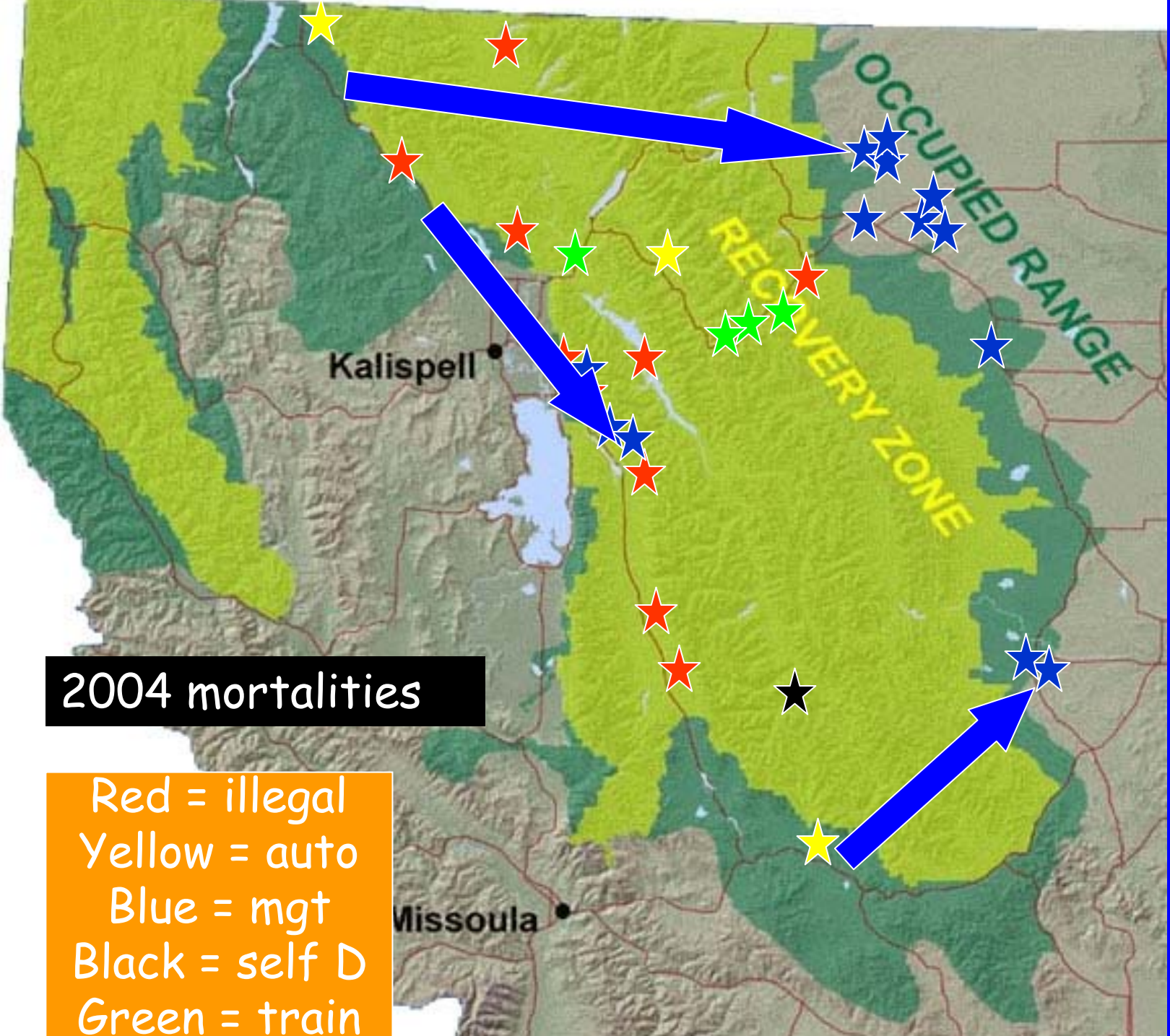
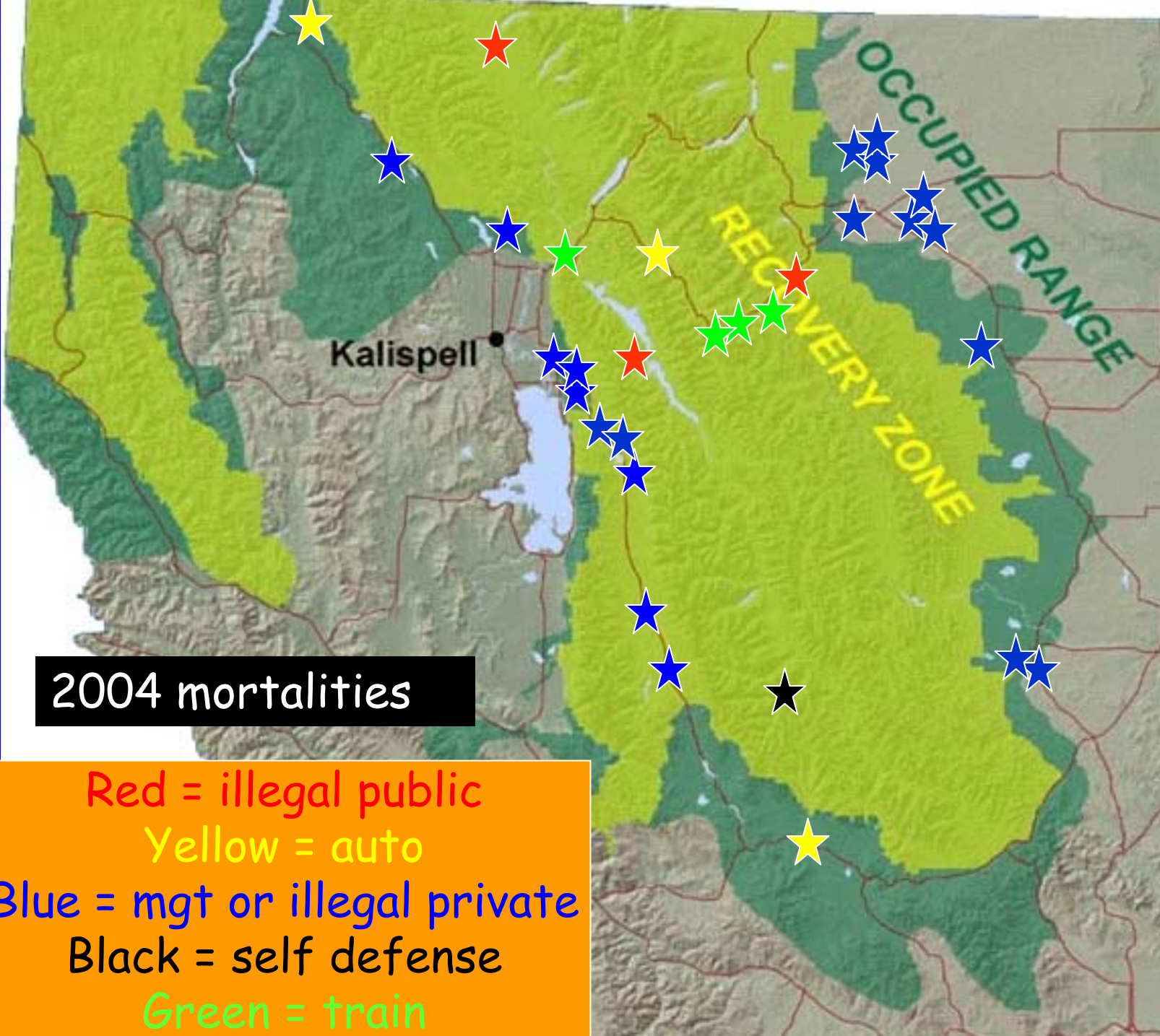


NCDE
HUMAN-CAUSED
MORTALITY
ISSUES



2004 mortalities

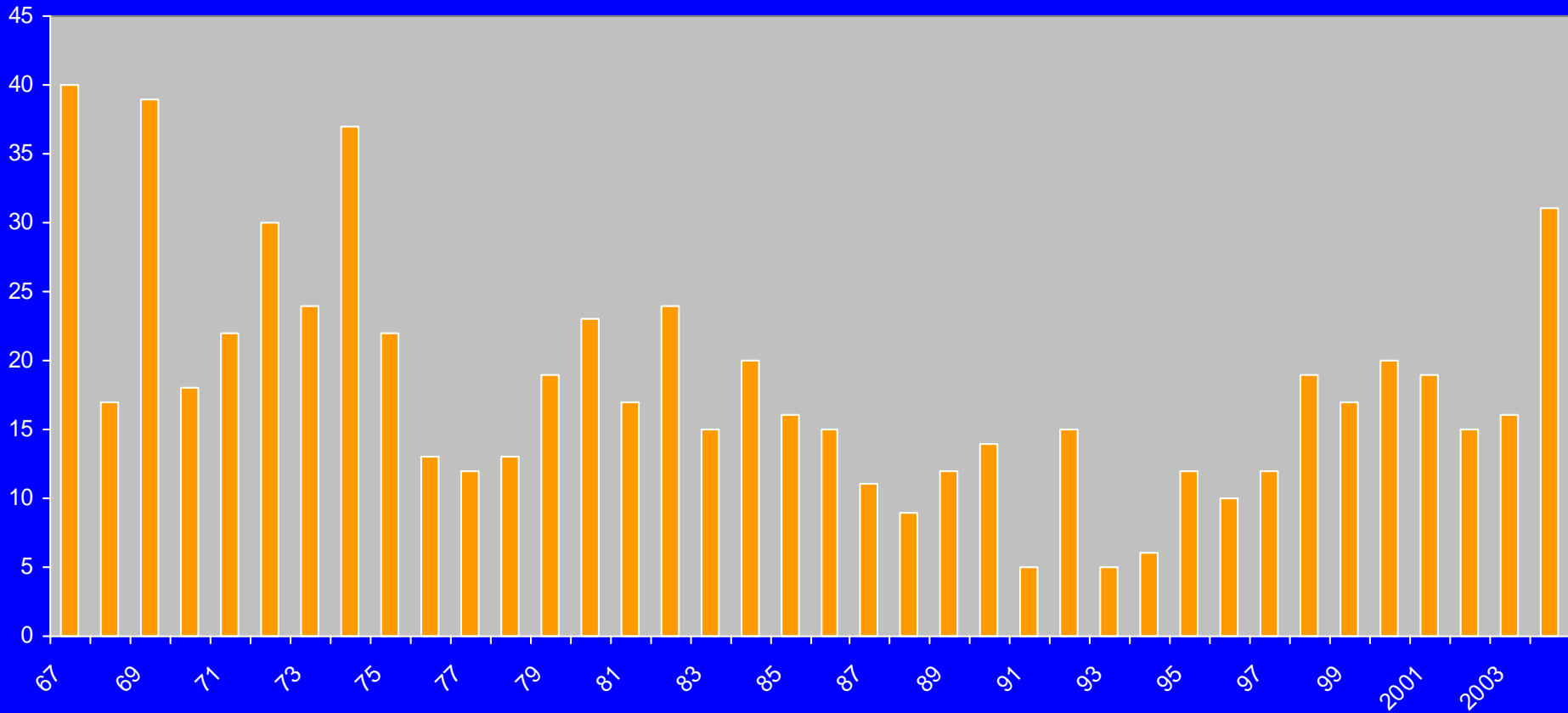
Red = illegal
Yellow = auto
Blue = mgt
Black = self D
Green = train



2004 mortalities

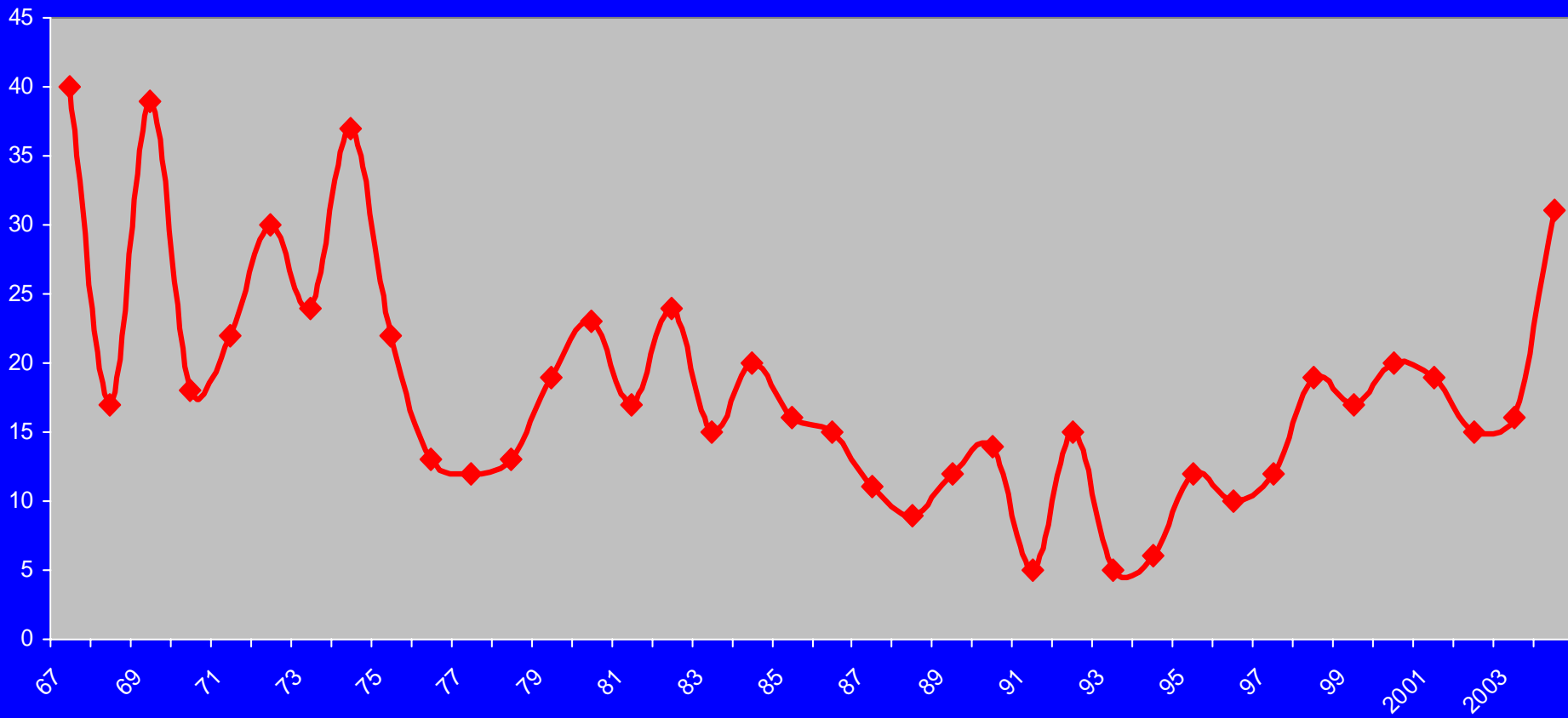
- Red = illegal public
- Yellow = auto
- Blue = mgt or illegal private
- Black = self defense
- Green = train

NCDE KNOWN HUMAN-CAUSED MORTALITY 1967-2004



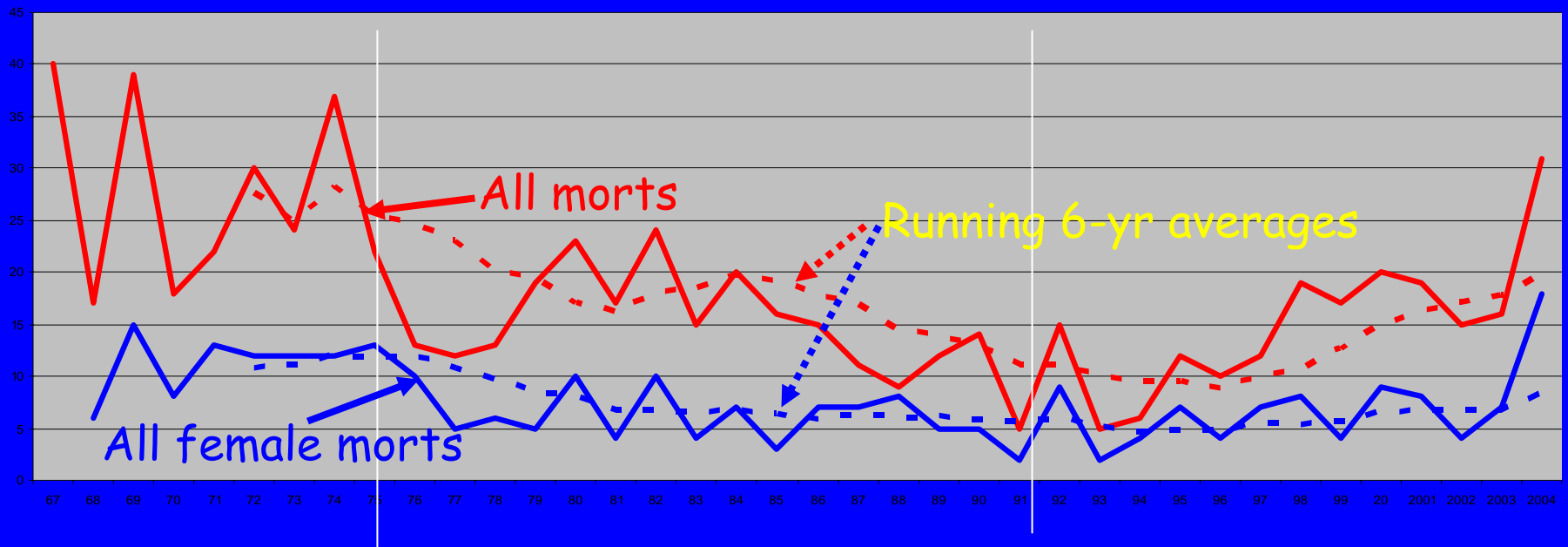
USFWS Grizzly Bear Recovery

NCDE KNOWN HUMAN-CAUSED MORTALITY 1967-2004

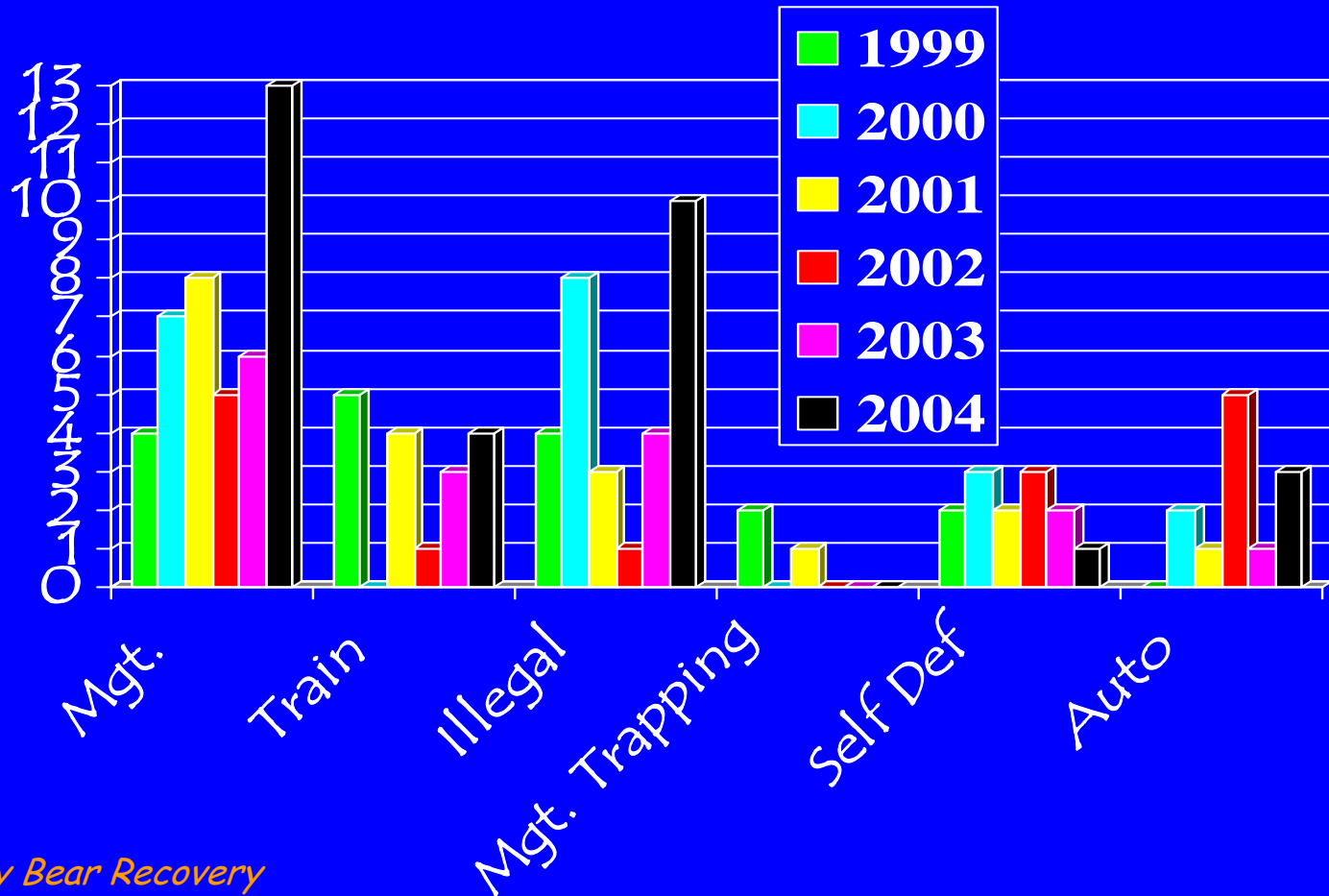


USFWS Grizzly Bear Recovery

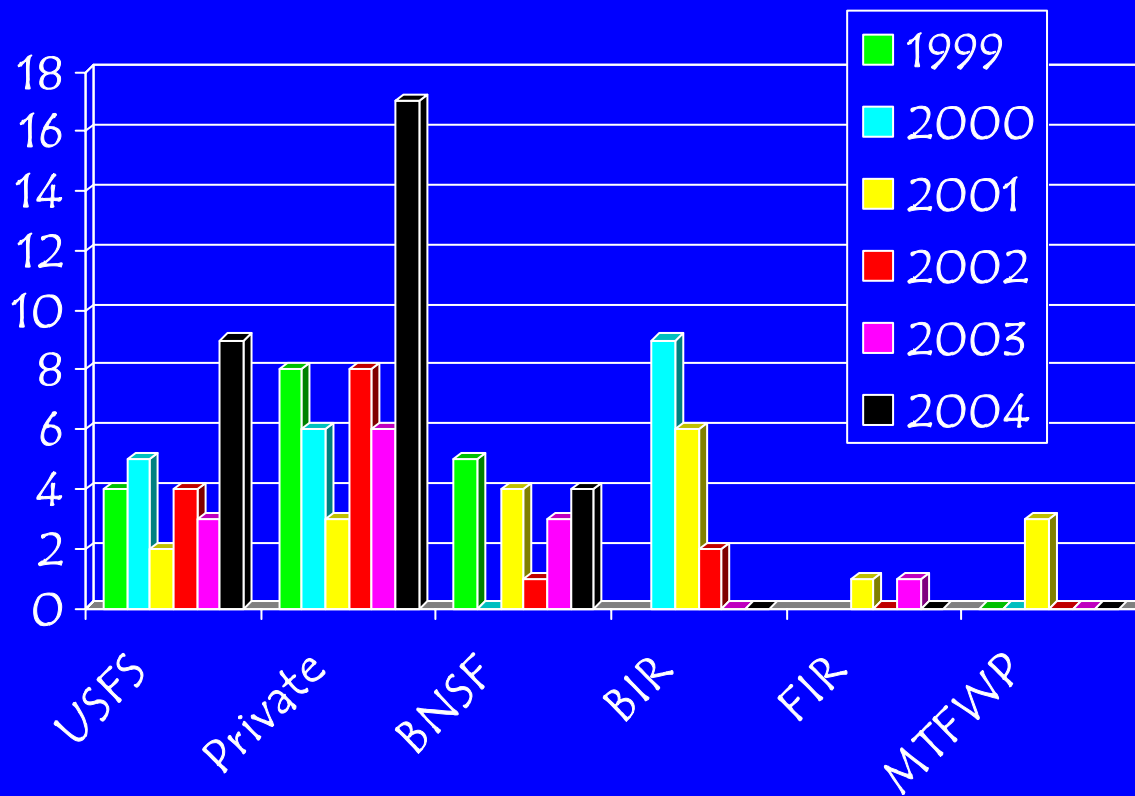
TOTAL KNOWN HUMAN-CAUSED MORTALITY 1967-2004



1999 - 2004 NCDE KNOWN HUMAN-CAUSED MORTALITY CAUSES

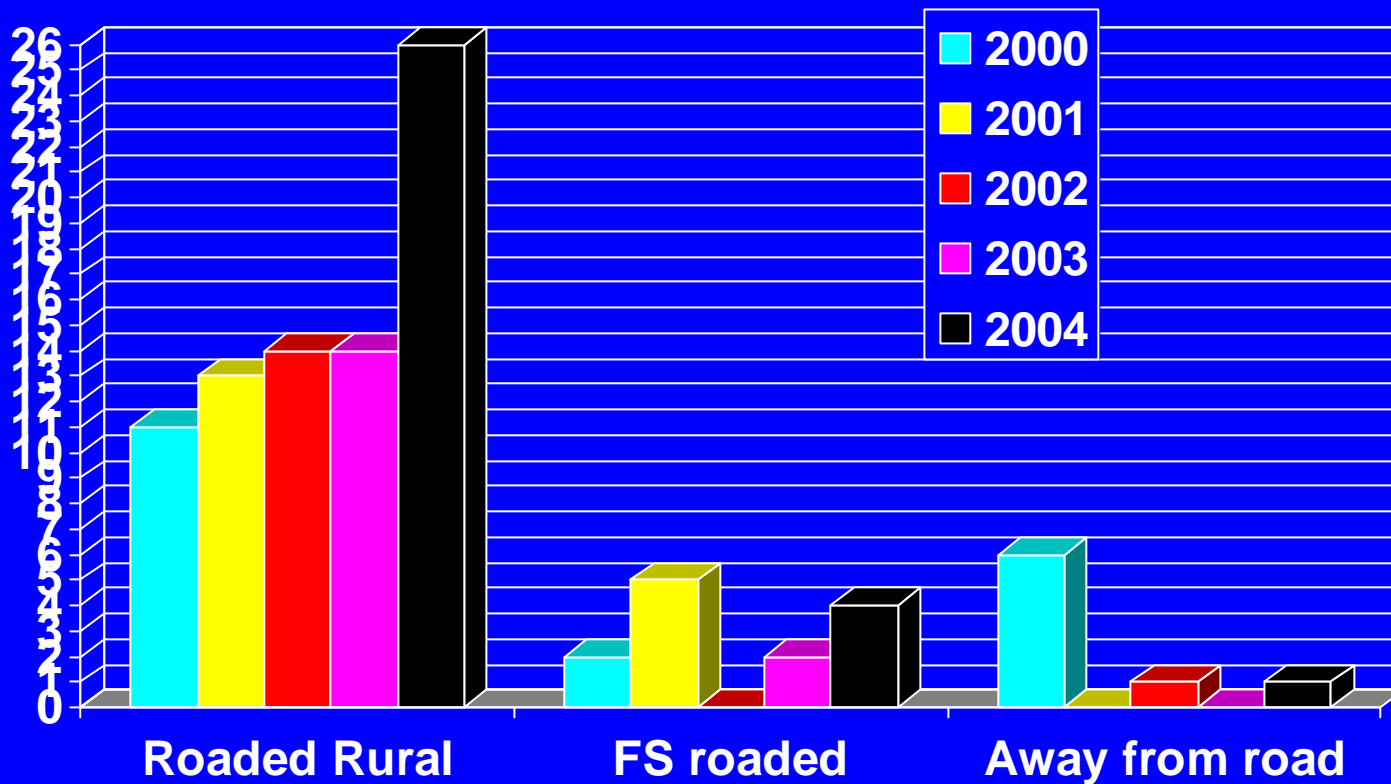


WHERE KNOWN HUMAN-CAUSED MORTALITIES OCCURRED, NCDE 1999 -2004

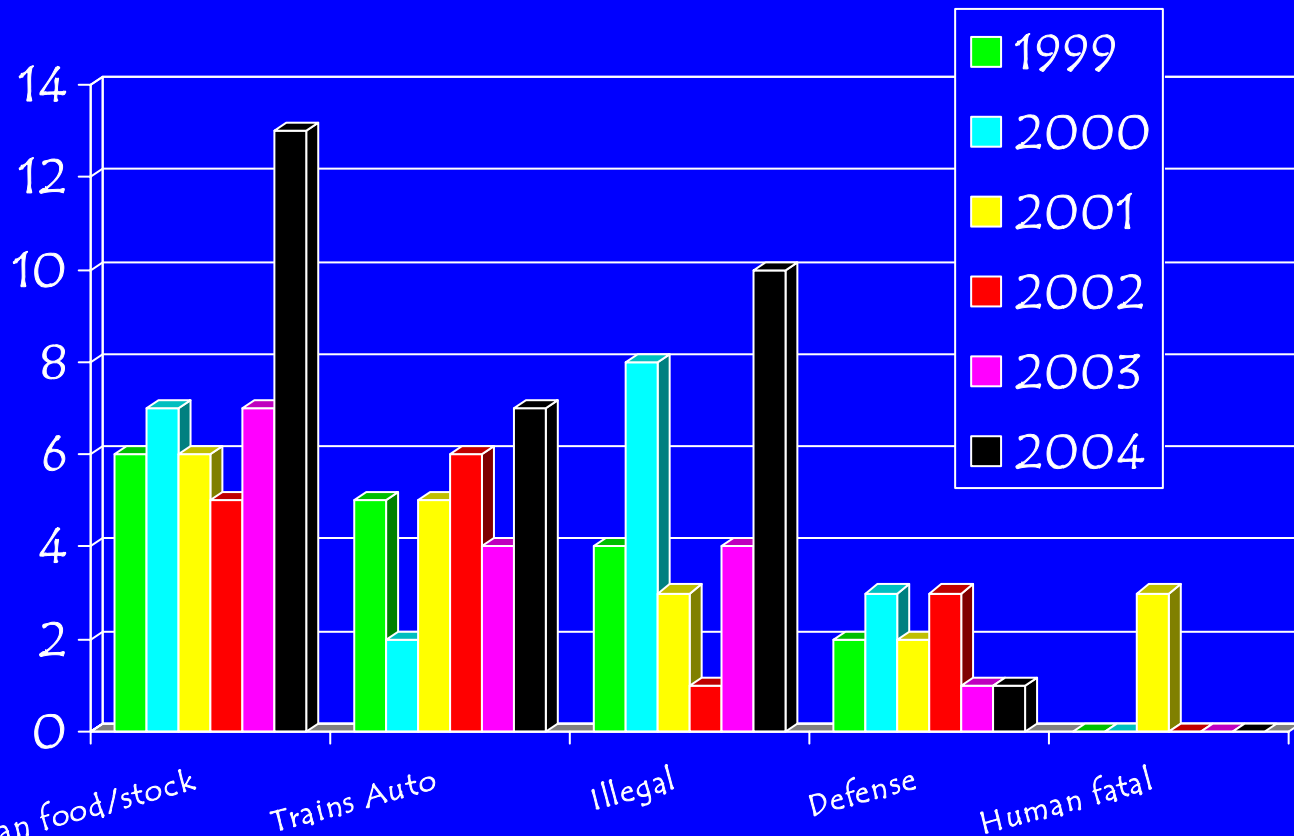


USFWS Grizzly Bear Recovery Road kills included in private. BIR includes some private.

Access type for human caused mortalities 2000-2004

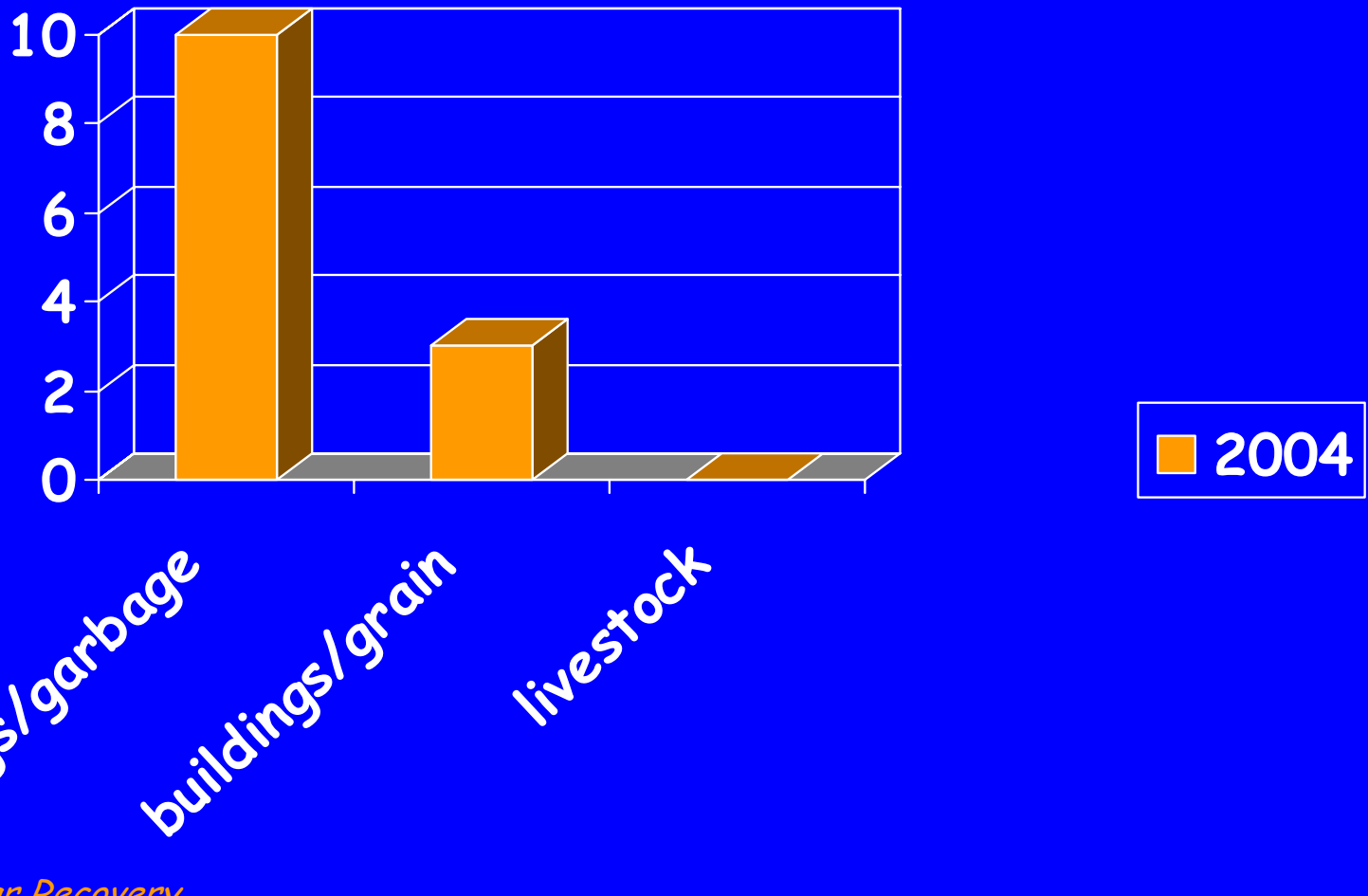


ULTIMATE REASONS FOR KNOWN HUMAN-CAUSED DEATHS, NCDE 1999-2004

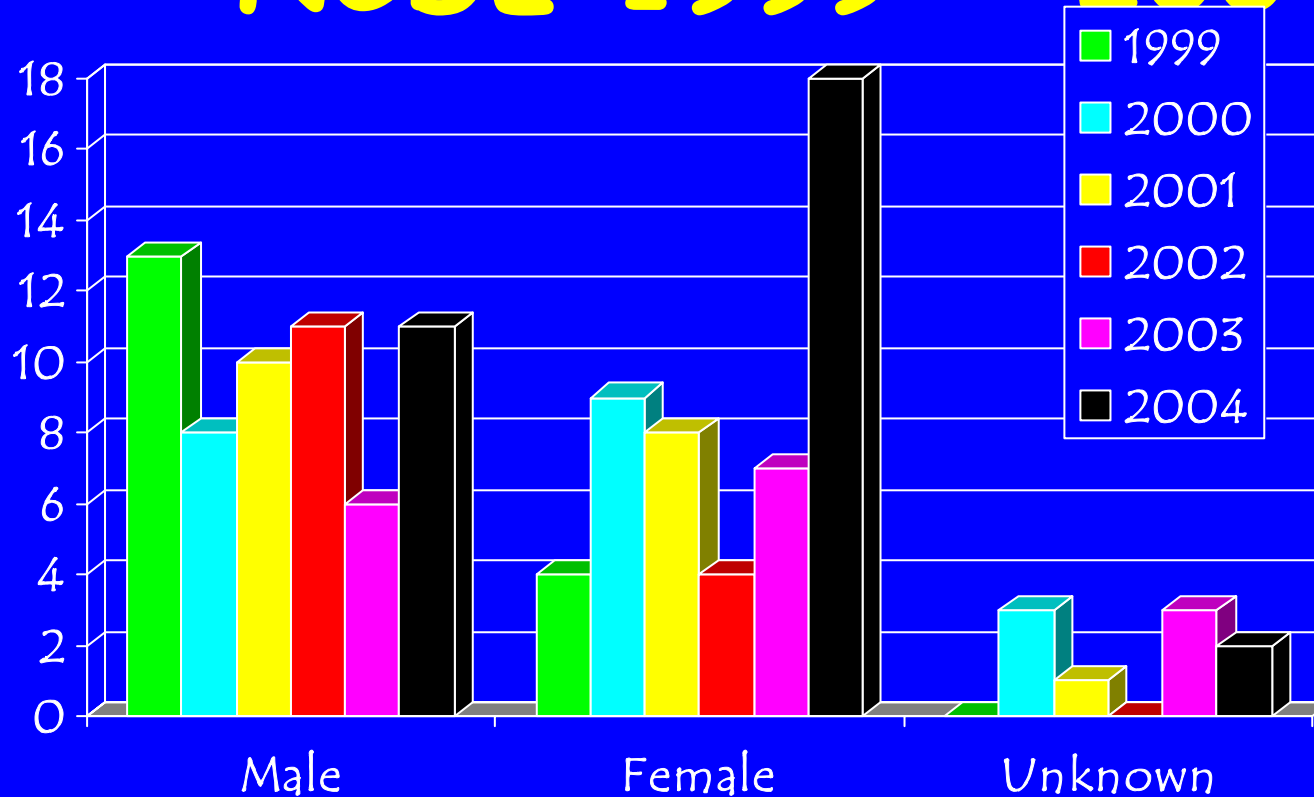


USFWS Grizzly Bear Recovery

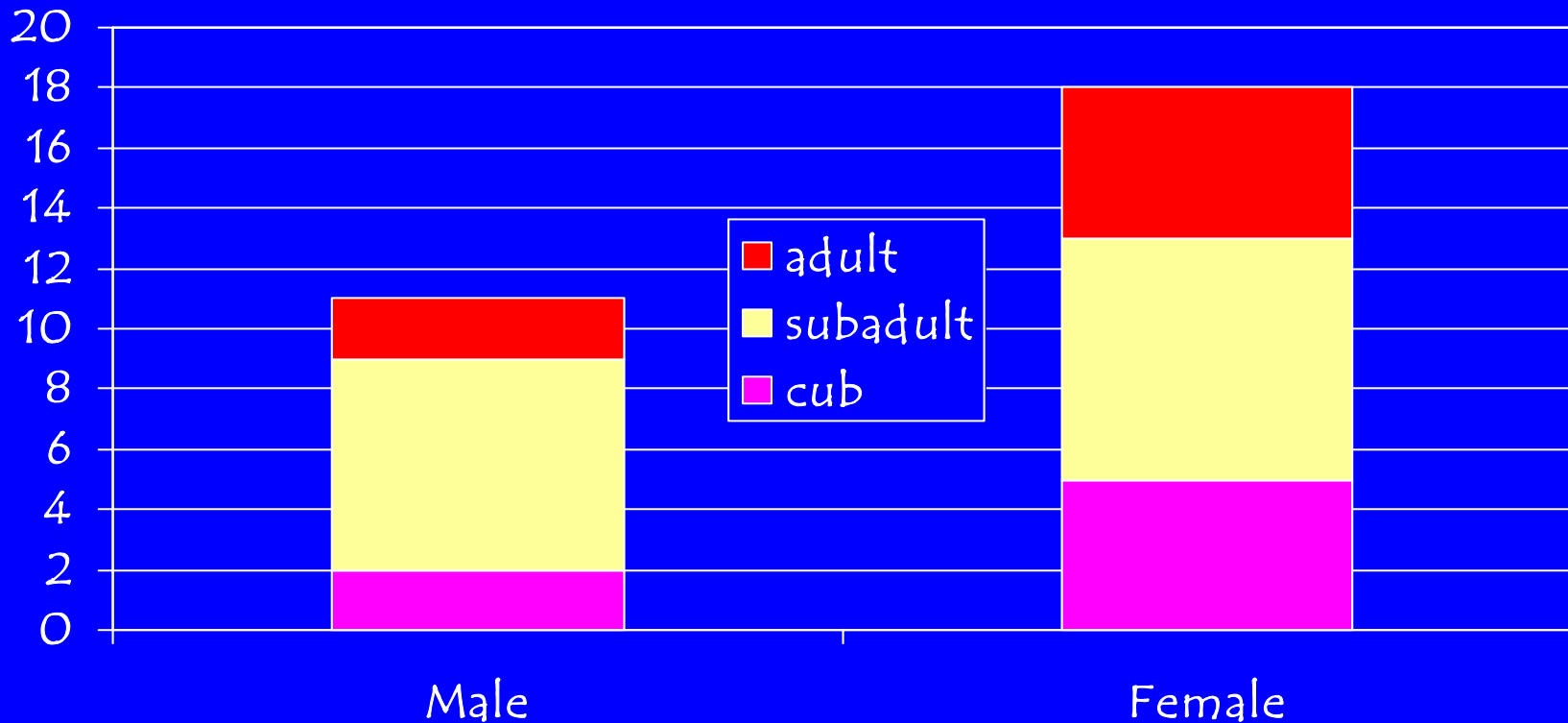
Management removals 2004 - Causes



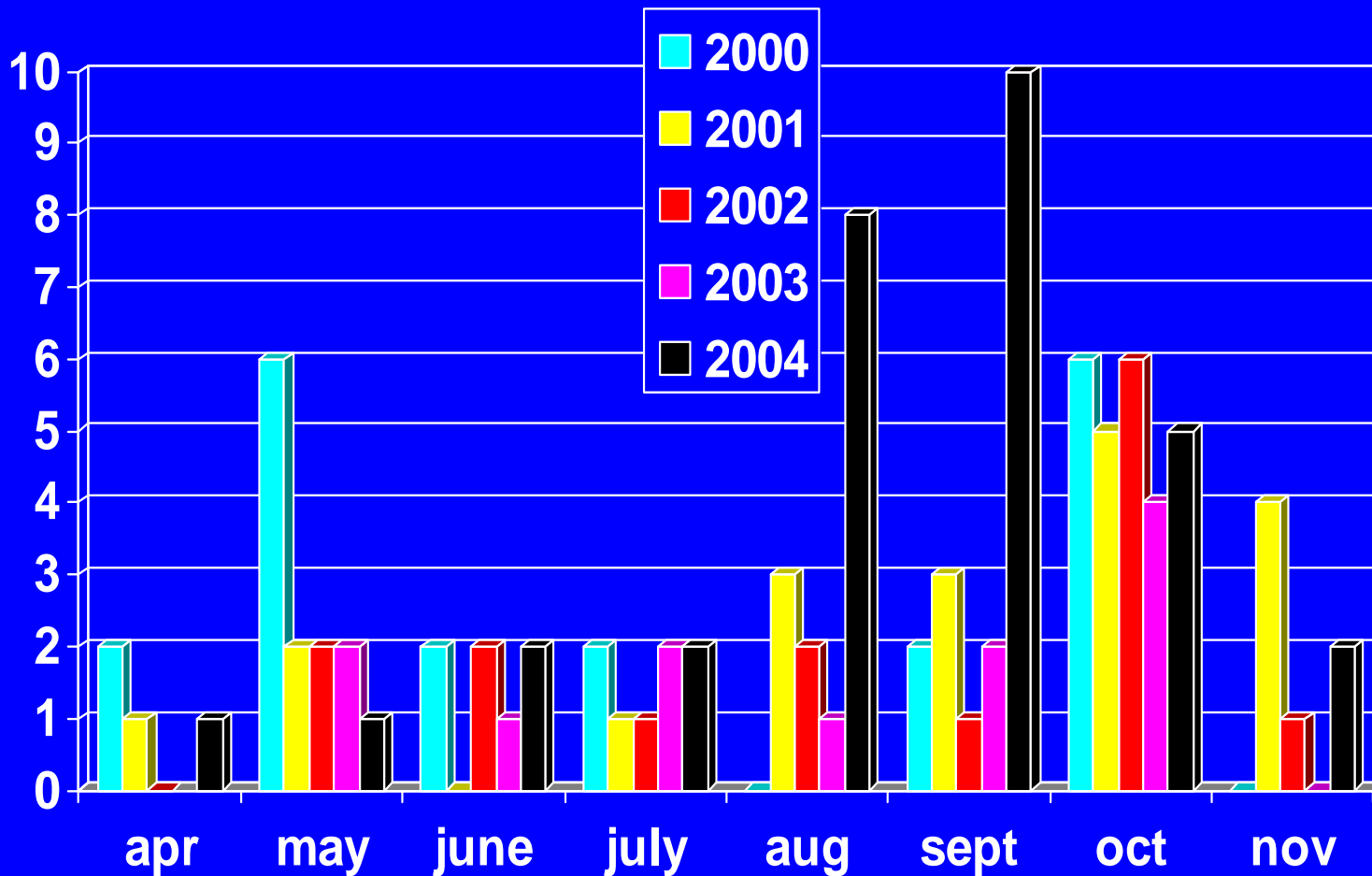
SEX OF KNOWN HUMAN-CAUSED MORTALITIES, NCDE 1999 - 2004



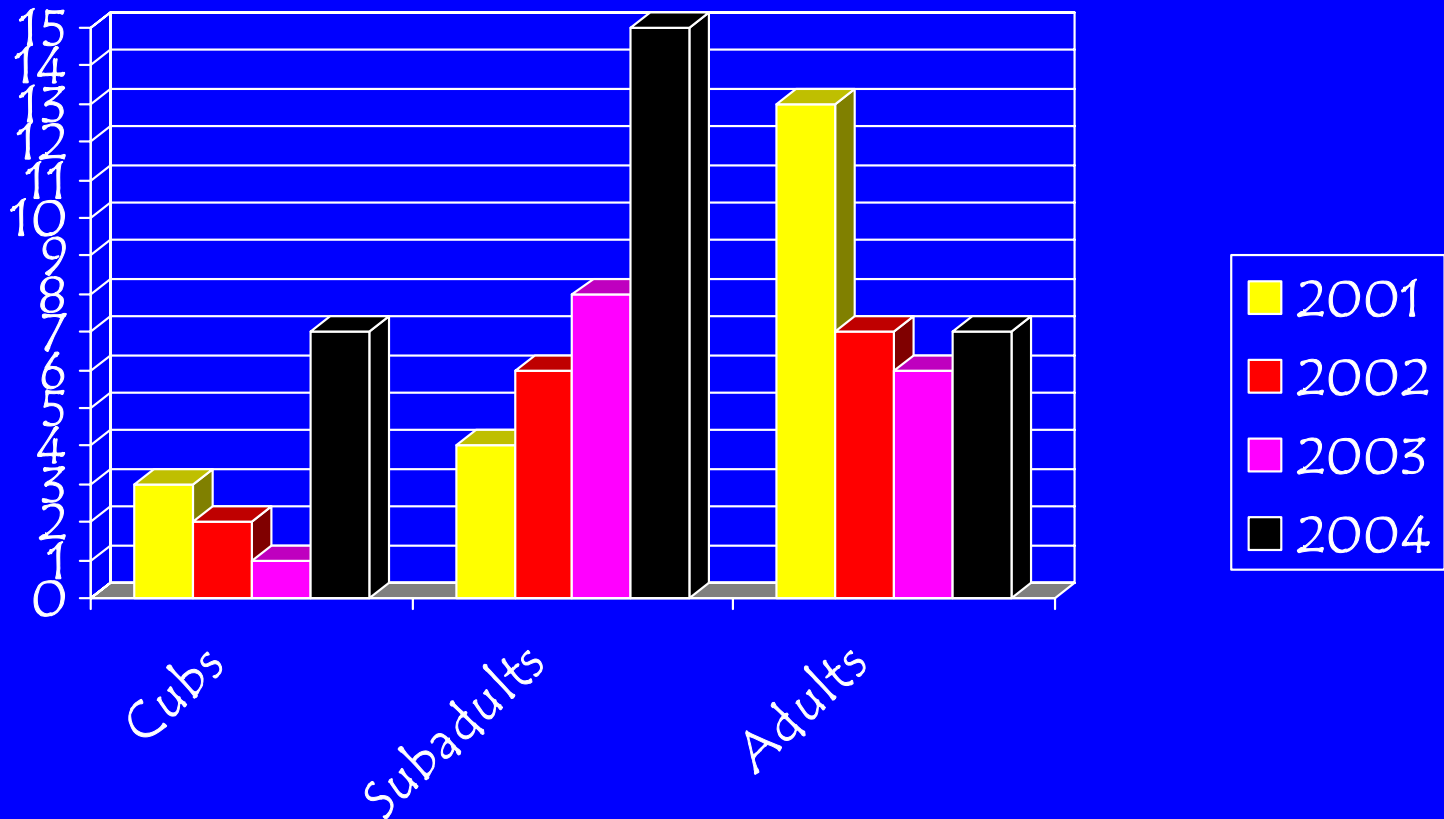
SEX AND AGE OF KNOWN HUMAN-CAUSED MORTALITIES, NCDE 2004



Month of Mortality 2000-2004



AGE OF KNOWN HUMAN-CAUSED MORTALITIES, NCDE 2001-2004



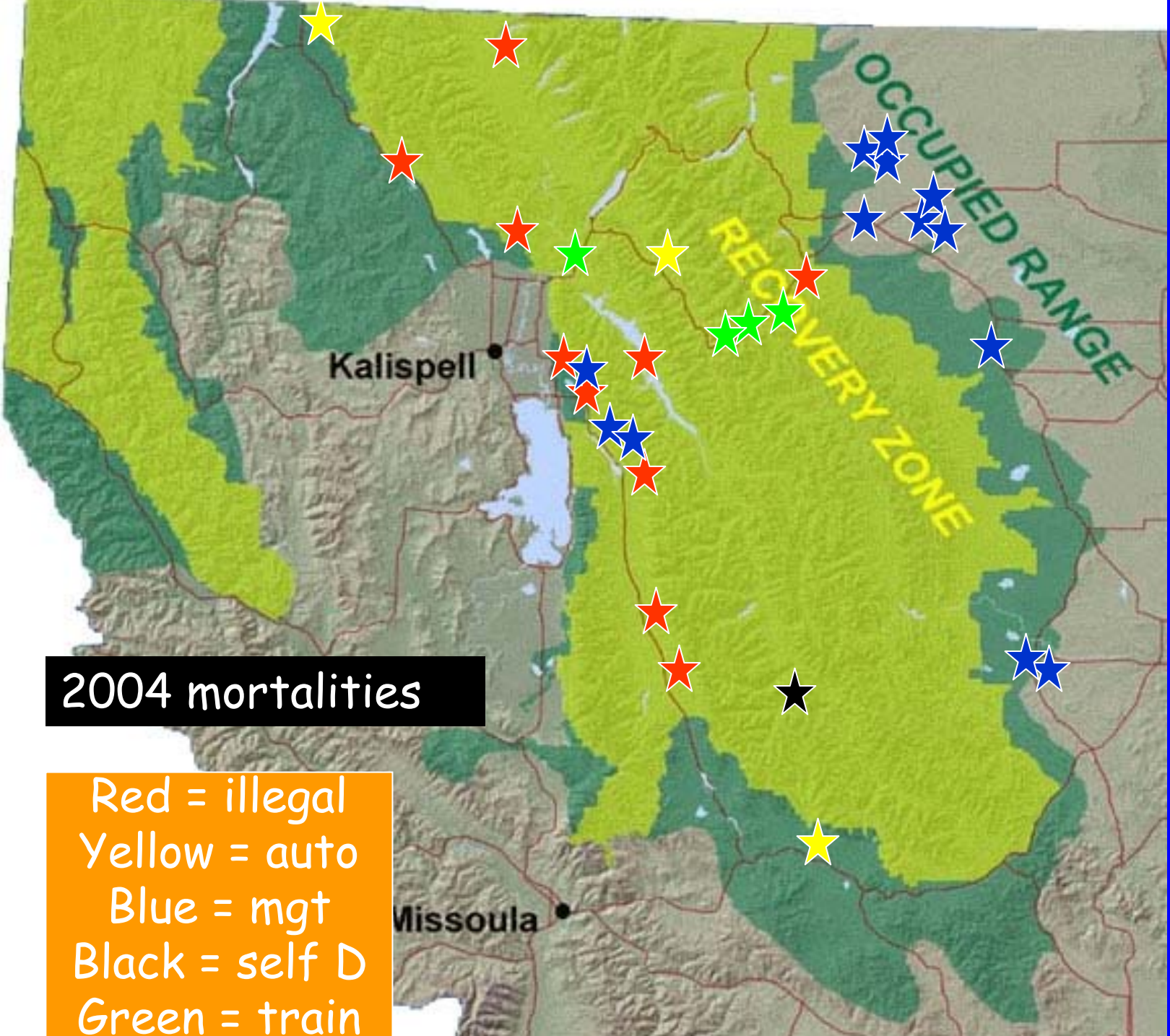
The NCDE population is expanding

Light green is recovery zone

Dark green is current range

White arrows are main expansion areas





2004 mortalities

- Red = illegal
- Yellow = auto
- Blue = mgt
- Black = self D
- Green = train

What is the minimum population estimate?

YR	ANN UNDUP FWC'S (outside/inside GNP)	ANN ADULT FEML MORT	ANN ALL FEML MORT	ANN TOTAL MORT	4% TOTAL MORT LIMIT ^{III}	30% ALL FEML MORT LIMIT	ANN TOTAL MORT 6 YR AVG	ANN FEML MORT 6 YR AVG
1997	13 (9/4)	1	5	12	14.6	4.4	10.0 (60/6)	4.7 (28/6)
1998	33 (22/11)	3	8	19	13.9	4.2	10.7 (64/6)	4.5 (27/6)
1999	18 (13/5)	3	4	17	13.9	4.2	12.7 (76/6)	5.0 (30/6)
2000	24 (13/11)	7	9	19	15.0	4.5	14.8 (89/6)	6.0 (36/6)
2001	26 (15/11)	6	9	19	12.7	3.8	16.0 (96/6)	6.5 (39/6)
2002	23 (16/7)	3	4	15	13.9	4.2	16.8 (101/6)	6.5 (39/6)
2003	19 (11/8)	4	7	16	324 12.9	3.9	17.5	6.8
2004		5	18	31			19.5	8.5

NCDE min. pop est. = $68 - 13 = 55 / 0.6 = 92 / .284 = 324$ current minimum
(without 60% sightability est., $55 / .284 = 194$ min. pop. est.)

In 2004, for meeting total mort quota, $19.5 / .04 = 488$ (438)

USFWS In 2004, for meeting female subquota, $8.5 / .012 = 708$ (566)