SNOWPOURRI

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DWR Snow Surveys

A Potpourri of Snow Topics

- 2009 Funnel Performance
- 8-Station Index
- 5-Station Index
- Snow Course Maintenance

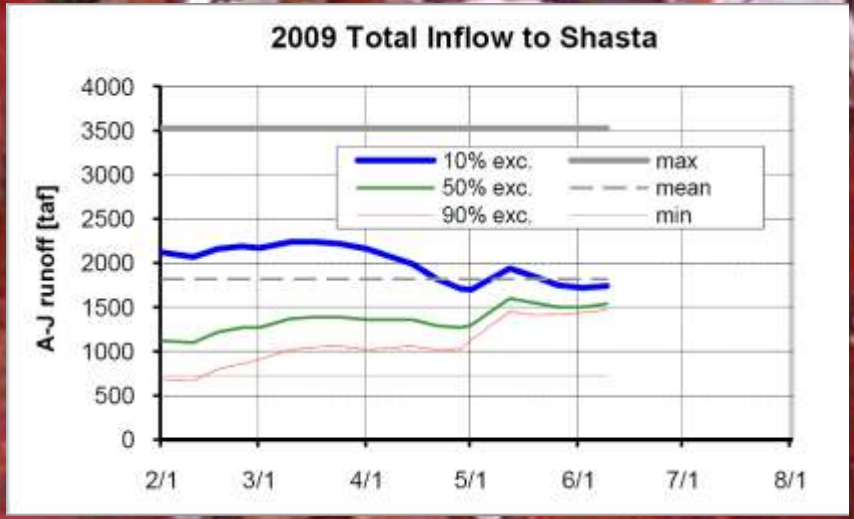
2009 Funnel Performance

- We were CLOSE.
- We should ALWAYS be close.
- Average NEVER happens.
- We were pleased . . .
- . . . (except for San Joaquin and Kings).

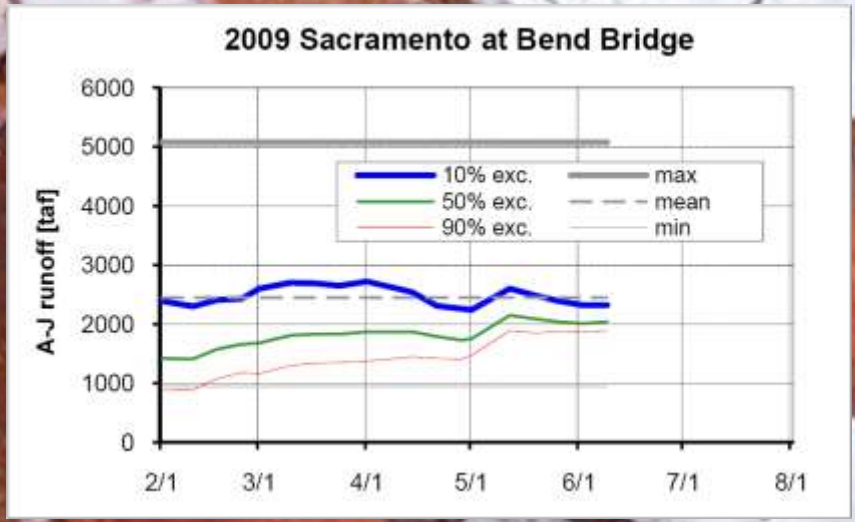
2009 Funnel Performance

BASIN	Feb 1 Forecast	April 1 Forecast	June 9 Forecast	ADJUSTED A-J RUNOFF
Inflow to Shasta	1,120	1,360	1,540	1,555
Sacramento, Bend	1,420	1,870	2,040	2,074
Feather, Oroville	960	1,320	1,300	1,262
Yuba, Smartville	630	830	860	846
American, Folsom	790	1,000	1,060	1,039
Mokelumne, Pardee	330	400	410	417
Stanislaus, N.Melones	500	620	630	656
Tuolumne, Don Pedro	890	1,080	1,100	1,105
Merced, McClure	430	520	540	561
San Joaquin, Millerton	910	960	970	1,042
Kings, Pine Flat	880	950	930	1,010
Kaweah, L.Kaweah	200	200	200	213
Tule, Success	32	26	29	28
Kern, Isabella	270	270	280	297

2009 Funnel Performance



Under by 15.



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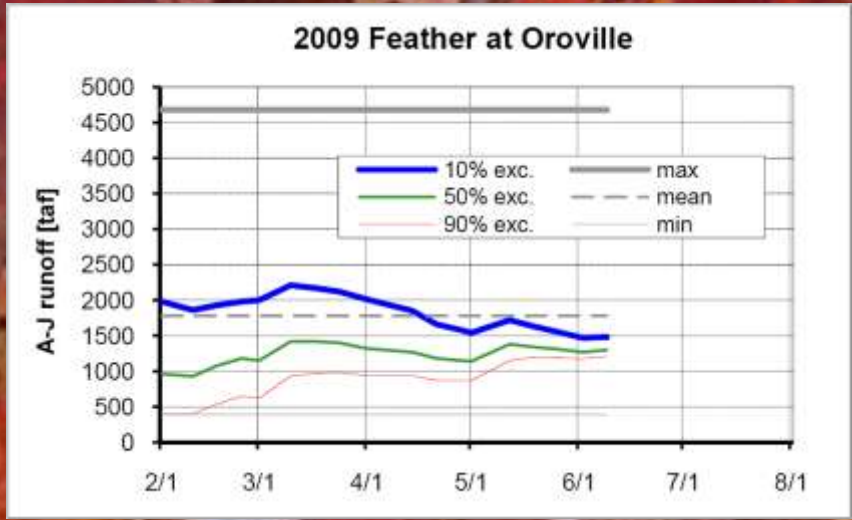
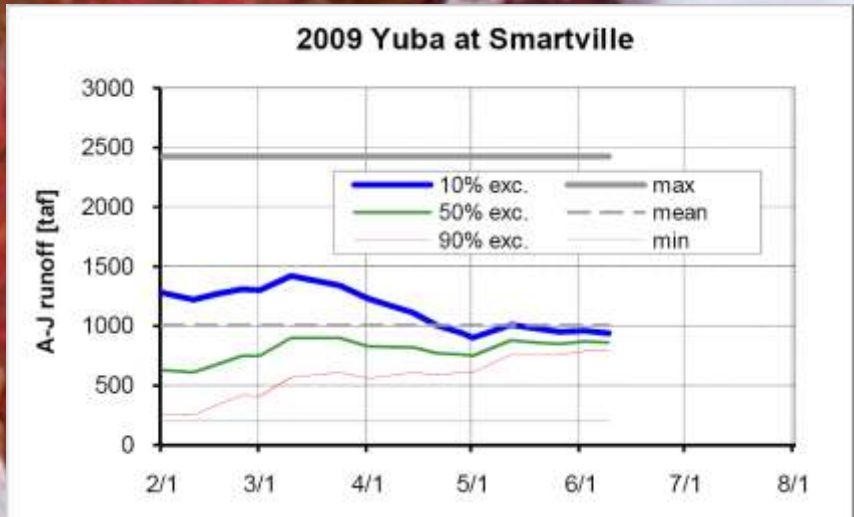
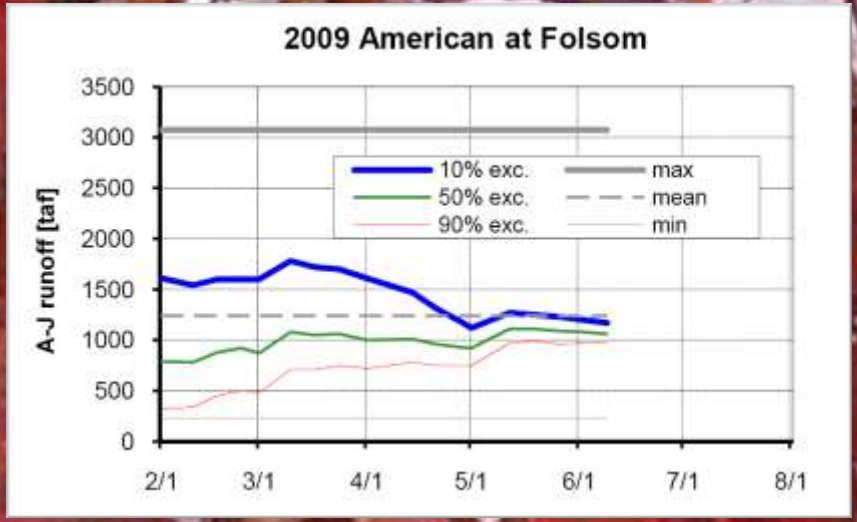


Over by 38.

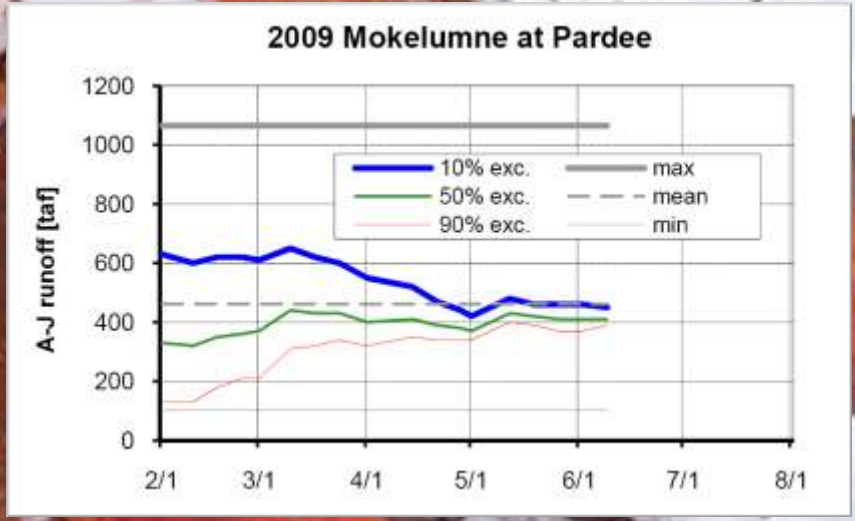


Over by 14.

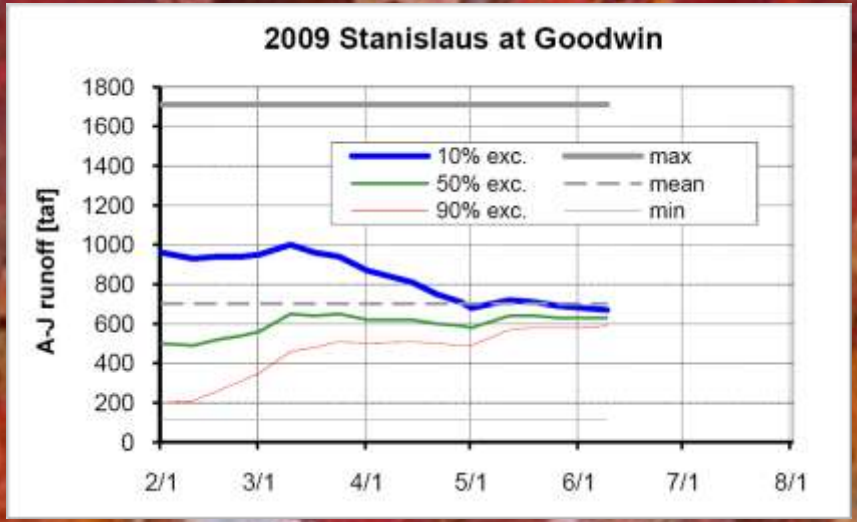
2009 Funnel Performance



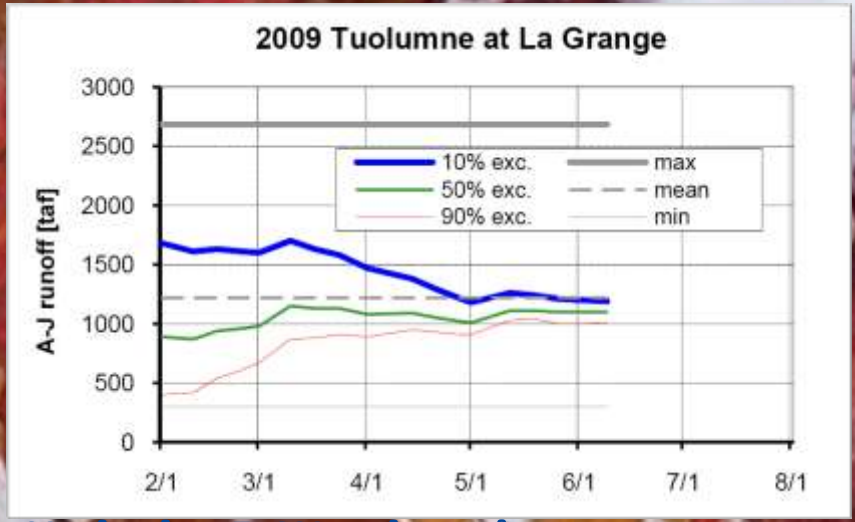
Over by 21.



Under by 7. Sweet.

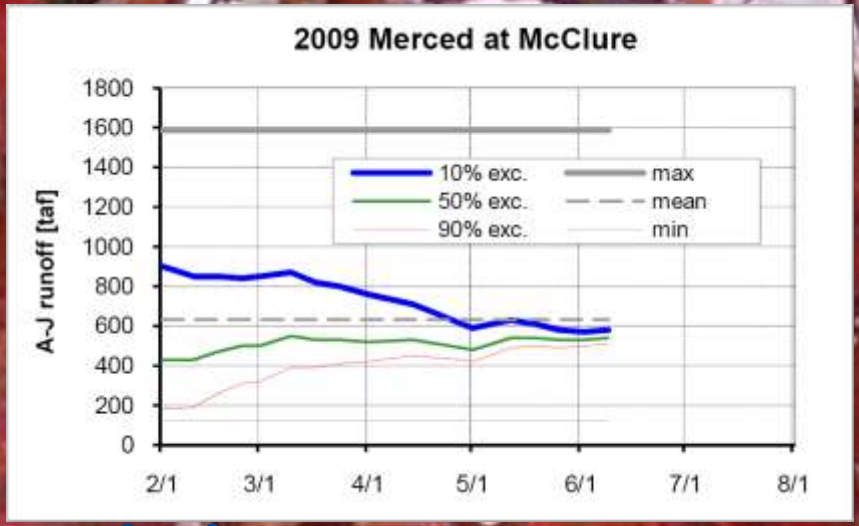


Under by 26.

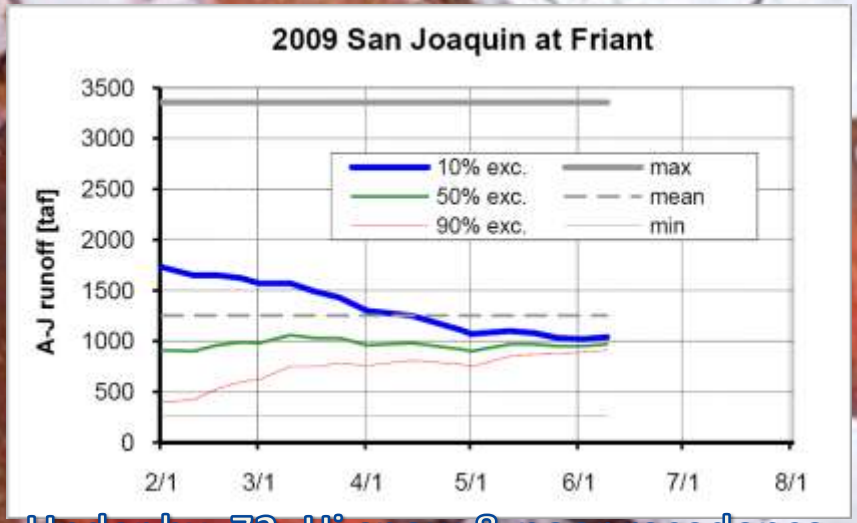


Under by 5. Wes doesn't pay us enough!

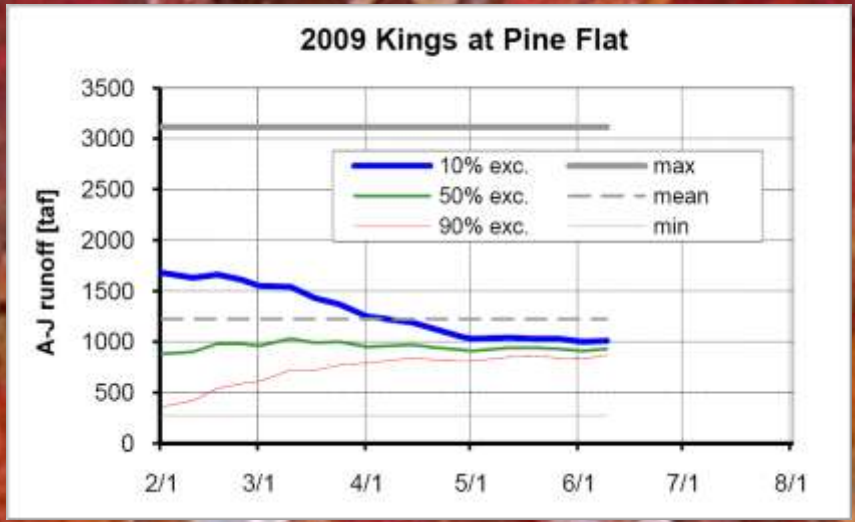
2009 Funnel Performance



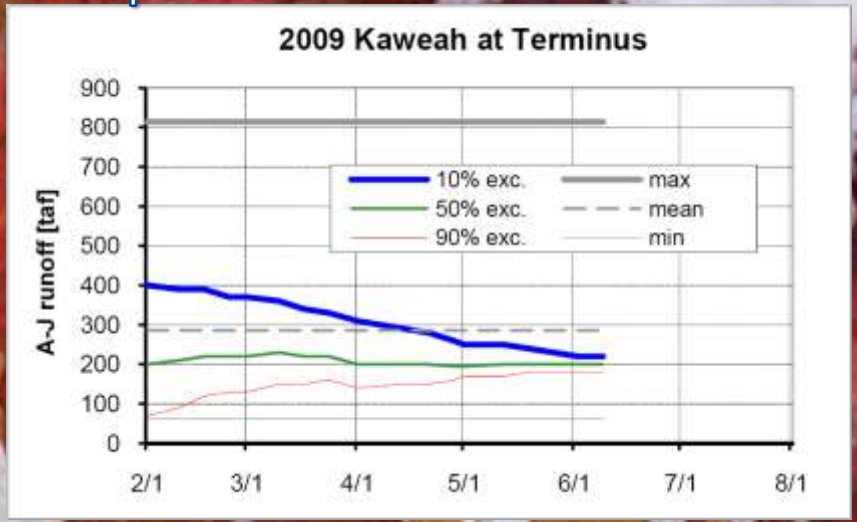
Under by 21.



Under by 72. Hi snow & poor recedence extrapolation.



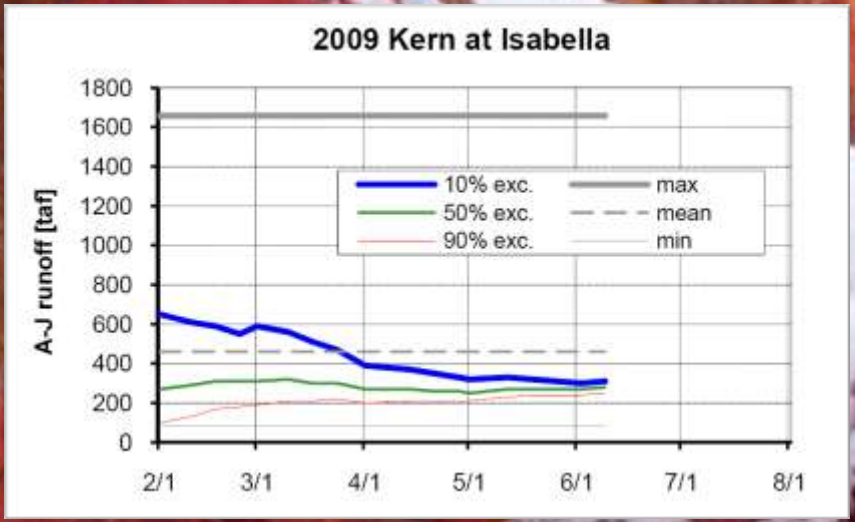
Under by 80. (see SJ)



Under by 13.

2009 Funnel Performance

Over by 1.



Under by 17.

8-Station Index

- What is it?
  - An average of 8 stations that span the Sierra Nevada portion of the Sacramento Basin.
- What's it for?
  - Widely used by water agencies as an indicator of precipitation levels in northern California.

8-Station Index

- Where did it come from?
  - Resulted from drought starting in 1987-8. First year of index was 1988. Water contractors were watching water supplies like hawks and were looking for an earlier look (than Feb 1) at water year comparisons.
- What was the criteria?
  - Maury Roos chose 8 stations with good historic records that had both observers and telemetry. Got 80% correlation with WY runoff.
- How does it get calculated?
  - Ahhhh. Here's where it gets more complicated!

8-Station Index

THE STATIONS

Station	Primary	Secondary
Blue Canyon	**BYM** (QCed)	BLC (Automated)
Brush Creek	**BCM** (QCed)	BRS (Automated)
Mineral	**MNR** (Observer)	MIN (Automated)
Mt. Shasta City	**MSC** (Observer)	MTS (Automated)
Pacific House	**PCF** (Observer)	PFH (Automated)
Quincy	**QRD** (Observer)	QCY (Automated)
Shasta Dam	**SHA** (Observer)	SHS (Automated)
Sierraville	**SRR** (Observer)	SVL (Automated)

8-Station Index

- Did you know there are two values?
  1. The Tabular 8-Station Index is updated about once a week, not a daily product. Updated by Maury Roos and Matt Winston.
  2. The CDEC 8-Station Index (8si) is automatically calculated daily.
- What's the difference?
  - Timing of updates, data entered, rounding, and whether telemetered or observer records used.

8-Station Index

Month-End Accumulated Values

Month	Tabulated	CDEC	*Difference*
October	3.09	3.09	*0.00*
November	8.55	8.56	*0.01*
December	14.60	14.64	*0.04*
January	17.66	17.69	*0.03*
February	29.55	29.64	*0.09*
March	37.88	38.00	*0.12*
April	39.53	39.66	*0.13*
May	45.00	45.13	*0.13*
June	46.33	46.47	*0.14*
July	46.36	46.49	*0.13*
August	46.53	46.66	*0.13*
September	46.67	46.81	*0.14*

8-Station Index

Station	Primary	Secondary
Blue Canyon	**BYM** (QCed)	BLC (Telemetered)
Brush Creek	**BCM** (QCed)	BRS (Telemetered)
Mineral	**MNR** (Observer)	MIN (Telemetered)
Mt. Shasta City	**MSC** (Observer)	MTS (Telemetered)
Pacific House	**PCF** (Observer)	PFH (Telemetered)
Quincy	**QRD** (Observer)	QCY (Telemetered)
Shasta Dam	**SHA** (Observer)	SHS (Telemetered)
Sierraville	**SRR** (Observer)	SVL (Telemetered)

CDEC daily accumulated Values will change:

- On Oct. 18th for Oct. 18th:
  - Daily Average = (BLC+BRS+MIN+MTS+PCF+QCY+SHA+SVL)/8
- On Nov. 8th for Oct. 18th:
  - Daily Average = (BYM+BCM+MNR+MSC+PCF+QRD+SHA+SRR)/8

8-Station Index

<u>Summary:</u>

- Index includes 8 precipitation stations in northern Sierras
- Has 20+ year history
- Two running values that will be close but not exact
- Clear as mud?

5-Station Index

What is it?

- An average of 5 stations spanning the Sierra Nevada portion of the San Joaquin Basin

Is it new?

- The index has existed on DWR internal spreadsheet for years, but it was decided to bring it into the limelight last year (2008)

5-Station Index

What are the stations?

Station	Primary	Secondary
Calaveras	CVT	CVS
Hetch Hetchy	HTH	MIL
Huntington Lake	NFR	BAL
North Fork RS	MSC	CRR
Yosemite	YSV	MIL

In what form is the data?

- **The cumulative index is offered both in tabulated data (CDEC code *5si*) and water year plot form.**

Snow Course Maintenance

From WHOOAAAA . . . . . To **WOW!!!!**

Snow Course Maintenance Update

SUMMARY	End 2008	End 2009
TOTAL SNOW COURSES MONITORED BY DWR SNOW SURVEYS	265	265
SNOW COURSES VISITED BY DWR SNOW SURVEYS STAFF	90	117
SNOW COURSES KNOWN TO BE IN "GOOD" CONDITION	68	86
SNOW COURSES NEEDING MINOR WORK (NEEDING SIGNS, GPS COORDINATES, ETC)		39
SNOW COURSES NEEDING MAJOR WORK (MAJOR BRUSHING, LIMBING, ETC)	41	12
STATUS OF SNOW COURSES "UNKOWN" (NOT VISITED WITHIN PAST 3 YEARS)	156	128
WORK TO BE DONE	LOTS!	MORE!

From WHOOAAAA . . . . . To WOW!!!!

Snow Course Maintenance Trips

If you join us on a maintenance trip, you <u>might</u> just experience . . .

. . . . beautiful scenery . . . .

. . . . amazing wildlife . . . .

. . . . good cell coverage . . . .

. . . . great teamwork . . . .

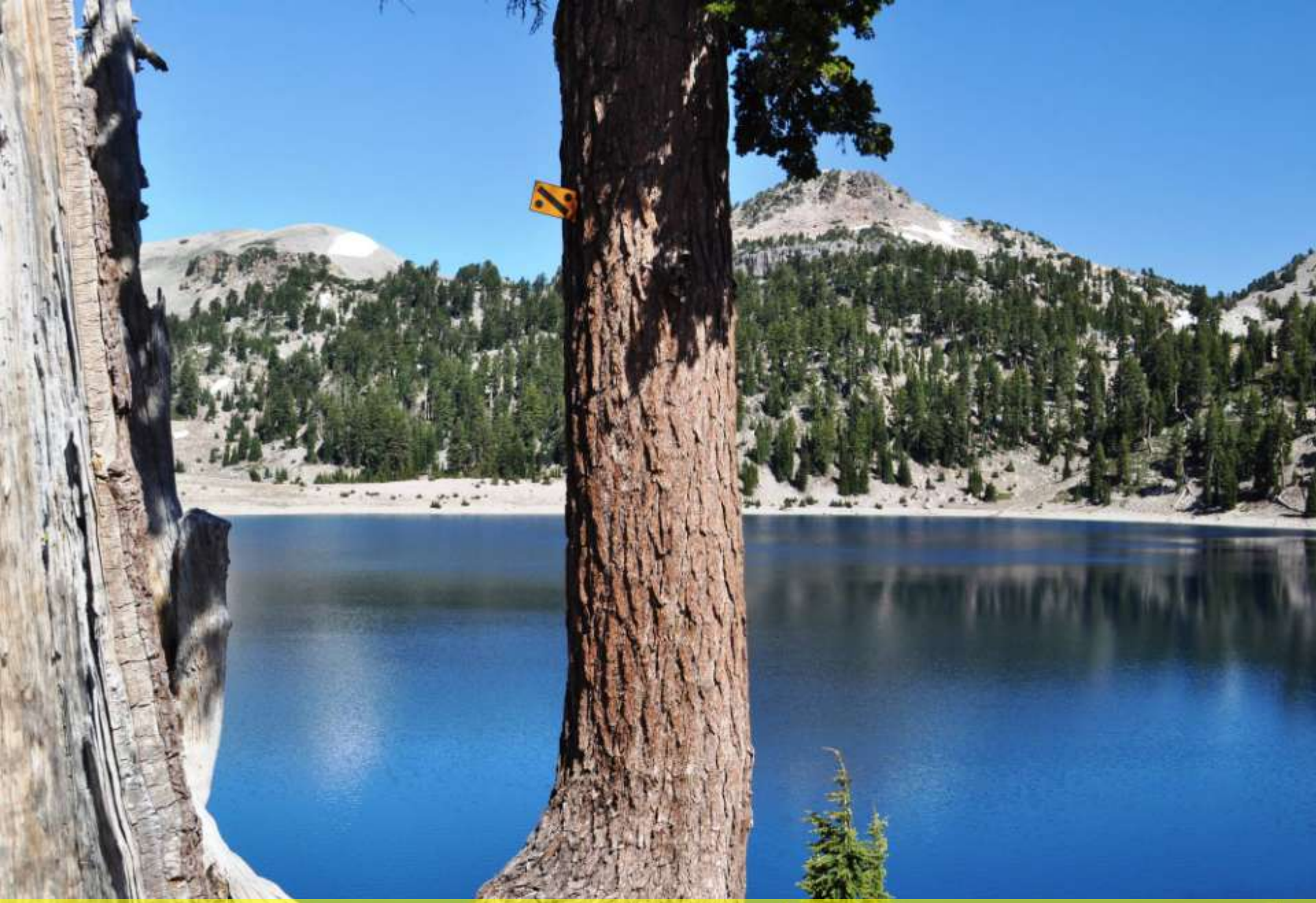
. . . . cuckoos . . . .

. . . . camaraderie . . . .

. . men looking in bushes by waterfalls . .

. . . . resurrection . . . .

. . . . traffic . . . .



. . and did we mention beautiful scenery???

Start small.

And if you're just not cuttin' it . . .

. . . call in a USFS Fire Crew!! . . .

. . and ride off in glory into the sunset.