

Oregon State Police  
2017-19 Mobilization Costs  
(Estimates as of 02/05/19)

2017 Fire Name	Actual			Federal	
	Fire Costs (as of 02/5/19)	Estimated Reimbursement	Estimated State Liability	Reimbursement Source	State (Non- Federal)
Nena Springs Fire	\$ 1,492,226	\$ 1,547,279	\$ (55,053)	BIA (100%)	N/A
Milli Fire	\$ 1,719,008	\$ 1,318,327	\$ 400,681	FEMA/FMAG (75%)	N/A
Chetco Bar Fire	\$ 6,704,400	\$ 5,251,153	\$ 1,453,247	FEMA/FMAG (75%)	N/A
Eagle Creek Fire	\$ 6,468,458	\$ 4,906,678	\$ 1,561,780	FEMA/FMAG (75%)	N/A
CA Fire Response 1	\$ 72,675	\$ 72,675	\$ -	EMAC (100%)	N/A
CA Fire Response 2	\$ 40,109	\$ 40,109	\$ -	EMAC (100%)	N/A
<b>2017 Totals</b>	<b>\$ 16,496,876</b>	<b>\$ 13,136,221</b>	<b>\$ 3,360,655</b>		

2018 Fire Name	Estimated			Federal	
	Fire Costs (as of 02/5/19)	Estimated Reimbursement	Estimated State Liability	Reimbursement Source	State (Non- Federal)
Graham Fire	\$ 541,896	\$ 406,422	\$ 135,474	FEMA/FMAG (75%)	N/A
Substation Fire	\$ 1,783,949	\$ 1,337,962	\$ 445,987	FEMA/FMAG (75%)	N/A
Garner Complex Fire	\$ 2,903,558	\$ 2,177,669	\$ 725,889	FEMA/FMAG (75%)	N/A
Taylor Fire	\$ 2,066,937	\$ 1,550,203	\$ 516,734	FEMA/FMAG (75%)	N/A
South Valley Fire	\$ 801,264	\$ 600,948	\$ 200,316	FEMA/FMAG (75%)	N/A
Ramsey Canyon Fire	\$ 894,761	\$ 671,071	\$ 223,690	FEMA/FMAG (75%)	N/A
Hugo Fire	\$ 236,909	\$ 177,682	\$ 59,227	FEMA/FMAG (75%)	N/A
Mendocino Response	\$ 22,524	\$ 22,524	\$ -	EMAC (100%)	N/A
Hurricane Michael Response	\$ 49,967	\$ 49,967	\$ -	EMAC (100%)	N/A
Campfire Response	\$ 4,756	\$ 4,756	\$ -	EMAC (100%)	N/A
<b>Sub-Total</b>	<b>\$ 9,306,521</b>	<b>\$ 6,999,204</b>	<b>\$ 2,307,317</b>		
Miles Fire	\$ 1,598,374	\$ -	\$ 1,598,374	N/A	State (100%)
Memaloose #2 Fire	\$ 322,786	\$ -	\$ 322,786	N/A	State (100%)
Stubblefield Fire	\$ 1,540,317	\$ -	\$ 1,540,317	N/A	State (100%)
Klondike West Fire	\$ 1,009,523	\$ -	\$ 1,009,523	N/A	State (100%)
<b>Sub-Total</b>	<b>\$ 4,471,000</b>	<b>\$ -</b>	<b>\$ 4,471,000</b>		
<b>2018 Totals</b>	<b>\$ 13,777,521</b>	<b>\$ 6,999,204</b>	<b>\$ 6,778,317</b>		

2017-18 Fires	Total Estimated Fire Costs	Estimated Reimbursement	Estimated State Liability
2017-18 Totals	\$ 30,274,397	\$ 20,135,425	\$ 10,138,972
2018 Feb Session GF Allocation	\$ (3,165,945)		\$ (3,165,945)
2018 Sep E-Board GF Allocation	\$ (9,865,644)	\$ (4,000,000)	\$ (5,865,644)
2018 Dec E-Board GF Allocation	\$ (6,300,000)	\$ (6,300,000)	\$ -
2019 Feb (HB5046) GF Allocation (in process)	\$ (6,665,000)	\$ (5,209,000)	\$ (1,456,000)
<b>2017-18 Totals</b>	<b>\$ 4,277,808</b>	<b>\$ 4,626,425</b>	<b>\$ (348,617)</b>

Legend:

- FEMA - Federal Emergency Response Agency
- FMAG - Fire Management Assistance Grant
- EMAC - Emergency Management Assistance Compact

**Table 1: 2016 Fatal Crash / Fatalities Comparison**

	<b>24 hour Patrol Counties</b>	<b>Non-24 hour Patrol Counties</b>
<b>Fatalities (Median #):</b>	13.28	28.12
<b>Fatal Crashes (Median #):</b>	11.62	23.44

\*Represents Fatal Crashes/Fatalities on all roadways

\*\*2016 Crash/Fatalities statistics obtained from ODOT

\*\*\*2016 County population data obtained from US Census Bureau

The table above shows the median number of fatalities and fatal crashes in counties with 24 hour patrols available versus counties without any 24 hour patrols. As demonstrated in the table, the counties with 24 hour patrol available have a lower median number of fatalities (53%) and fatal crashes (50%) than counties without 24 hour patrols.

The reality of a higher fatality rate on Oregon’s roadways with a lower police presence matches extant research published in peer reviewed journals. In an article titled, *Life and Death in the Fast Lane: Police Enforcement and Traffic Fatalities* (2014), Dr. Benjamin Hansen (Professor of Economics, University of Oregon) and Dr. Gregory DeAngelo (Associate Professor of Economic Sciences, Claremont Graduate University) researched the impact of reduced Trooper presence on Oregon’s highways after the 2003 layoffs. Using Idaho, Nevada and Washington as a control group and factoring for weather, roadway maintenance and roadway type Dr. Hansen and Dr. DeAngelo found the number of fatalities on Oregon’s highways has a semi-elasticity to the number of Troopers.

Research conducted by Rezapour, Wulff, and Ksaibati (2018) also had a similar outcome to Hansen and Deangelo’s research. Specifically, they examined the impact of Troopers staffing levels, the number of patrol hours, and budget on the fatality rates on highways in Idaho, Colorado, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. What they found is the number of Troopers and hours spent on patrol reduces the fatality rate.

In both studies, the increase (and/or reduced) presence of Troopers on highways impacted the fatality rate because enforcement of traffic laws influences driver behavior. Reduced enforcement results in drivers taking increased risks (i.e. speeding, distracted driving, DUII). This relationship has been recently displayed again on Oregon’s highways. In a report released by Portland State University, titled *Preliminary Analysis of Speed Limit Changes* in Eastern Oregon (2018), there were 382 more traffic accidents in 2017 on the sections of highway where the speed limit was increased.

## References

DeAngelo, G. and Hansen, B. "Life and Death in the Fast Lane: Police Enforcement and Traffic Fatalities." *American Economic Journal: Economic Policy* 6, no. 2 (2014): 231-257.

Monsere, C. et al., "Preliminary analysis of Speed Limit Changes in Eastern Oregon." *Portland State University, Civil & Environmental Engineering* (2018).

Rezapour, M. et al., "Effectiveness of Enforcement Resources in the Highway Patrol in Reducing Fatality Rates." *IATSS Research* (2018), <https://doi.org/10.1016/j.iatssr.2018.04.001>.

2016 Fatalities Calculations

24 Hour Patrol Counties (Yellow)			Non-24 Hour Patrol Counties (Black)				
	2016 Fatalities	2016 Population	Fatalities per Capita (100,000)		2016 Fatalities	2016 Population	Fatalities per Capita (100,000)
<b>Benton</b>	9	89,296	10.08	<b>Baker</b>	7	15,948	43.89
<b>Clackamas</b>	44	406,680	10.82	<b>Columbia</b>	4	50,886	7.86
<b>Clatsop</b>	13	38,637	33.65	<b>Coos</b>	7	63,375	11.05
<b>Deschutes</b>	24	180,675	13.28	<b>Crook</b>	2	22,344	8.95
<b>Douglas</b>	16	108,100	14.80	<b>Curry</b>	1	22,588	4.43
<b>Hood River</b>	3	23,064	13.01	<b>Gilliam</b>	4	1,859	215.17
<b>Jackson</b>	34	214,706	15.84	<b>Grant</b>	3	7,184	41.76
<b>Jefferson</b>	9	23,119	38.93	<b>Harney</b>	5	7,261	68.86
<b>Lane</b>	45	368,283	12.22	<b>Josephine</b>	24	85,338	28.12
<b>Linn</b>	18	122,700	14.67	<b>Klamath</b>	14	66,283	21.12
<b>Marion</b>	37	335,766	11.02	<b>Lake</b>	3	7,820	38.36
<b>Multnomah</b>	55	801,539	6.86	<b>Lincoln</b>	15	47,897	31.32
<b>Polk</b>	13	81,442	15.96	<b>Malheur</b>	7	30,393	23.03
<b>Washington</b>	30	582,739	5.15	<b>Morrow</b>	4	11,219	35.65
<b>Yamhill</b>	14	104,117	13.45	<b>Sherman</b>	1	1,717	58.24
				<b>Tillamook</b>	3	26,209	11.45
				<b>Umatilla</b>	14	76,649	18.27
				<b>Union</b>	4	26,043	15.36
				<b>Wallowa</b>	2	6,916	28.92
				<b>Wasco</b>	10	25,871	38.65
				<b>Wheeler</b>	0	1,326	0.00

*24 Hour Patrol Counties - Calculations*

Mean	15.31521104
Standard Error	2.348726013
<b>Median</b>	<b>13.28352013</b>
Mode	#N/A
Standard Deviation	9.096576732
Sample Variance	82.74770825
Kurtosis	3.313080574
Skewness	1.894408752
Range	33.7809171
Minimum	5.148102324
Maximum	38.92901942
Sum	229.7281656
Count	15

*Non-24 Hour Patrol Counties - Calculations*

Mean	35.73624718
Standard Error	9.769865677
<b>Median</b>	<b>28.123462</b>
Mode	#N/A
Standard Deviation	44.77114899
Sample Variance	2004.455782
Kurtosis	14.02237911
Skewness	3.48496286
Range	215.1694459
Minimum	0
Maximum	215.1694459
Sum	750.4611908
Count	21

2016 Fatal Crashes Calculations

24 Hour Patrol Counties (Yellow)			Non-24 Hour Patrol Counties (Black)				
	2016 Fatal Crashes	2016 Population	Fatal Crashes per Capita (100,000)		2016 Fatal Crashes	2016 Population	Fatal Crashes per Capita (100,000)
<b>Benton</b>	8	89,296	8.96	<b>Baker</b>	6	15,948	37.62
<b>Clackamas</b>	36	406,680	8.85	<b>Columbia</b>	4	50,886	7.86
<b>Clatsop</b>	10	38,637	25.88	<b>Coos</b>	7	63,375	11.05
<b>Deschutes</b>	21	180,675	11.62	<b>Crook</b>	2	22,344	8.95
<b>Douglas</b>	16	108,100	14.80	<b>Curry</b>	1	22,588	4.43
<b>Hood River</b>	3	23,064	13.01	<b>Gilliam</b>	4	1,859	215.17
<b>Jackson</b>	33	214,706	15.37	<b>Grant</b>	3	7,184	41.76
<b>Jefferson</b>	5	23,119	21.63	<b>Harney</b>	3	7,261	41.32
<b>Lane</b>	39	368,283	10.59	<b>Josephine</b>	20	85,338	23.44
<b>Linn</b>	16	122,700	13.04	<b>Klamath</b>	14	66,283	21.12
<b>Marion</b>	34	335,766	10.13	<b>Lake</b>	3	7,820	38.36
<b>Multnomah</b>	55	801,539	6.86	<b>Lincoln</b>	14	47,897	29.23
<b>Polk</b>	13	81,442	15.96	<b>Malheur</b>	6	30,393	19.74
<b>Washington</b>	28	582,739	4.80	<b>Morrow</b>	3	11,219	26.74
<b>Yamhill</b>	11	104,117	10.57	<b>Sherman</b>	1	1,717	58.24
				<b>Tillamook</b>	3	26,209	11.45
				<b>Umatilla</b>	13	76,649	16.96
				<b>Union</b>	4	26,043	15.36
				<b>Wallowa</b>	2	6,916	28.92
				<b>Wasco</b>	7	25,871	27.06
				<b>Wheeler</b>	0	1,326	0.00

24 Hour Patrol Counties - Calculations

Mean	12.80475697
Standard Error	1.410342605
<b>Median</b>	<b>11.62308012</b>
Mode	#N/A
Standard Deviation	5.462233421
Sample Variance	29.83599394
Kurtosis	1.337846924
Skewness	1.059948656
Range	21.07703115
Minimum	4.804895502
Maximum	25.88192665
Sum	192.0713546
Count	15

Non-24 Hour Patrol Counties - Calculations

Mean	32.60795304
Standard Error	9.656002656
<b>Median</b>	<b>23.43621833</b>
Mode	#N/A
Standard Deviation	44.24936308
Sample Variance	1958.006133
Kurtosis	16.12332538
Skewness	3.817071898
Range	215.1694459
Minimum	0
Maximum	215.1694459
Sum	684.7670139
Count	21