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To: Forest Supervisors: Eldorado, Inyo, Lassen, Plumas, Modoc, Sierra, Stanislaus, Sequoia and Tahoe National Forests and the Lake Tahoe Basin Management Unit

To: Park Superintendents, Sequoia, Kings Canyon and Yosemite National Parks

Subject: Douglas-fir Tussock Moth Pheromone Detection Survey 2005 Report (NE06-01)

Enclosed are the results of the 2005 cooperative Douglas-fir tussock moth (DFTM) pheromone detection survey (Table 1). During 2005, traps were installed in 196 plots (5 traps/plot) with data collected for 187 plots (data for 9 plots were not collected). There were 165 (84%) plots with an average of <25 males per trap and 22 plots (11%) that averaged 25 or more moths per trap. Twenty-six percent of the plots averaged >25 males moths per trap in 2004 indicating a downward trend in overall trap counts this past year compared to last. Plots that averaged >25 moths per trap for 2005 were located on the following Ranger Districts: Amador and Placerville (Eldorado NF), Devil's Garden (Modoc NF) and Calaveras, Miwok and Summit (Stanislaus NF). In addition to these plots monitored on National Forest lands there were five plots that exceeded an average of 25 moths/trap on lands of other ownership. Four of these plots were located in Yosemite National Park and 1 was in Shasta County on private land near Burney Mountain, monitored by C.D.F.

Increases and declines in trap counts are very common with DFTM populations. Based on the results of the 2005 trap monitoring, there may be some increases in activity in 2006 in some locations, in addition to the areas where defoliation was detected in 2005. During the field season of this year Forest Health Protection staff will monitor other life stages in the areas where DFTM activity exceeded an average of 25 males/trap and/or where notable larval activity occurred. Land managers will be notified of the results of the additional monitoring. Field going personnel are urged to continue to check for evidence of feeding and defoliation on white fir throughout the susceptible host type this coming summer and fall and report any findings to their Forest Health Protection Shared Services Office.

During 2005, heavy defoliation from Douglas-fir tussock moth was detected by aerial surveys in Yosemite National Park and on the Sierra and Stanislaus National Forests on over 10,000 acres. There were also an additional 200+ acres of defoliation observed on private land in Mariposa County. The results of larval surveys conducted during 2005 in recreation areas and around trap plots with high counts indicated that most areas were one year away from reaching outbreak status. Based on larval surveys, defoliation ratings, and egg mass counts, DFTM populations in these areas are predicted to peak in 2006. Two areas were already at outbreak densities (Chinquapin in Yosemite NP and 1 plot located on the Sierra National Forest) in 2005 and declines in populations are expected in those areas. If no suppression treatment is implemented in 2006, some tree mortality can be expected in small, localized patches where heavy defoliation



occurred in 2005.

Sufficient trapping materials have been ordered for the detection survey plots for 2006. They will be distributed to cooperators in June or July of this year. Please direct any questions and/or observations of feeding or defoliation to Danny Cluck (530-252-6431) or Beverly Bulaon at (209-532-3671). Updates on population monitoring will be distributed to land managers as needed. FHP appreciates the continued cooperation from all agencies in this ongoing west-wide survey effort.

/s/ **Sheri Lee Smith**

Sheri Lee Smith

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Forest Health Protection

NE CA Shared Service Area

Enclosure

cc: Jesse Rios, CDF&FP, Sacramento
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Don Dockery, BLM, Susanville
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Table 1. Number of Douglas-fir tussock moth pheromone detection survey plots by trap catch for 1995-2005 for California.

Year	Total	NUMBER OF PLOTS WITH AN AVERAGE MOTH CATCH PER TRAP OF:														
		# of Plots	0<10	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<65	65<70	70<75	75+
1995	158	77	35	13		16	7	7	3	0	0	0	0	0	0	0
	100%	49%	22%	8%		10%	4.5%	4.5%	2%							
1996	149	33	26	16		8	7	12	9	5	8	6	8	5	1	5
	100%	22%	17%	11%		6%	4%	8%	6%	3%	6%	4%	6%	3%	1%	3%
1997	142	88	27	10		9	4	3	0	0	1	0	0	0	0	0
	100%	62%	19%	7%		6%	3%	2%			<1%					
1998	159	81	22	11		9	6	3	10	7	5	2	1	1	1	0
	100%	51%	14%	7%		6%	3%	2%	6%	4%	3%	<1%	<1%	<1%	<1%	
1999	159	126	20	5		3	2	2	0	0	0	1	0	0	0	0
	100%	79%	13%	3%		2%	1%	1%			1%					
2000	185	154	15	4		4	0	1	2	2	2	0	0	1	0	0
	100%	83%	8%	2%		2%		<1%	1%	1%	1%			<1%		
2001	183	95	57	13		10	6	0	1	1	0	0	0	0	0	0
	100%	52%	31%	7%		5%	3%		<1%	<1%						
2002	168	126	31	5		3	3	0	0	0	0	0	0	0	0	0
	100%	75%	18%	3%		2%	2%									
2003	163	53	42	11		11	10	14	13	3	1	4	0	1	0	0
	100%	32%	26%	7%		7%	6%	8%	8%	2%	1%	2%		1%		
2004	174	68	43	6		16	11	6	5	3	0	2	1	1	0	0
	* 93%	39%	25%	3%		9%	6%	3%	3%	2%		1%	<1%	<1%		
2005	195	139	15	11		7	4	3	2	3	1	0	0	0	1	1
	*95%	71%	8%	5%		4%	2%	2%	1%	2%	<1%				<1%	<1%
* Some plots were not collected due to weather.																