Results of the 2009 Safety Survey

Presented to
The Hydraulic Power Committee
Birmingham, Alabama
October 14, 2009

What's Different in 2009?

- Seventeen companies responded (11 last year)
  - 55,311 MW represented
  - 5,660 employees
  - 10.6 Million work hours
- Data from (2000-2008)
- Partnership in survey with EUCG (Electric Utility Cost Group)
- Survey in the form of a "part 1 – core" and part 2 – additional information".
- No big changes in information, only in the execution of the survey and data analysis.

Participants: Seventeen companies responded

- Alabama Power
- Ameren
- Safe Harbor Water and Power
- First Light
- PS&G
- Tacoma Power
- TVA
- OPG (Ontario Power)
- USACE
- Alcoa
- Avista
- Exelon
- Minnesota Power
- PPL Holtwood
- South Feather
- WE energy

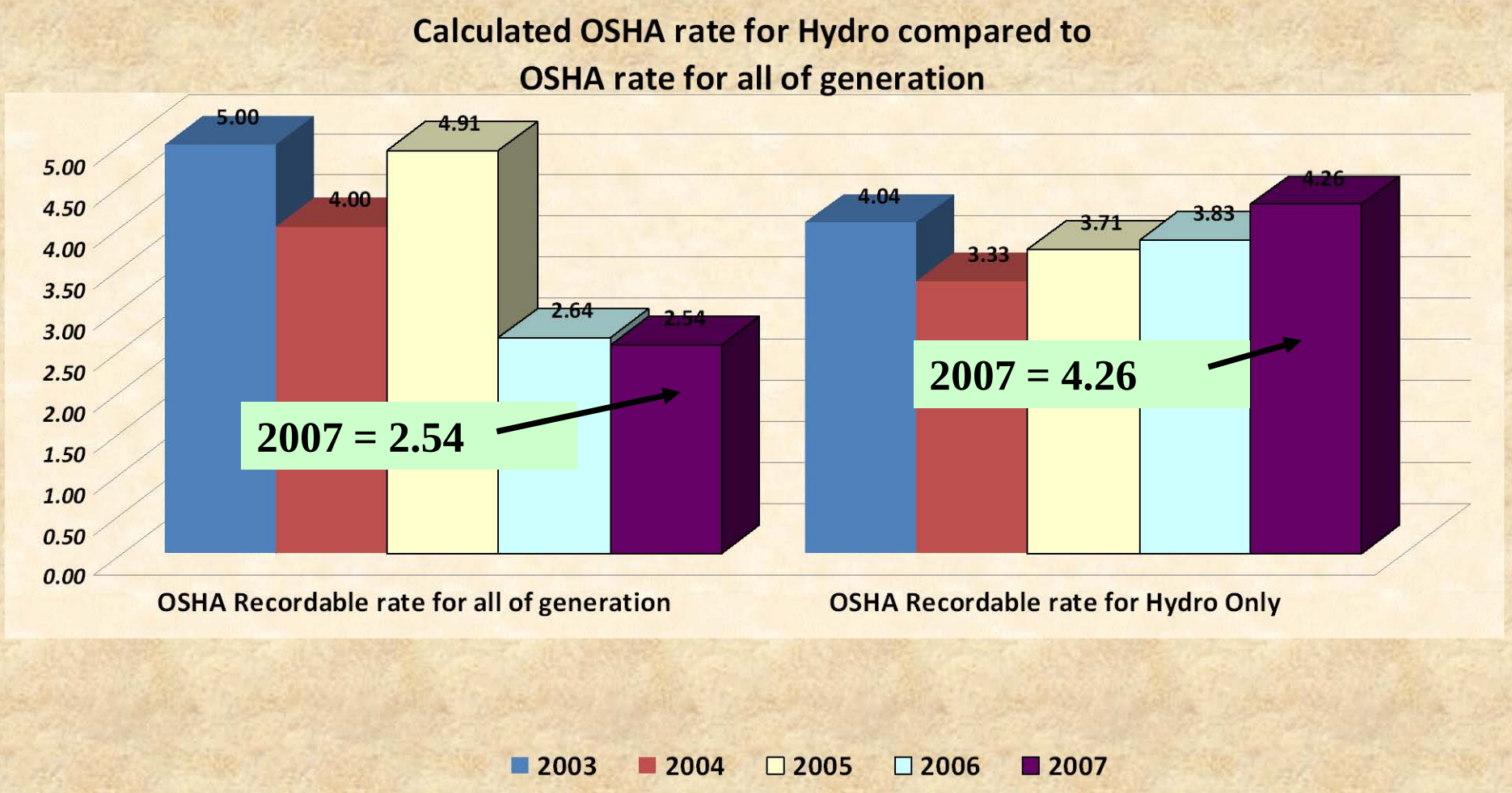
The 2009 Survey

- Questions centered around (2000-2008):
  - OSHA Rate for Hydro vs. all generation
  - Severity of incident
  - Age at the time of the incident
  - Contributing Factors
  - Time of day are incidents happening?
  - Trends?

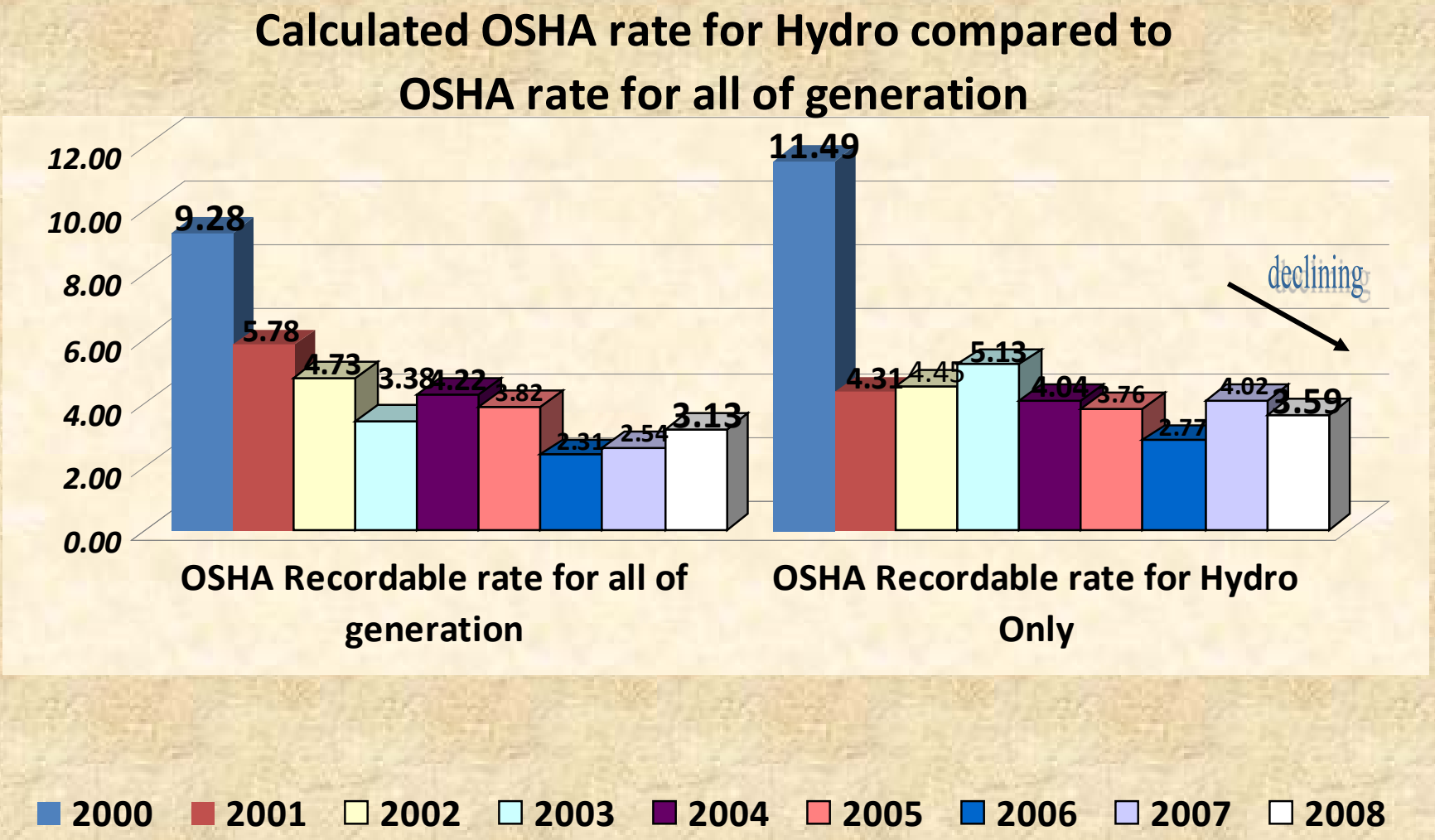
General Trends

- One fatality
- Number of medical attention/injuries decreasing.
- Number of lost time cases flattened.
- OSHA Recordable rate and lost time rate show steep increase year over year then a sudden downturn in 2008.
- First aids climbing
- Hydro Generation slightly under performs fossil by comparison.

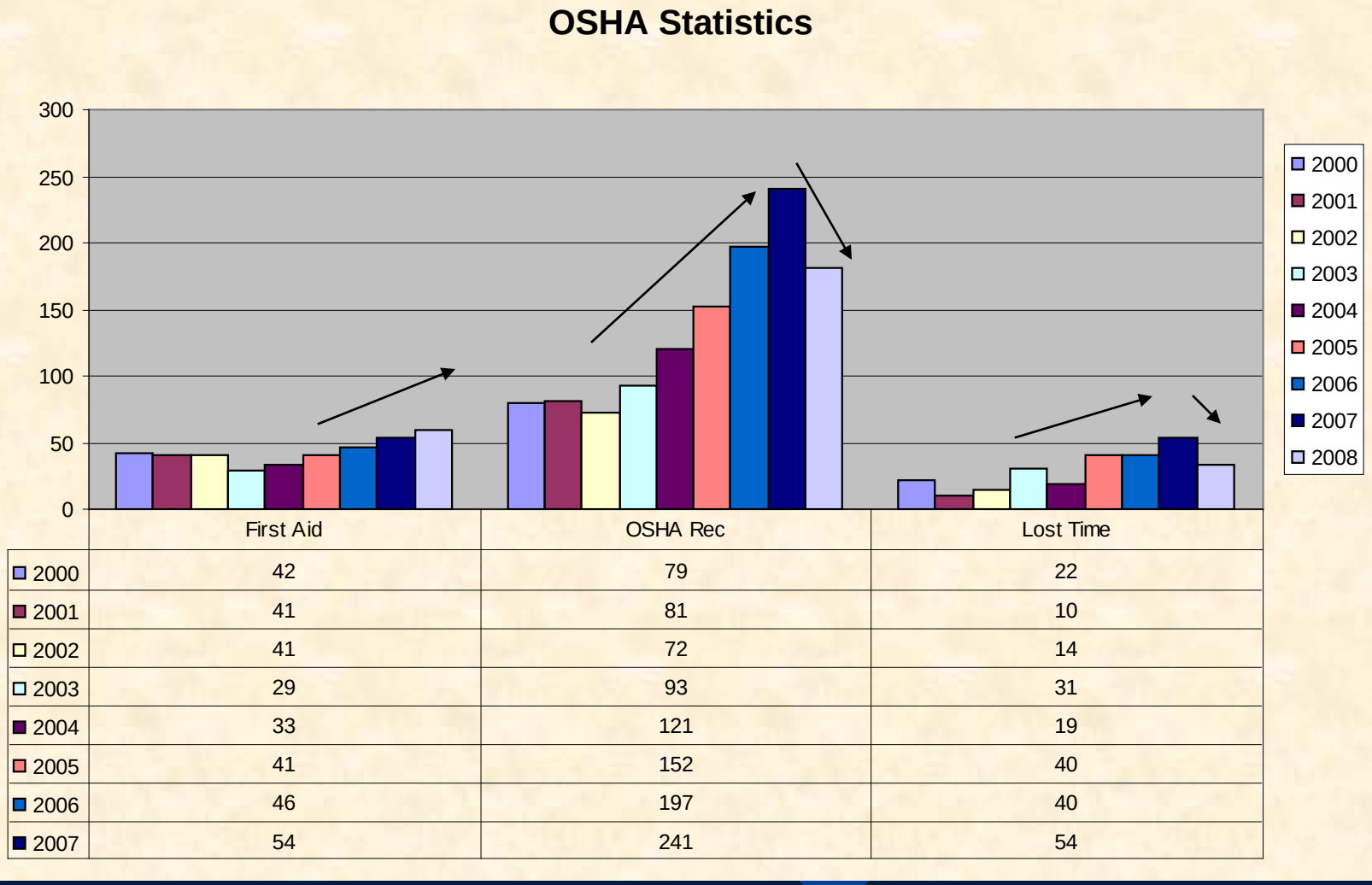
2008- A look at last year



2009- Rate

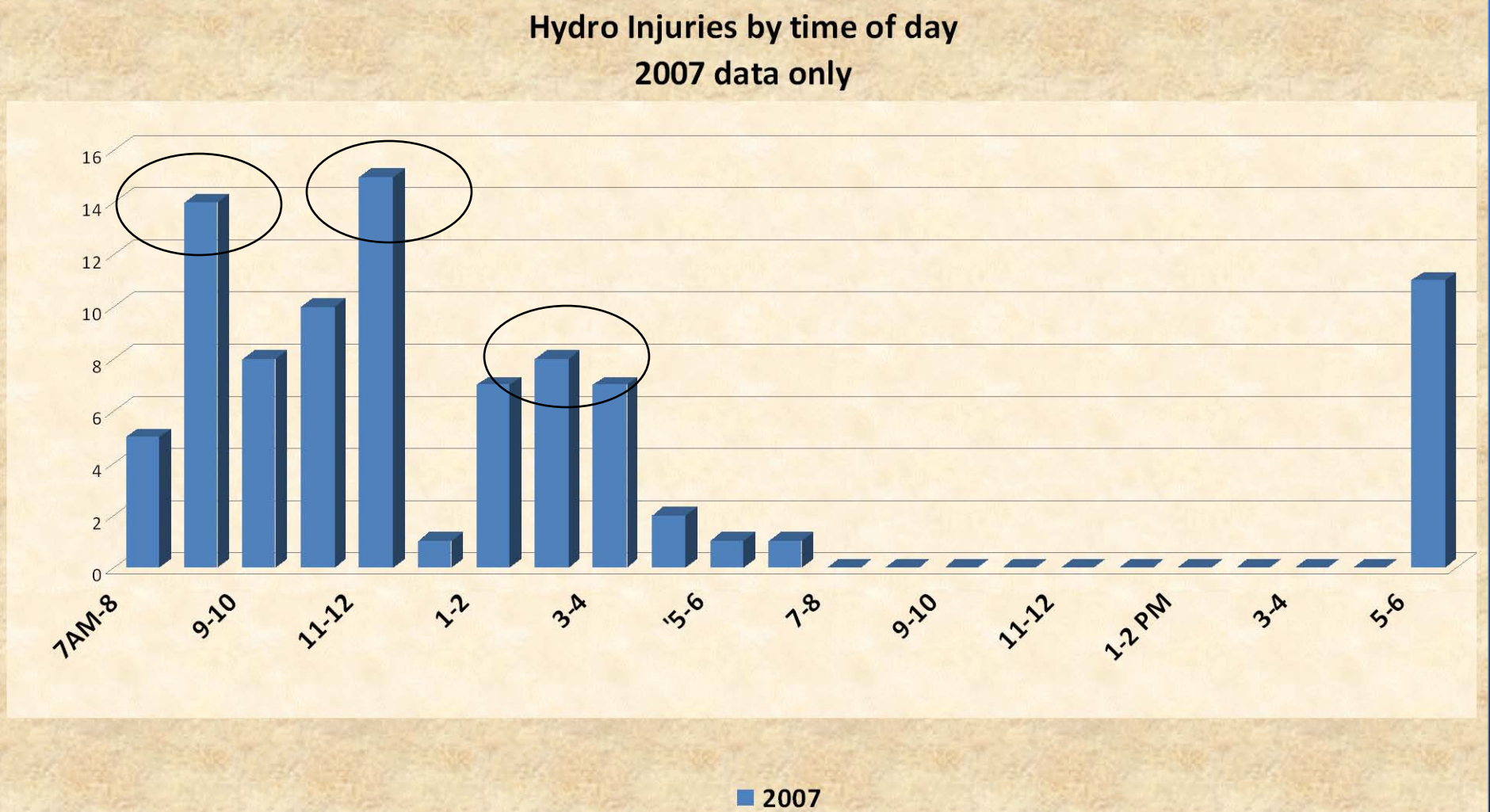

Calculated OSHA rate for Hydro compared to OSHA rate for all of generation
12.00
10.00
8.00
6.00
4.00
2.00
0.00
9.28
5.78
4.73
3.38
4.22
3.82
2.31
2.54
3.13
11.49
4.31
4.45
5.13
4.04
3.76
2.77
4.02
3.59
declining
OSHA Recordable rate for all of generation
OSHA Recordable rate for Hydro Only
2000
2001
2002
2003
2004
2005
2006
2007
2008

2009 – Number of Incidents, note decline in last year

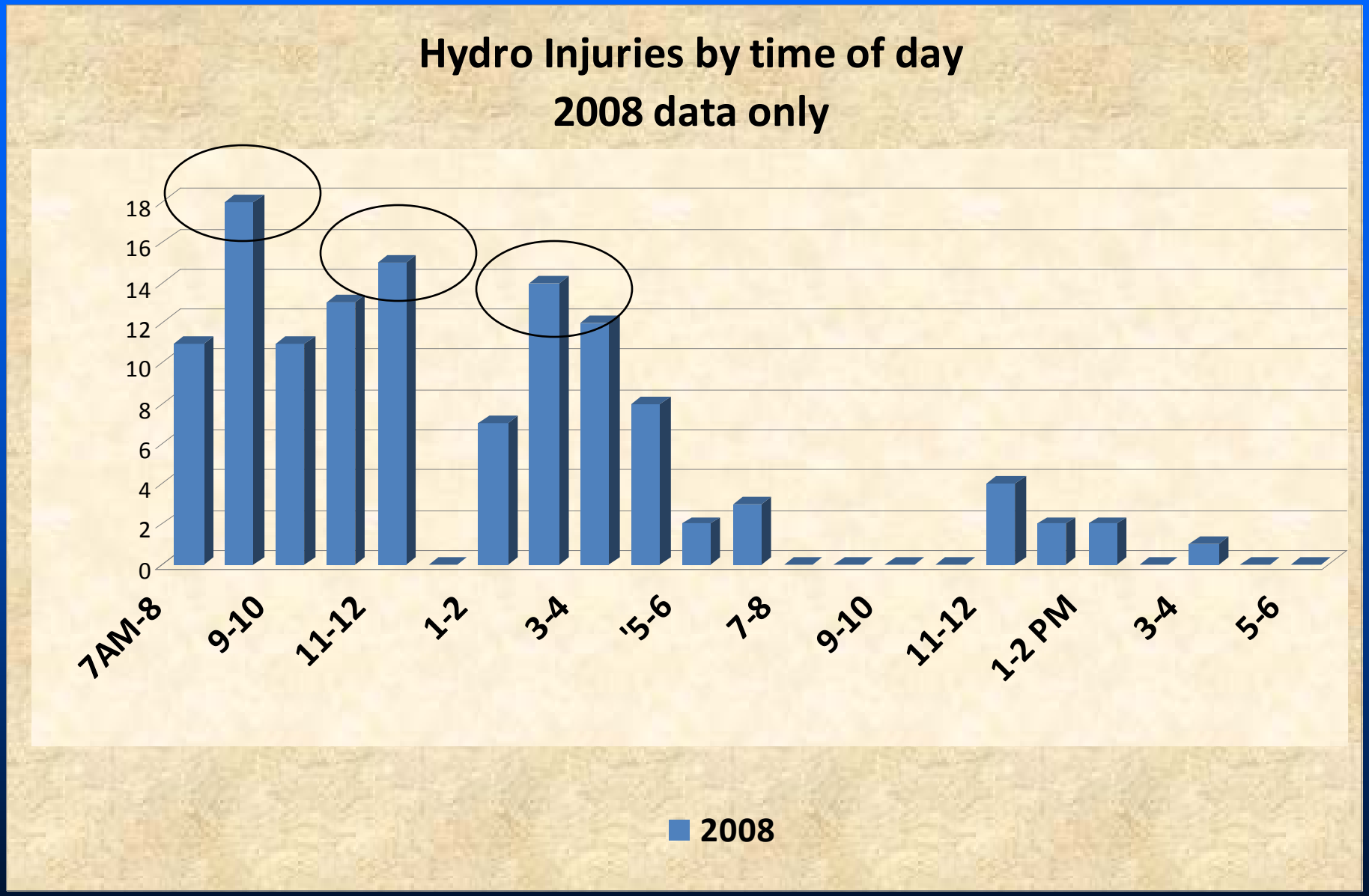


	First Aid	OSHA Rec	Lost Time
2000	42	79	22
2001	41	81	10
2002	41	72	14
2003	29	93	31
2004	33	121	19
2005	41	152	40
2006	46	197	40
2007	54	241	54
2008	**59**	**181**	**34**

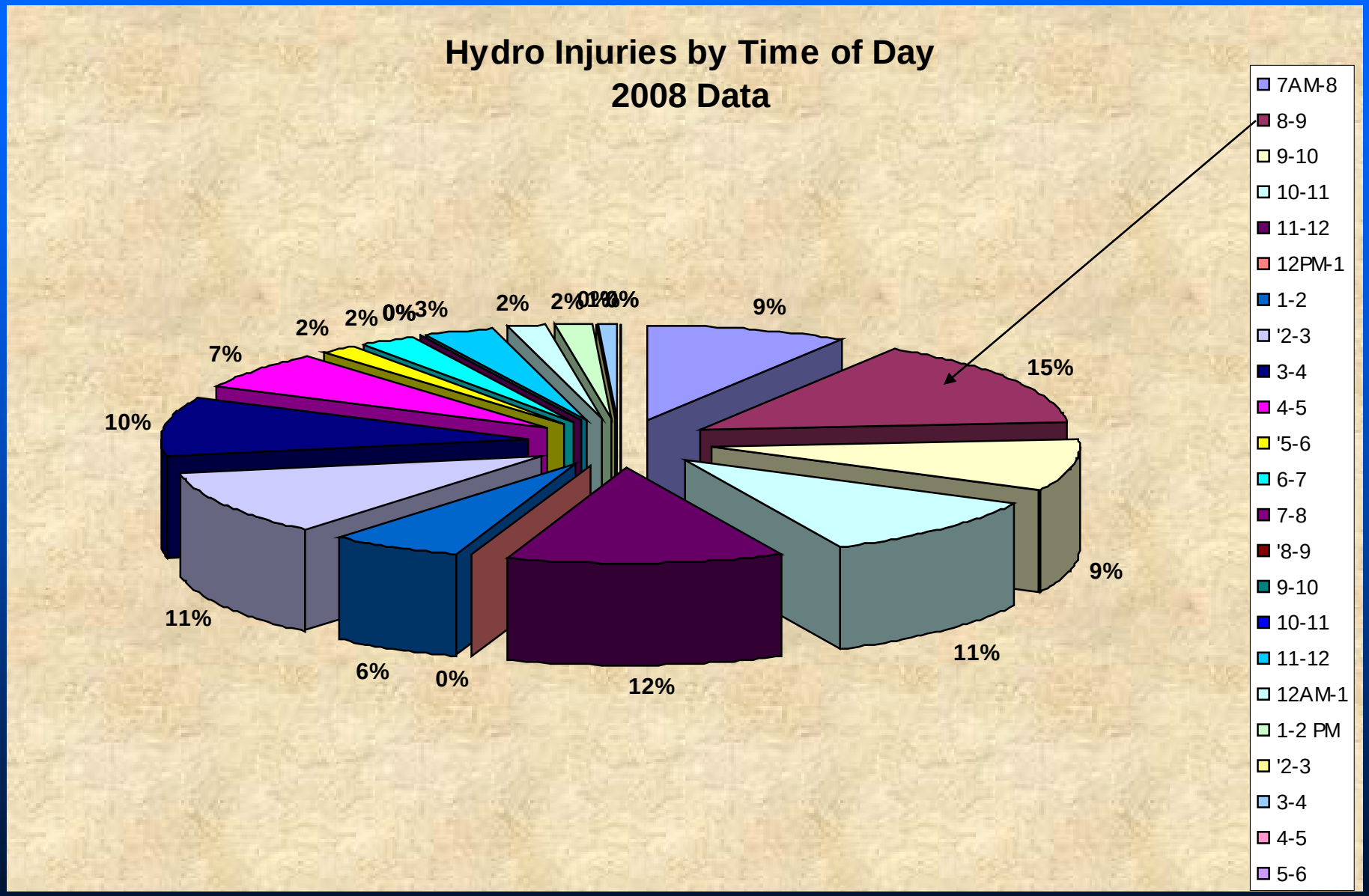
2008


Hydro Injuries by time of day
2007 data only
16
14
12
10
8
6
4
2
0
7AM-8
9-10
11-12
1-2
3-4
'5-6
7-8
9-10
11-12
1-2 PM
3-4
5-6
2007

2009

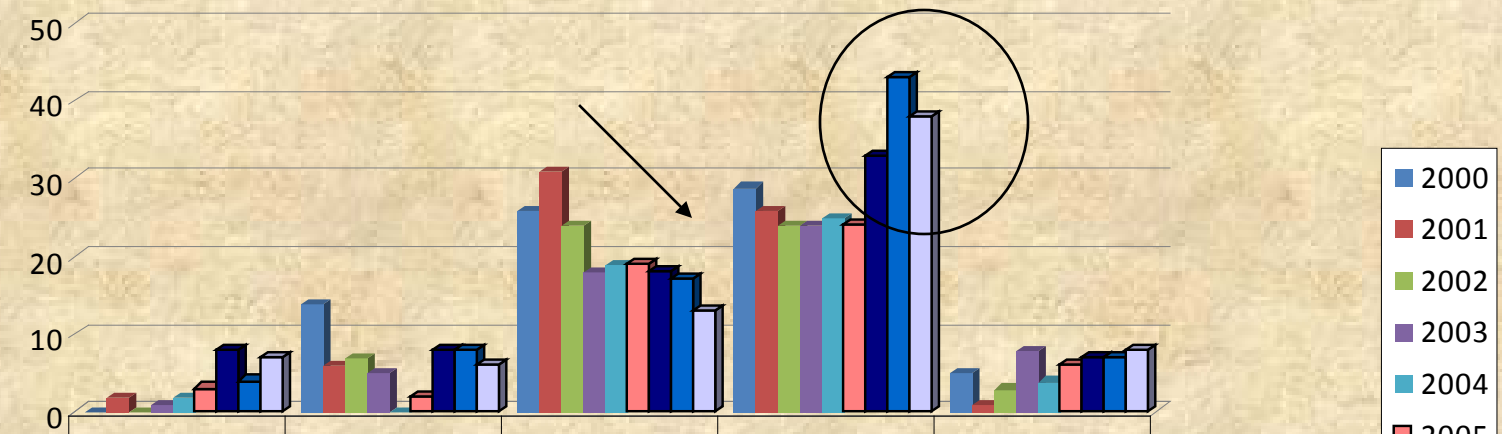

Hydro Injuries by time of day
2008 data only
18
16
14
12
10
8
6
4
2
0
7AM-8
9-10
11-12
1-2
3-4
'5-6
7-8
9-10
11-12
1-2 PM
3-4
5-6
2008

2009


Hydro Injuries by Time of Day
2008 Data
9%
15%
9%
11%
12%
0%
6%
11%
10%
7%
2%
2%
0%
3%
2%
2%
7AM-8
8-9
9-10
10-11
11-12
12PM-1
1-2
'2-3
3-4
4-5
'5-6
6-7
7-8
'8-9
9-10
10-11
11-12
12AM-1
1-2 PM
'2-3
3-4
4-5
5-6

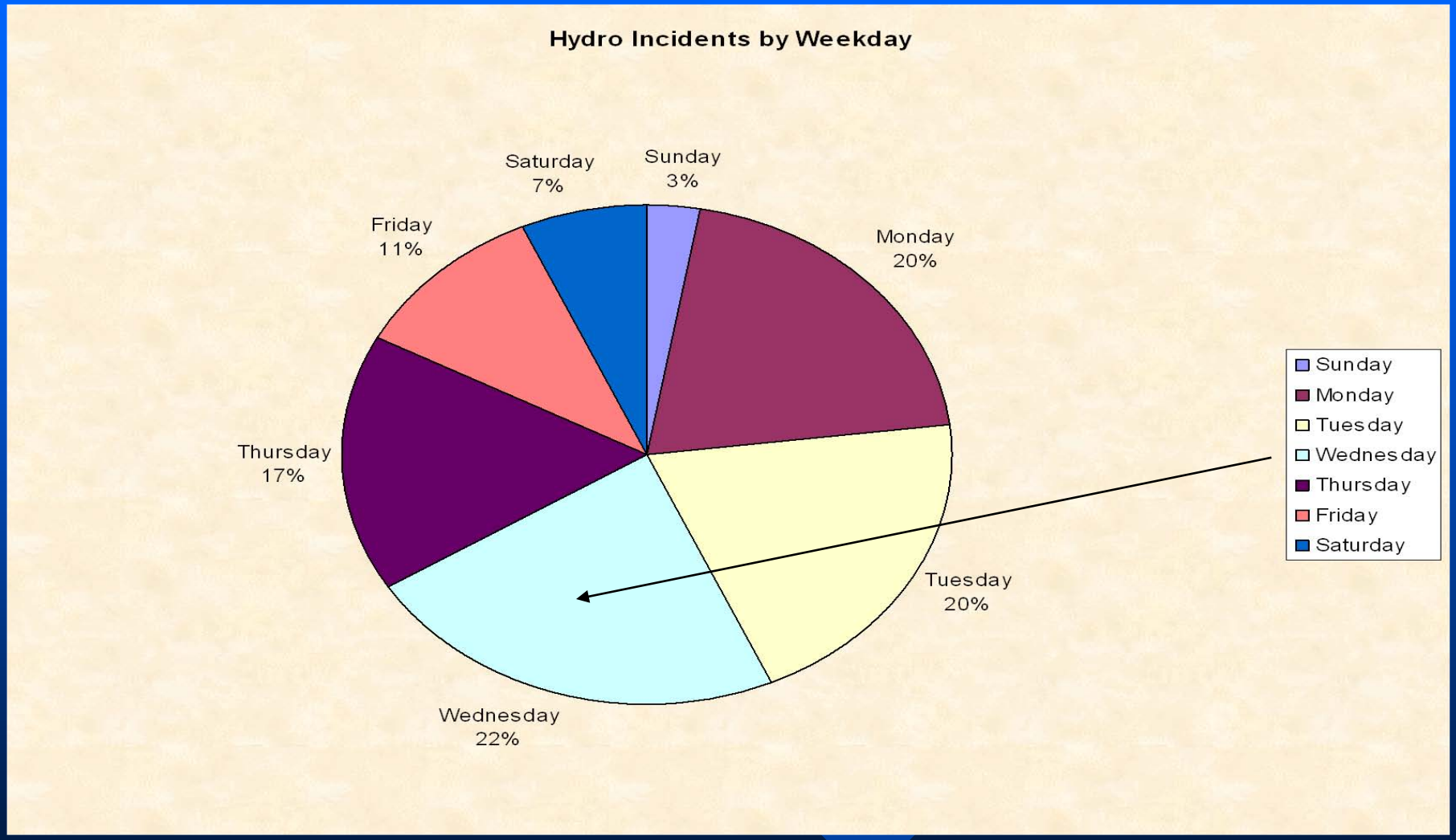
2009 – Age distribution is unknown. Difficult to draw conclusions.

Number of Incidents by Age Category

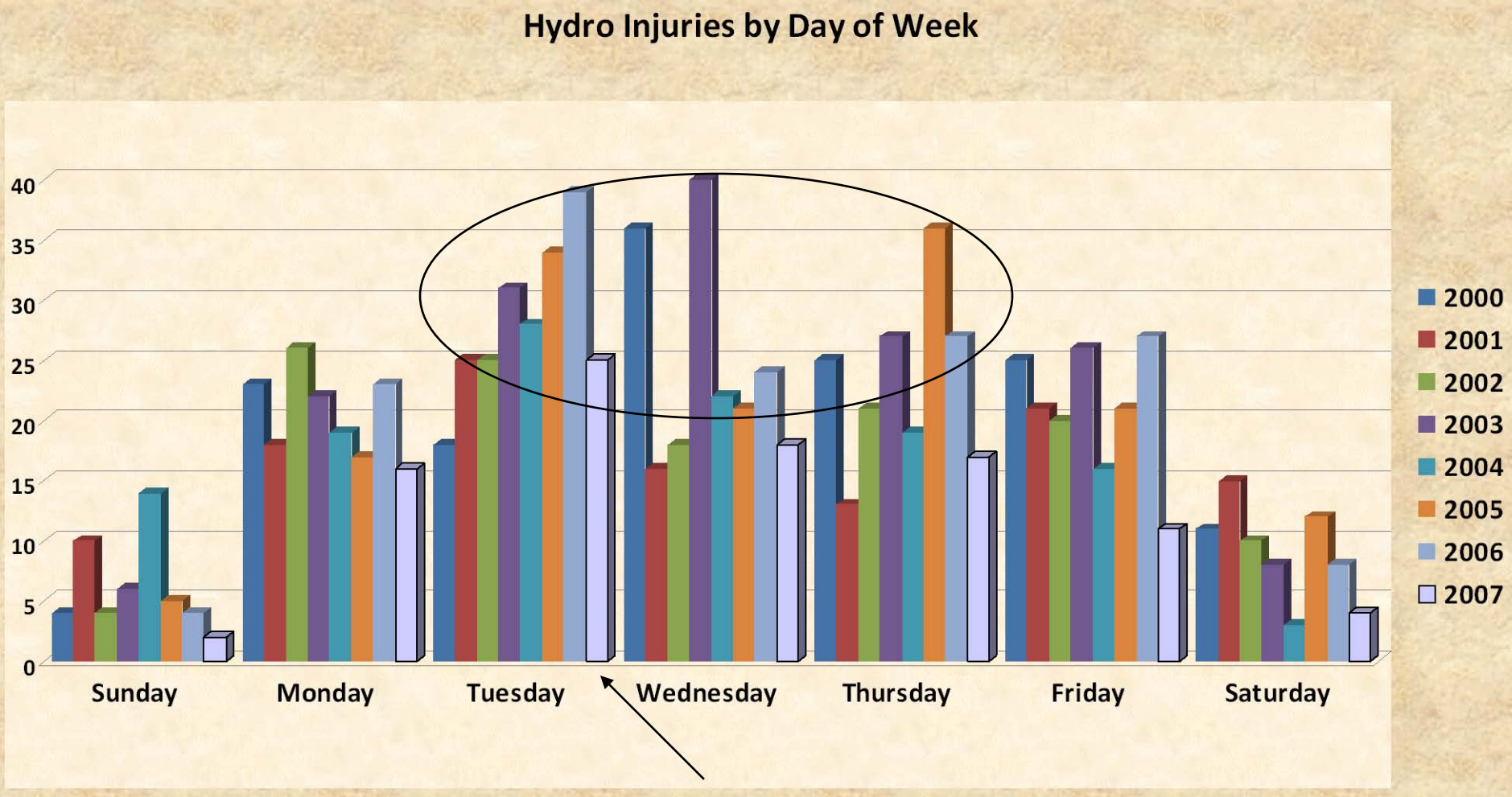


	20-29	30-39	40-49	50-59	60+
2000	0	14	26	29	5
2001	2	6	31	26	1
2002	0	7	24	24	3
2003	1	5	18	24	8
2004	2	0	19	25	4
2005	3	2	19	24	6

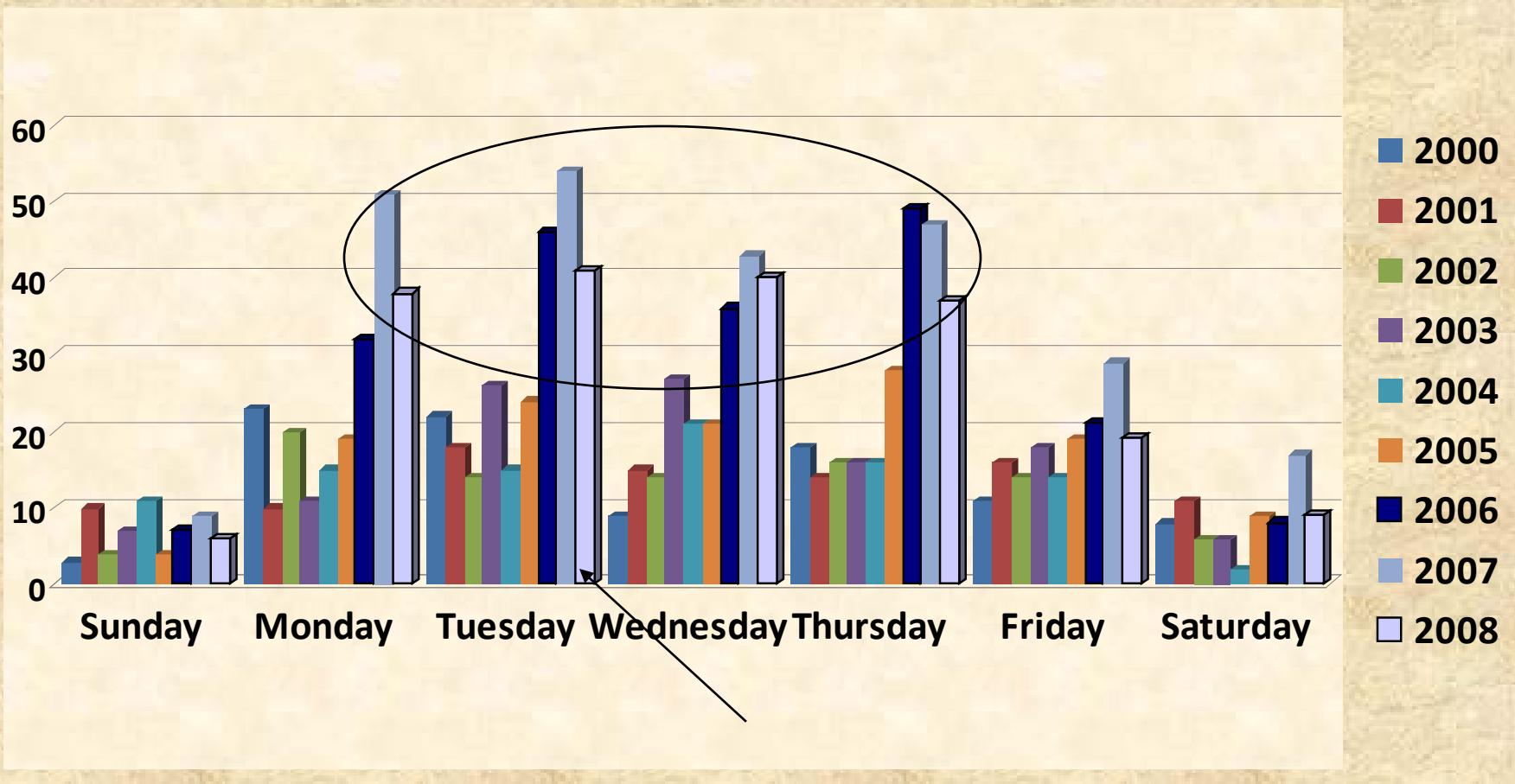
2007


Hydro Incidents by Weekday
Saturday 7%
Sunday 3%
Friday 11%
Monday 20%
Thursday 17%
Tuesday 20%
Wednesday 22%
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday

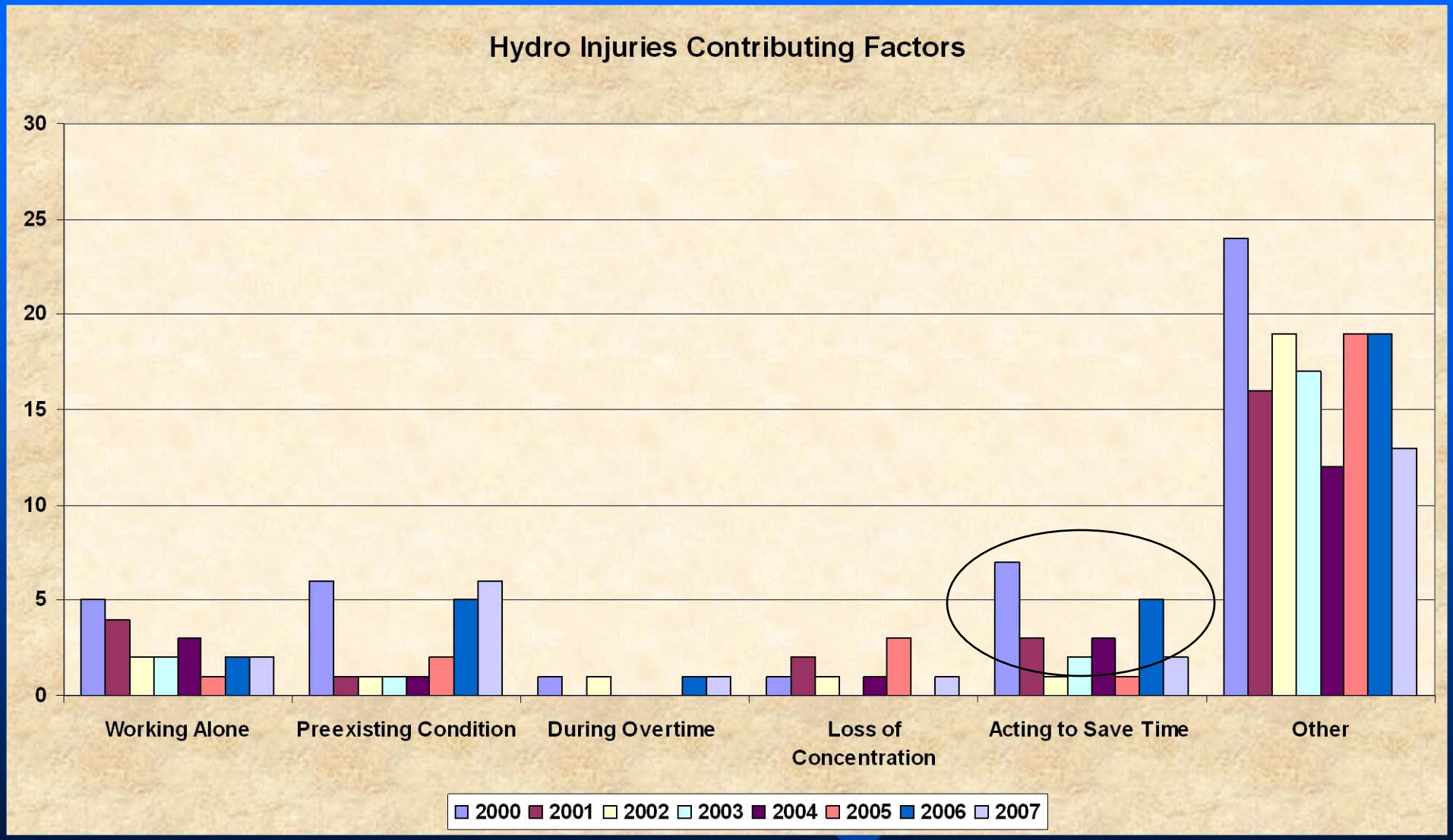
2008 Mid-week is when people get hurt



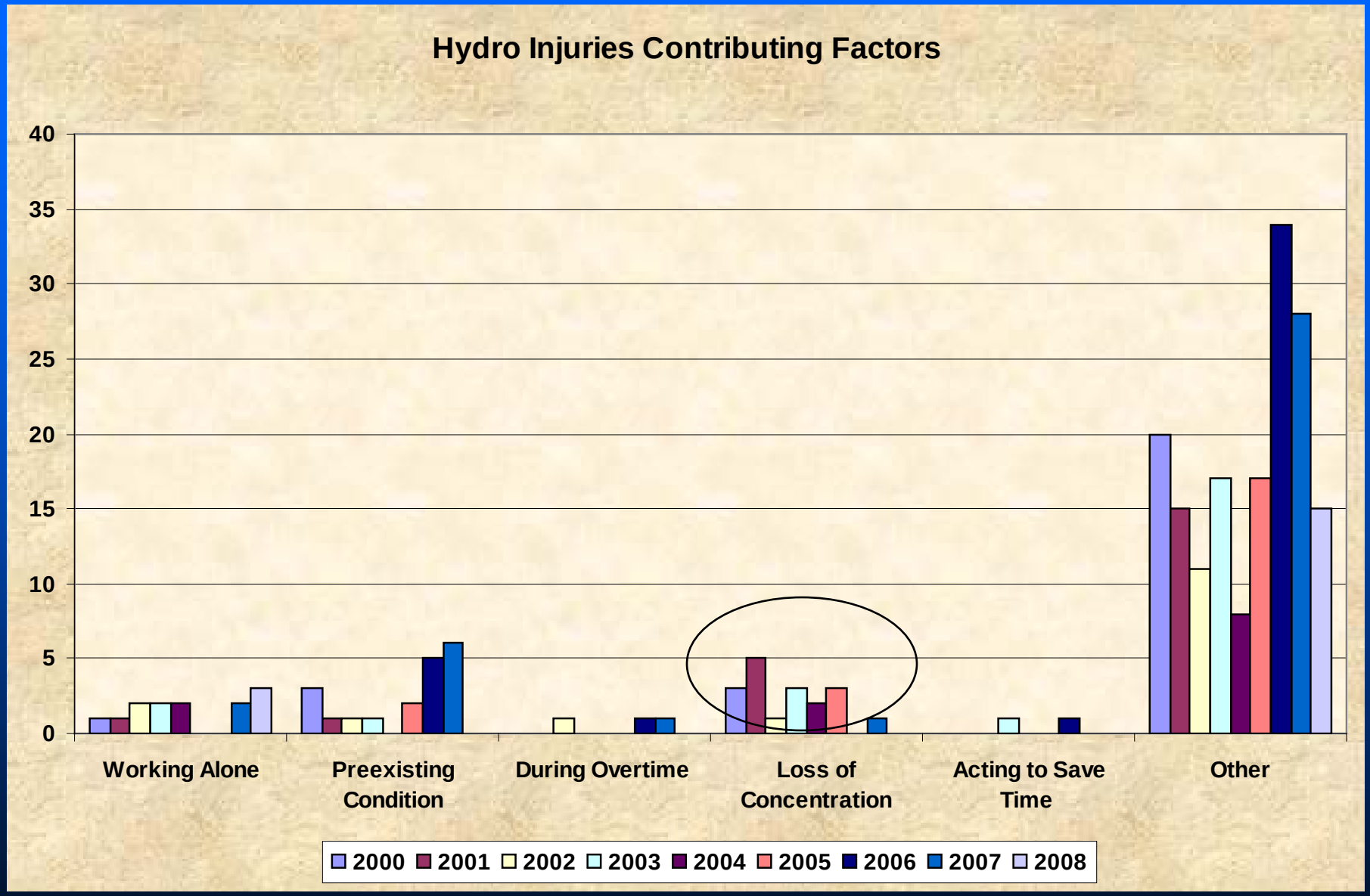
2009 Mid-Week is still what the data is telling us.



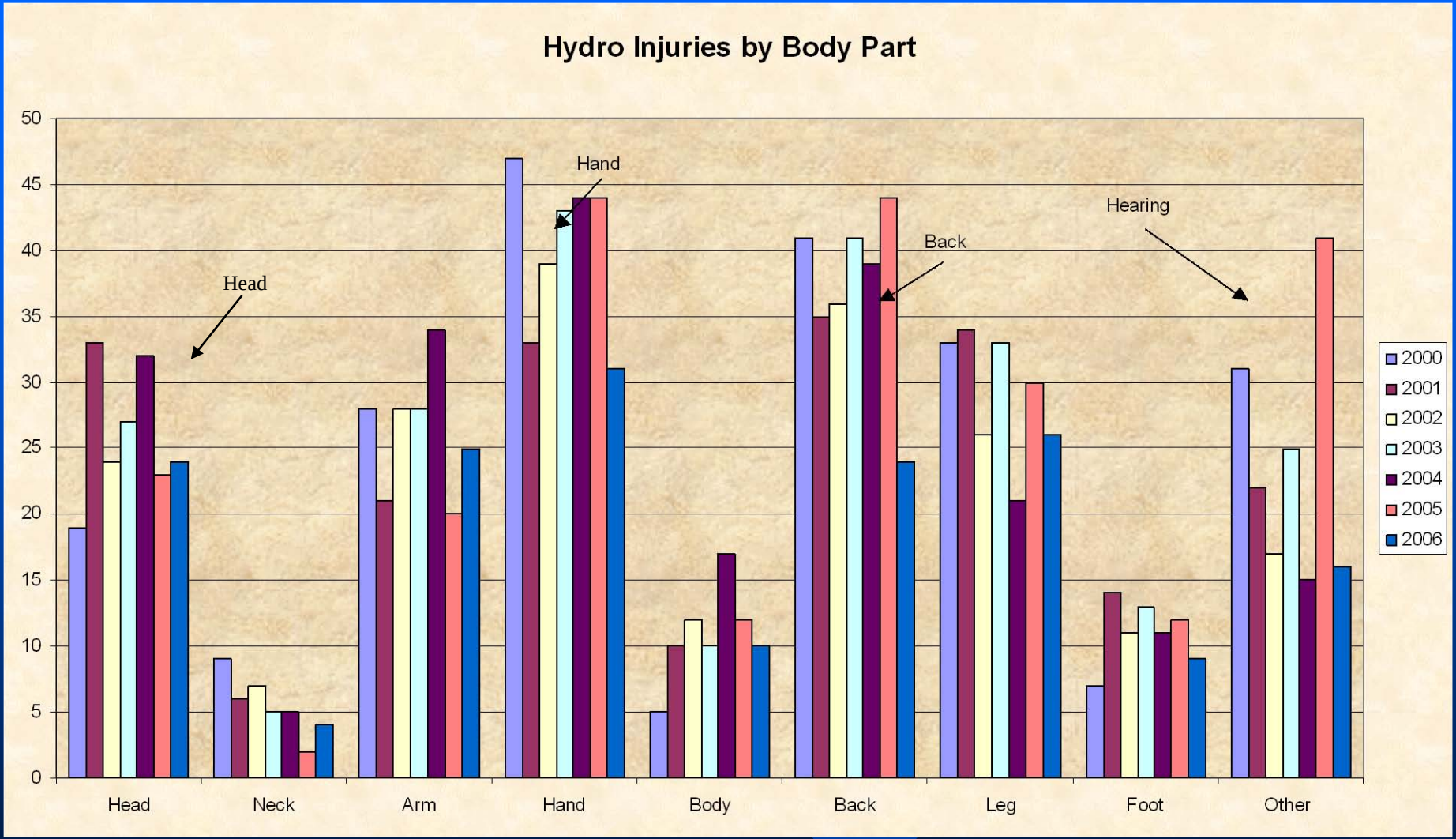
2008


Hydro Injuries Contributing Factors
30
25
20
15
10
5
0
Working Alone
Preexisting Condition
During Overtime
Loss of Concentration
Acting to Save Time
Other
2000
2001
2002
2003
2004
2005
2006
2007

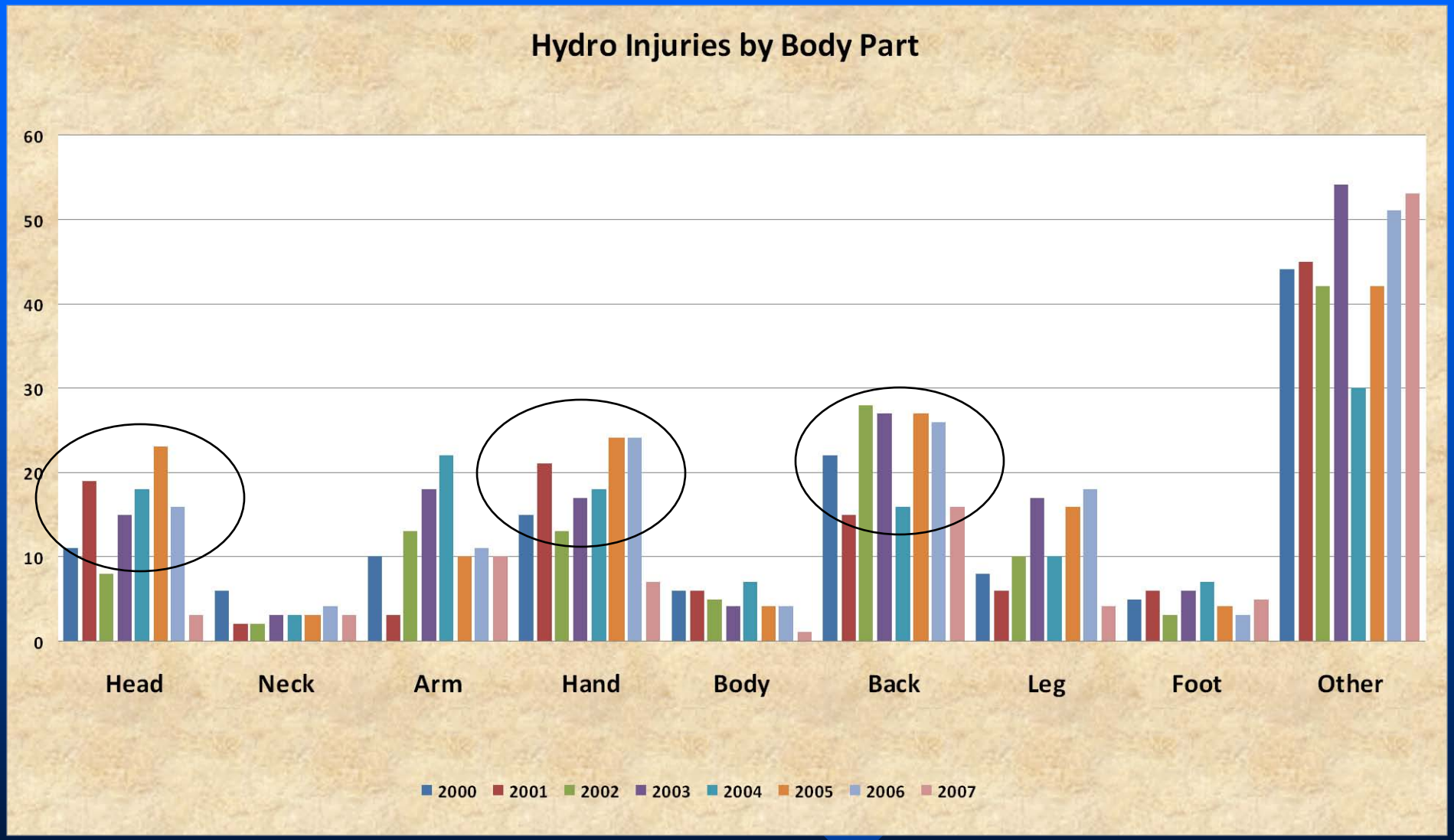
2009


Hydro Injuries Contributing Factors
40
35
30
25
20
15
10
5
0
Working Alone
Preexisting Condition
During Overtime
Loss of Concentration
Acting to Save Time
Other
2000
2001
2002
2003
2004
2005
2006
2007
2008

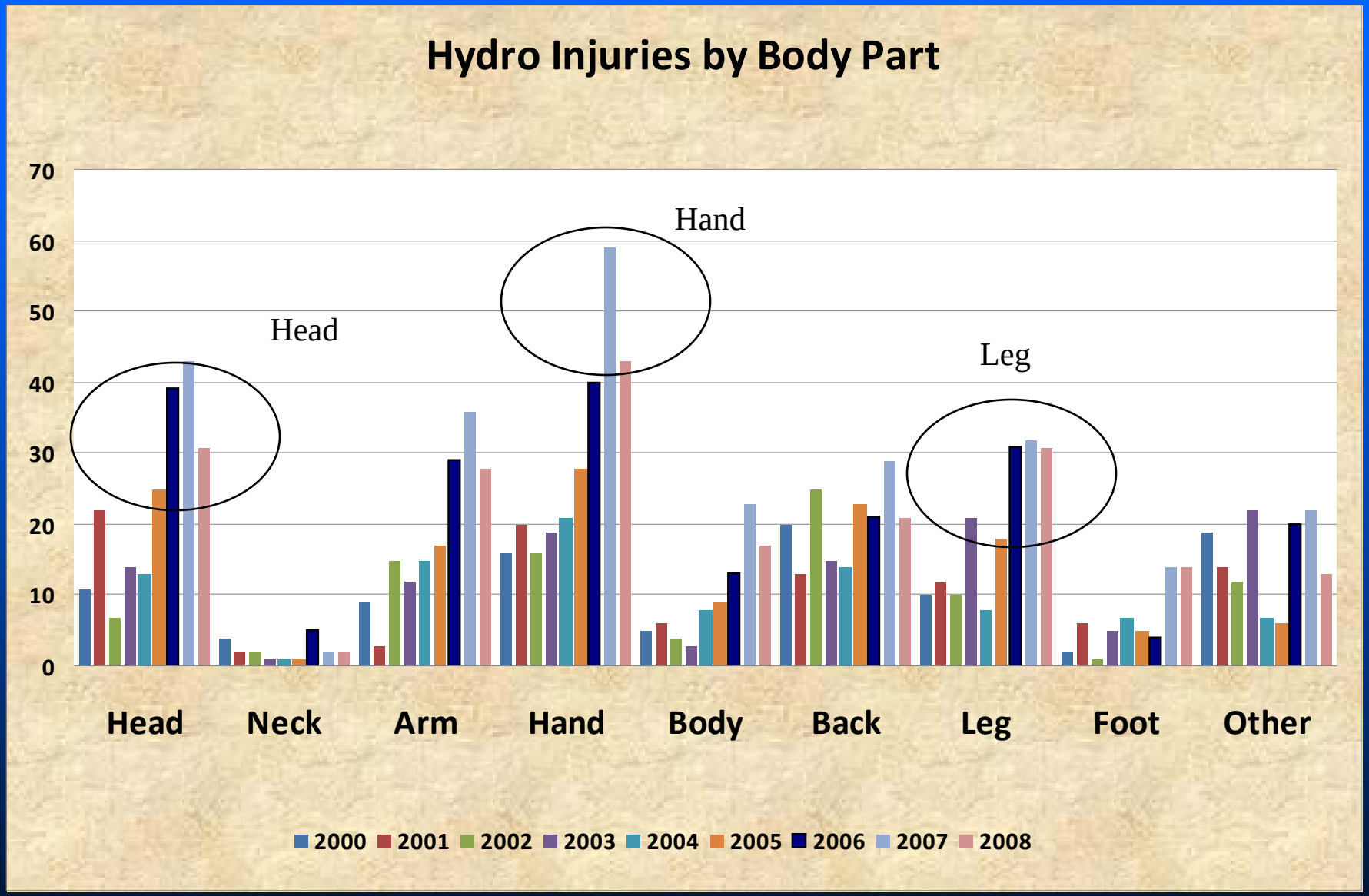
2007


Hydro Injuries by Body Part
50
45
40
35
30
25
20
15
10
5
0
Head
Hand
Back
Hearing
Head
Neck
Arm
Hand
Body
Back
Leg
Foot
Other
2000
2001
2002
2003
2004
2005
2006

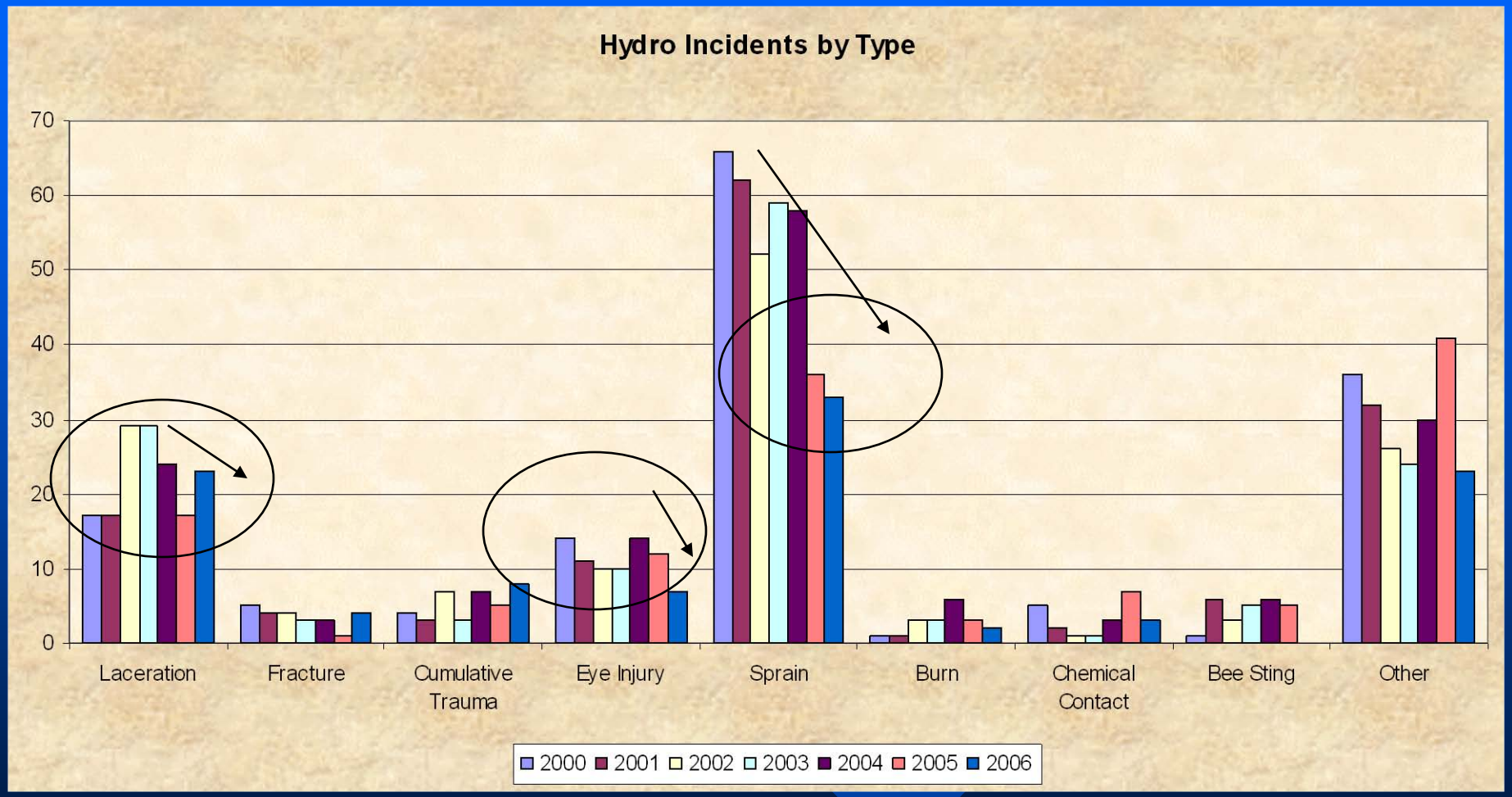
2008


Hydro Injuries by Body Part
60
50
40
30
20
10
0
Head
Neck
Arm
Hand
Body
Back
Leg
Foot
Other
2000
2001
2002
2003
2004
2005
2006
2007

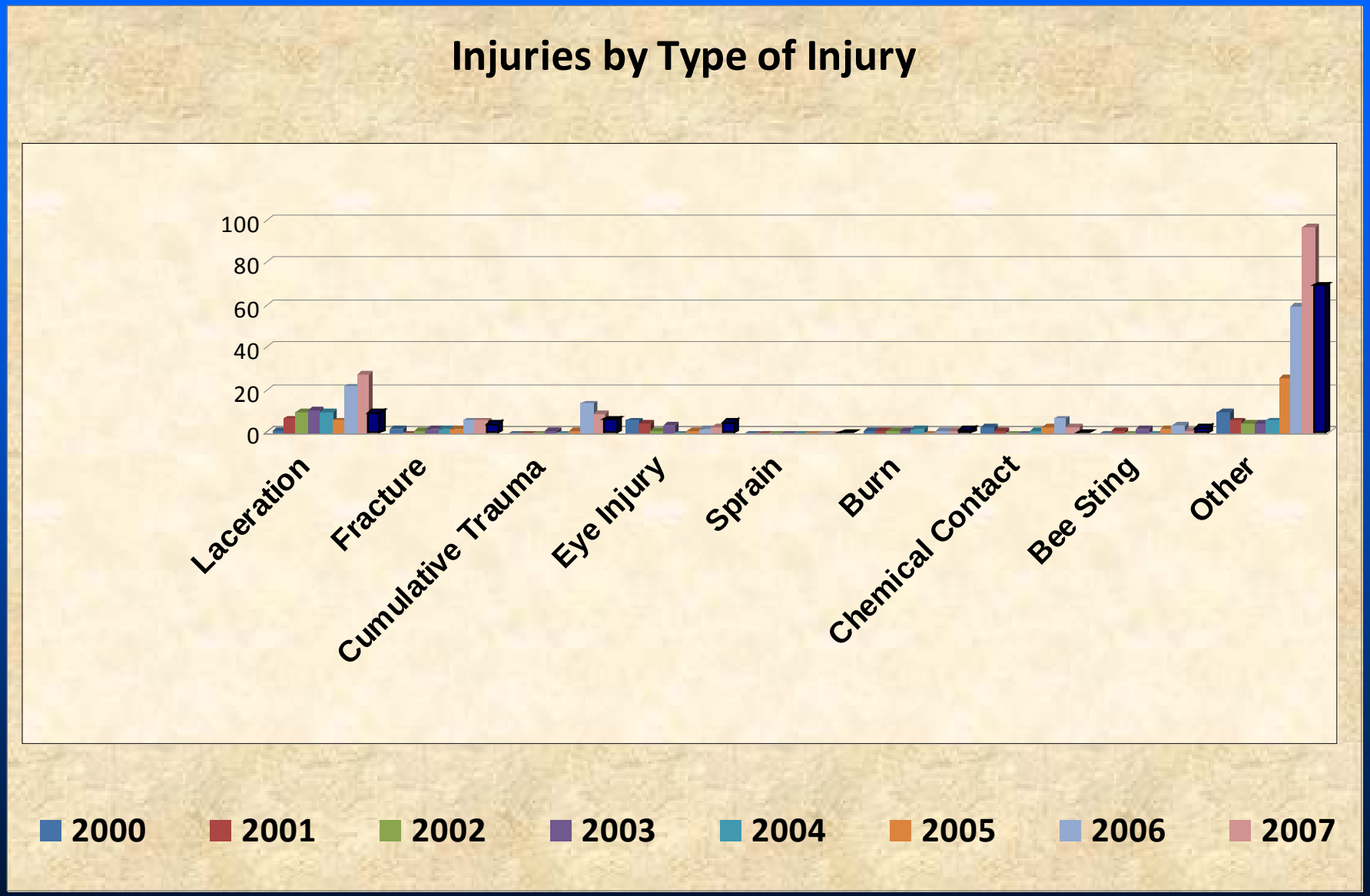
2009


Hydro Injuries by Body Part
70
60
50
40
30
20
10
0
Head
Hand
Leg
Head
Neck
Arm
Hand
Body
Back
Leg
Foot
Other
2000
2001
2002
2003
2004
2005
2006
2007
2008

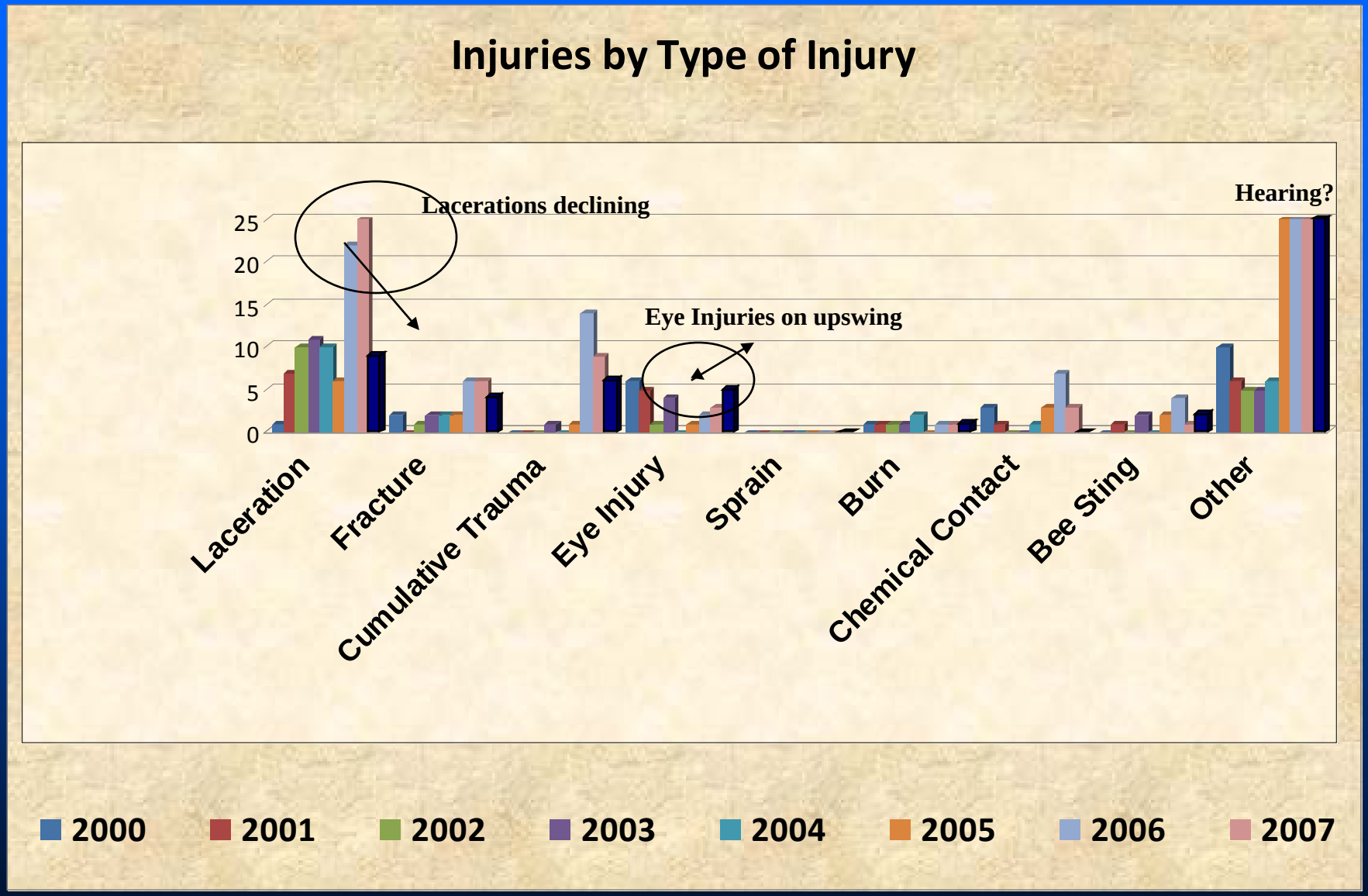
2007


Hydro Incidents by Type
70
60
50
40
30
20
10
0
Laceration
Fracture
Cumulative Trauma
Eye Injury
Sprain
Burn
Chemical Contact
Bee Sting
Other
2000
2001
2002
2003
2004
2005
2006

2009


Injuries by Type of Injury
100
80
60
40
20
0
Laceration
Fracture
Cumulative Trauma
Eye Injury
Sprain
Burn
Chemical Contact
Bee Sting
Other
2000
2001
2002
2003
2004
2005
2006
2007

2009- changed scale



Continuous Improvement

- Where should we direct our efforts?
- Is there a general profile?
- Is there a more dangerous
  - Time of day?
  - Working Age?
  - Day of week?
- Are there contributing factors?

Statistical Profile

- Tuesdays
- Work stops/starts
- Increasing eye injuries, leg injuries
- Decreasing laceration injuries
- Focus (lack of concentration)
- Injury to eye, cuts to hand, leg injuries

Action Plan/ Business Plan Ideas

- Re-focus employees after lunch or breaks.
- Hold Safety Stand-downs mid-week (counter intuitive).
- Hold soft tissue prevention workshops for employees on safety days.
- Focus on eye safety. Dust risk, spoggles, shields, how to remove PPE when dusty.
- Share data with Employees for heightened awareness.
- Hold employee focus groups to review data and look for other opportunities.

Next Year?

Discussion

Recommendations

- Add Hearing as an injury type
- Keep age, but note it's limited use
- Continue to look back at past years
- Keep EUCG as a partner!

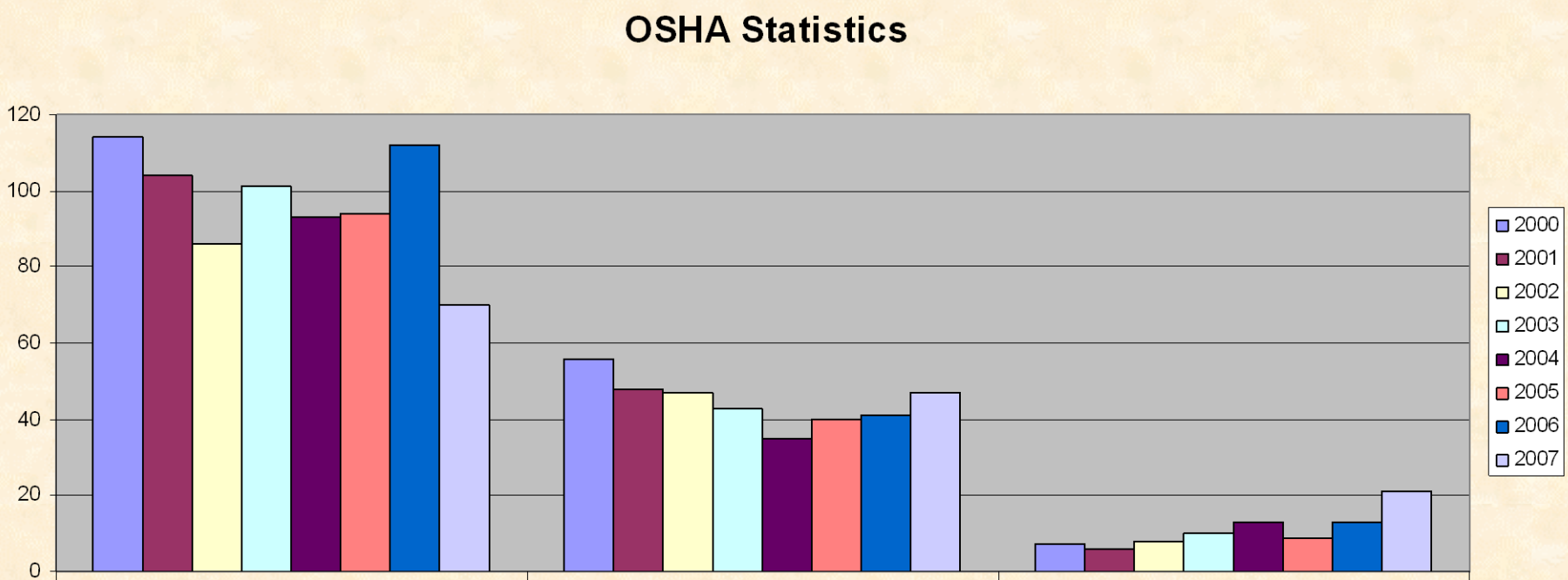
Special thanks to EUCG and

Chris Utracki

for his help in the data collection, design and analysis.

Appendix

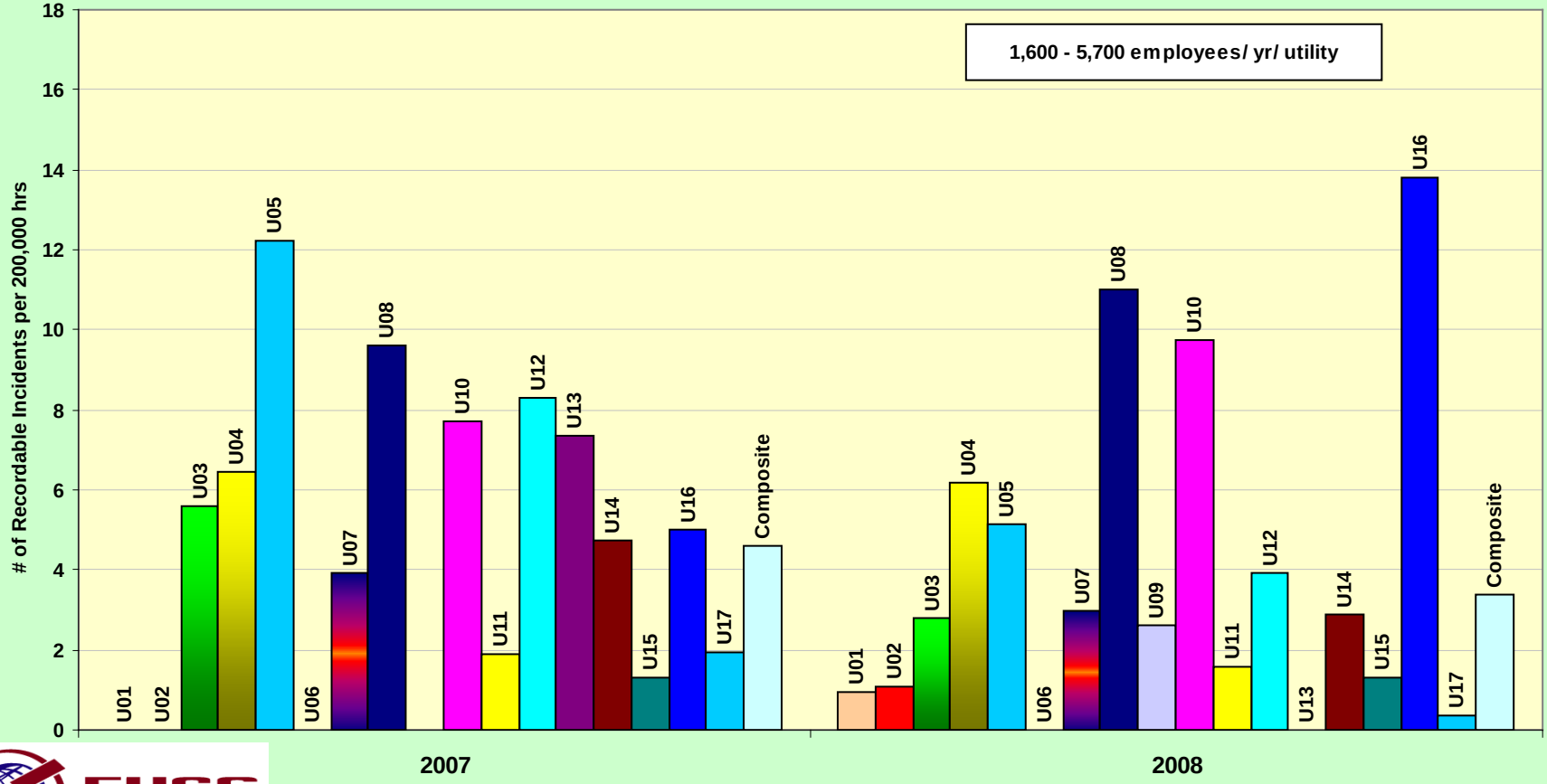
2008



	Hydro Medical Attention, number of cases	Hydro OSHA Recordables, number of cases	Hydro Lost Time, number of cases
2000	114	56	7
2001	104	48	6
2002	86	47	8
2003	101	43	10
2004	93	35	13
2005	94	40	9
2006	112	41	13
2007	70	47	21

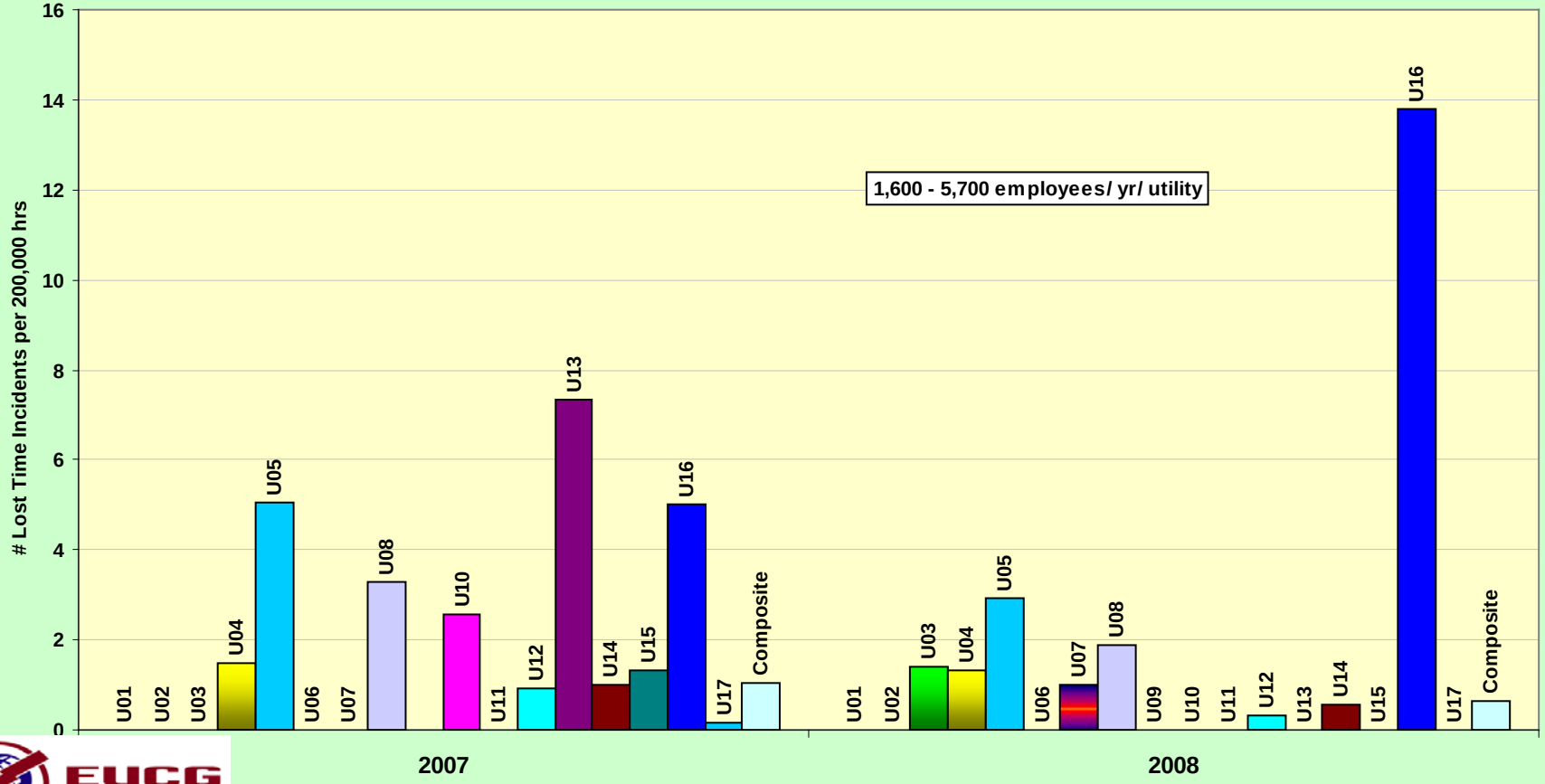
Sum of Capacity MW	Year								
Code	2000	2001	2002	2003	2004	2005	2006	2007	2008
U01	1,710	1,710	1,710	1,710	1,710	1,710	1,710	1,710	1,710
U02		575	575	575	575	575	575	575	575
U03	820	820	820	820	820	820	820	820	820
U04				981	981	981	981	981	981
U05							1,920	1,920	1,920
U06						1,452	1,452	1,452	1,452
U07					0	0	0	0	0
U08	5,050	5,050	5,050	5,050	5,050	5,050	5,050	5,050	5,050
U09									123
U10	89	89	89	89	89	89	89	89	89
U11	7,067	7,067	7,067	7,067	7,067	7,067	7,067	7,067	7,067
U12					3,896	3,896	3,896	3,896	3,896
U13	109	109	109	109	109	109	109	109	109
U14						23,729	23,729	23,729	23,729
U15	471	471	471	471	471	471	471	471	471
U16	128	128	128	128	128	128	128	128	128
U17							5,191	5,191	5,191
Grand Total	15,444	16,019	16,019	17,000	20,896	46,077	53,188	53,188	53,311

OSHA Recordable Incident Rate

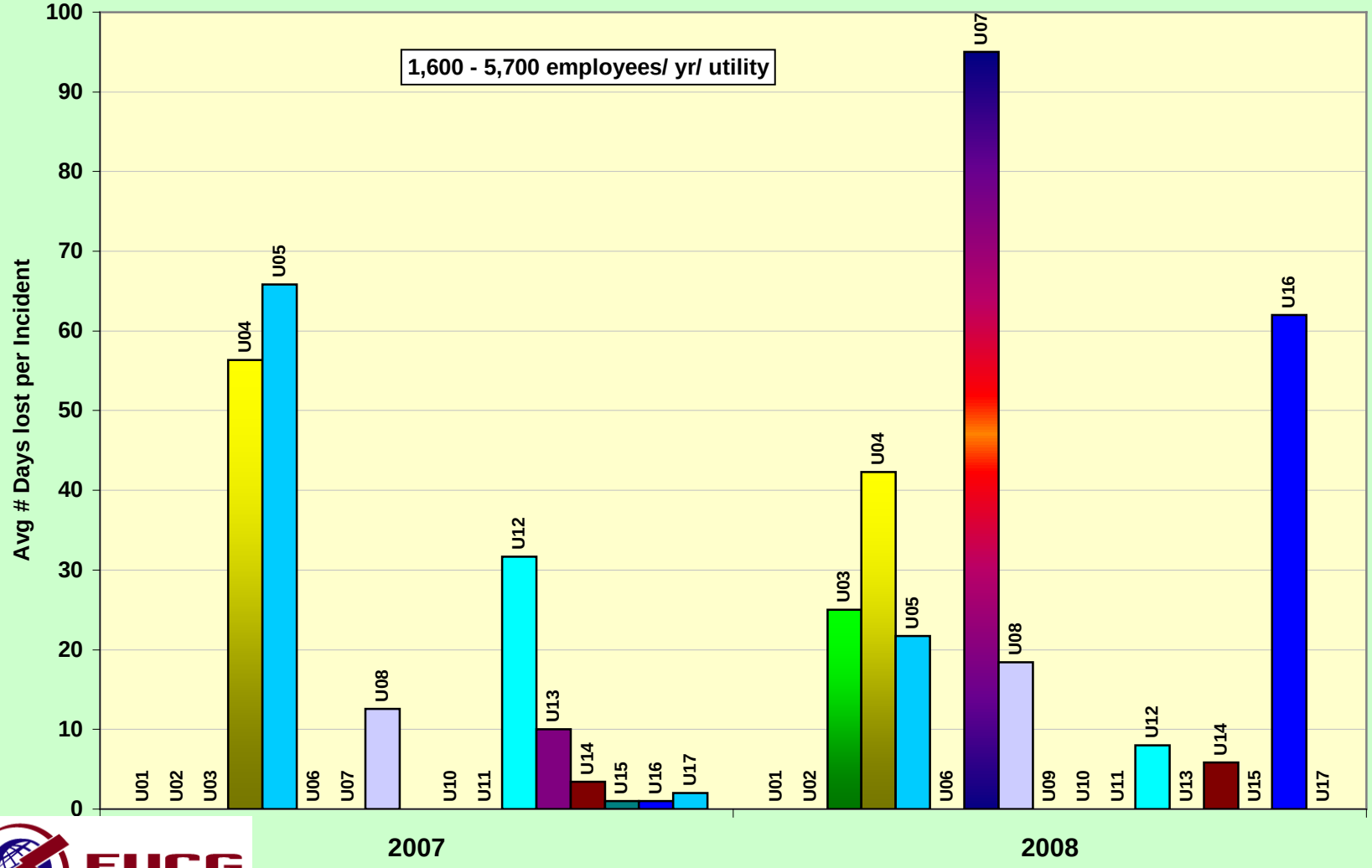


EUCG
Your Energy Information Source

OSHA Lost Time Incident Rate



Avg. # Days Lost per Incident



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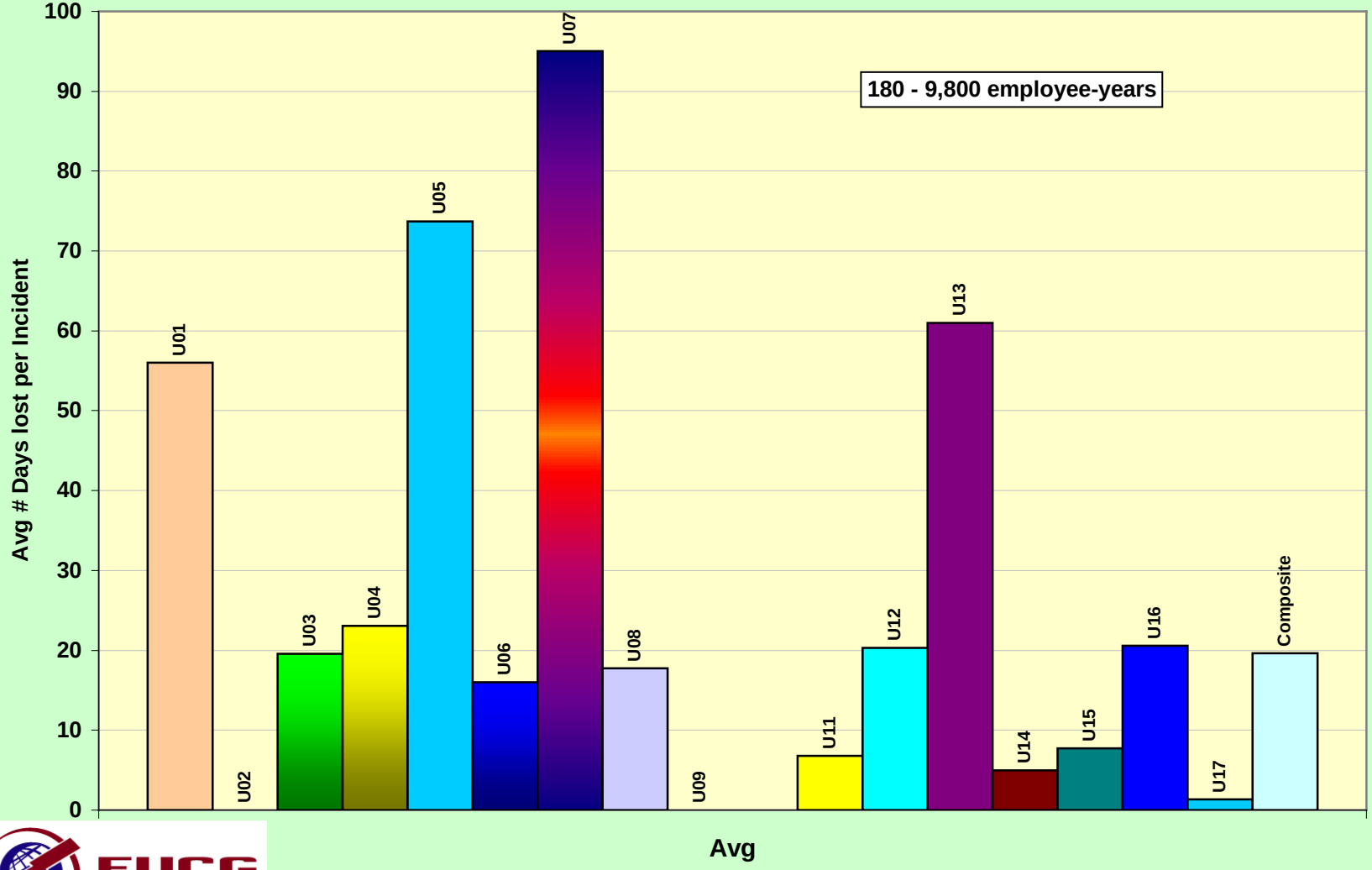

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