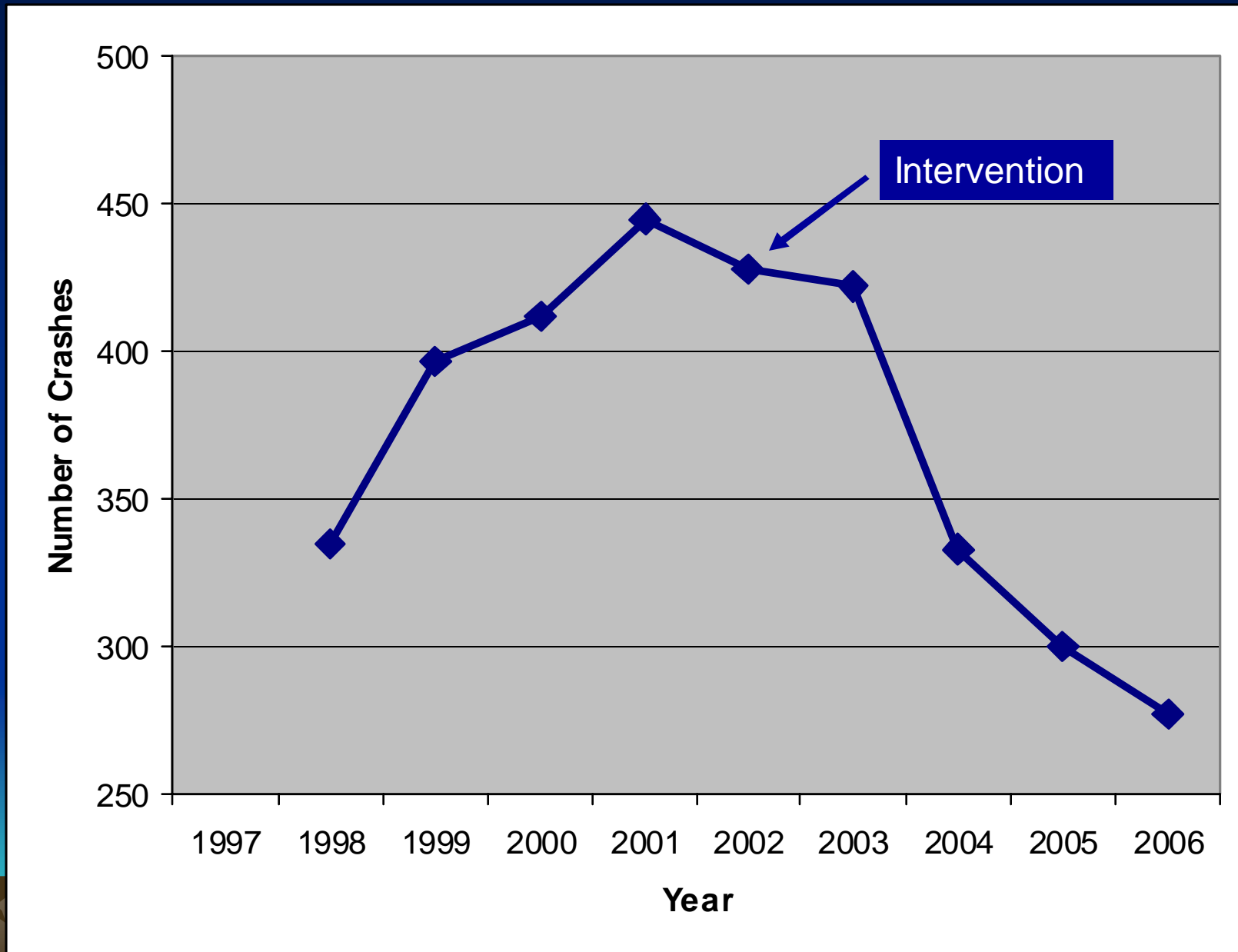
**the curves, the traffic,
and the 45 mph
speed limit.**



The Blue Ridge Parkway

It's beautiful, but potentially dangerous. Each year Rangers respond to over 450 serious accidents. Don't ruin a wonderful drive. Enjoy the view, but watch the road.

Tracking MVCs in Blue Ridge PKWY from 1998-2006*



*Collision numbers do not include deer/animal involved MVCs

HIKE SMART INITIATIVE

Grand Canyon

OVER **250** PEOPLE ARE
RESCUED FROM THE DEPTHS
OF GRAND CANYON
EACH YEAR...

Most of them look like him.

A surprising majority of victims rescued from Grand Canyon are young, healthy males between the ages of 18 and 40 attempting to hike to the river and back in one day. No matter what your age or health status, here are some tips to help you enjoy the Grand Canyon by Hiking Smart:

- 1. stay hydrated (drink plenty of water and electrolyte drinks)
- 2. eat often (carbohydrates & salty foods)
- 3. avoid hiking in the heat of the day (10am to 4pm)
- 4. rest often (sit in the shade)
- 5. get wet (wet your shirt, hat, & wear a wet bandanna around your neck)
- 6. DO NOT attempt to hike down to the river and back in one day.



THE NATIONAL SYSTEM OF PUBLIC LANDS
VULNERABLE TO THE EFFECTS OF CLIMATE CHANGE
OFFICE OF PUBLIC LANDS

- Increase hikers' awareness of heat related risks associated with hiking

- Heat stress incidents fell from 220 (1996) to 96 (2004).

GLEN CANYON RECREATION AREA

2006 Winner

Andrew C. Hecht Public Safety Award

SERIOUS INJURIES OCCURING ON LAKE POWELL APRIL-JUNE 2006





Actions Taken by GLCA

- Prohibit kite tubes
- Educate visitors
- Notify others
- Remove product from market

*What's the future direction of
injury prevention?*



RESPONSE

PREVENTION

Program Initiatives

- Conduct data collection and analysis of injuries
- Conduct assessment of tort claims
- Build Internship/ Student fellowship Program
- Build NPS Injury Control Network
- Identify effective risk communication methods
- Work with Junior Ranger Program

Big Cyprus

On February 16, rangers received a report of a couple lost inside the Loop Unit. The pair had entered that area of the park on bicycles from Loop Road and thought that they were on the Florida Trail. By late afternoon, they realized that they were lost. They had no food, water or compass with them, but did have a cell phone that they used to call 911. The couple had made no efforts to find out about the area before entering the preserve, and had taken an old trail which was about two miles east of the Florida Trail.



Questions??

