

Technical Appendix

Funding Public Safety Realignment

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Components of the Proposed Year 4 Allocation Model

The proposed Year 4 model consists of a base allocation, adjustments for county characteristics, and incentive bonuses. This technical appendix describes each component of our proposed model and presents data used in the model simulation.

Base Allocation

The base allocation is calculated as a weighted average of the following elements:

1. The county share of the total projected full roll-out realignment population (weighted at 40%)
2. The county share of the total high-risk population, males ages 18–29 (weighted at 60%)

Table A1 presents the Department of Finance (DOF) full roll-out projections of the increase in the Average Daily Population (ADP) under realignment by county. These projections are shown separately for the 1170(h) population of low-level felons and the Post-Release Community Supervision (PRCS) and parole populations. The DOF based the projected increase in ADP of the 1170(h) population on expected convictions and associated jail time for realignment felonies. The increase in ADP of the PRCS and parole populations is based on expected revocations, with the assumption that the average revocation term is 30 days. Table A2 presents American Community Survey (ACS)¹ estimates of the county male adult population from ages 18 to 29 years old; this age group represents the population at the greatest risk for criminal justice contact. Taken together, these elements form the base county allocation presented in Table A4.

Adjustments for Differences in County Characteristics

Our proposed Year 4 model adjusts the base allocation to capture differences in county characteristics that may affect the capacity to manage the realigned population. While no indicators will perfectly capture relevant differences in county characteristics, this model brings some key differences into the allocation decision by including adjustments for the poverty rate and percent of the population living in rural areas. Table A2 presents these characteristics by county.

1. **Poverty Rate.** The poverty rate adjustment increases the base allocation by 0 to 10 percent, depending on the level of poverty. Counties with poverty rates above the 75th percentile receive a 10 percent increase in their base allocations; counties with poverty rates at or above the 50th percentile receive a 5 percent adjustment in their base allocations. Poverty rate adjustments are summarized in Table A5.
2. **Percent Rural.** The rural population adjustment increases the base allocation by 0 to 10 percent, depending on the share of the county population living in rural areas. Counties with rural populations above the 75th percentile receive a 10 percent increase in their base allocations; counties with rural populations at or above the 50th percentile receive a 5 percent adjustment in their base allocations. Rural population adjustments are summarized in Table A5.

¹ ACS county level age/gender population estimates are based on 2007–2011 survey data.

Incentive Bonuses

The model's incentive bonuses are based on two types of recidivism: return to prison custody and reconviction. Counties receive bonuses for achieving low levels of recidivism, as well as bonuses for relative improvements in their recidivism rates. Recidivism outcomes for 2010 and 2011 are presented in Table A3.

1. **Return to Prison Custody.** The return to prison custody (RTC) bonus is composed of a reward for low RTC levels and a reward for relative improvement in RTC rates. This recidivism bonus increases the base allocation by 5 percent for counties at or below the 50th percentile in RTC levels and increases the base allocation by 5 percent for counties with changes in RTC rates at or below the 50th percentile. These bonus amounts are shown in Table A5.
2. **Reconviction.** The reconviction bonus is composed of a reward for low levels of reconviction and a reward for relative improvement in reconviction rates. This recidivism bonus increases the base allocation by 5 percent for counties at or below the 50th percentile in reconviction levels and increases the base allocation by 5 percent for counties with changes in reconviction rates at or below the 50th percentile. These bonus amounts are shown in Table A5.

Integration of Base Allocation, Adjustments, and Bonuses

Initially, the base allocation distributes 100 percent of the available funding across counties. The addition of capacity adjustments and incentive bonuses requires a reduction in the share of total funding allocated according to the base to allow for these adjustments and bonuses. Theoretically, the enhancement to the base could range from 0 to 40 percent; however, empirically, every county received some amount of increase in its base allocation in our proposed Year 4 model. Adjustments and bonuses, taken together, ranged from 5 to 40 percent of the base allocation for Year 4, with an average county enhancement of 17.4 percent.

Implications of Imposing a Minimum Past Allocation

Table A5 shows the allocation produced by our proposed model. In the text of the report, we impose a minimum allocation equal to the smallest past share received by a county. The allocations to the majority of counties are effectively reduced to 93.5 percent of their original model share to accommodate this minimum allocation rule.

TABLE A1

California Department of Finance projections of full roll-out realignment population by county

County	Projected ADP: 1170(h) convictions	Projected ADP: PRCS and parole revocations	Total projected ADP increase due to realignment
Alameda	267	132	400
Alpine	2	–	2
Amador	53	6	59
Butte	268	36	304
Calaveras	21	5	26
Colusa	23	1	24
Contra Costa	104	56	159
Del Norte	11	5	17
El Dorado	68	10	78
Fresno	518	218	736
Glenn	28	3	31
Humboldt	137	15	152
Imperial	90	11	101
Inyo	15	3	17
Kern	1,019	154	1,173
Kings	321	39	360
Lake	73	11	84
Lassen	32	6	38
Los Angeles	8,342	530	8,873
Madera	111	24	134
Marin	66	8	74
Mariposa	13	2	16
Mendocino	75	8	83
Merced	171	42	214
Modoc	2	1	4
Mono	3	1	4
Monterey	308	34	342
Napa	70	7	77
Nevada	23	6	29
Orange	1,464	220	1,685
Placer	251	25	276
Plumas	9	1	11
Riverside	1,601	262	1,864
Sacramento	895	208	1,103
San Benito	52	4	56
San Bernardino	2,301	348	2,649
San Diego	1,821	256	2,078
San Francisco	164	61	226
San Joaquin	450	126	575
San Luis Obispo	140	22	162
San Mateo	208	33	241
Santa Barbara	294	37	331
Santa Clara	693	115	809
Santa Cruz	78	17	95
Shasta	326	40	365
Sierra	1	–	1

Table A1 (continued)

County	Projected ADP: 1170(h) convictions	Projected ADP: PRCS and parole revocations	Total projected ADP increase due to realignment
Siskiyou	34	8	41
Solano	278	53	331
Sonoma	231	21	252
Stanislaus	540	66	606
Sutter	103	21	124
Tehama	154	13	167
Trinity	9	1	11
Tulare	520	70	590
Tuolumne	47	4	51
Ventura	380	60	439
Yolo	277	37	314
Yuba	94	19	113

SOURCE: California Department of Finance, Projections of the Realignment Population.

TABLE A2
County characteristics

County	County population, males ages 18–29 (ACS)	Percent in poverty (USDA)	Percent rural (Census)
Alameda	131,275	13.2%	0.4%
Alpine	69	17.4%	100.0%
Amador	2,580	14.0%	60.4%
Butte	24,696	22.6%	18.9%
Calaveras	2,588	12.5%	75.4%
Colusa	1,776	13.2%	31.7%
Contra Costa	76,361	11.9%	0.8%
Del Norte	2,815	25.4%	33.7%
El Dorado	11,622	10.3%	34.7%
Fresno	91,336	25.8%	10.8%
Glenn	2,244	19.2%	40.9%
Humboldt	14,092	21.1%	29.8%
Imperial	17,311	26.0%	17.4%
Inyo	1,134	12.7%	46.4%
Kern	84,720	24.6%	10.2%
Kings	18,867	21.2%	10.9%
Lake	4,290	23.0%	33.1%
Lassen	5,738	19.3%	70.5%
Los Angeles	924,526	18.4%	0.6%
Madera	12,729	23.6%	32.9%
Marin	14,362	9.4%	6.5%
Mariposa	1,025	15.7%	100.0%
Mendocino	6,599	20.2%	45.2%
Merced	24,865	26.8%	14.3%
Modoc	526	21.5%	70.0%
Mono	1,576	10.8%	45.8%
Monterey	42,033	17.1%	9.8%
Napa	10,869	12.0%	13.4%
Nevada	5,949	12.1%	42.1%
Orange	266,008	13.0%	0.1%
Placer	23,471	8.5%	13.8%
Plumas	1,138	14.8%	74.0%
Riverside	186,618	16.9%	4.6%
Sacramento	125,496	17.7%	2.1%
San Benito	4,402	12.4%	24.0%
San Bernardino	192,241	19.4%	4.7%
San Diego	326,774	15.2%	3.3%
San Francisco	79,688	13.8%	0.0%
San Joaquin	60,531	18.2%	8.5%
San Luis Obispo	32,094	15.1%	16.6%
San Mateo	53,861	7.9%	1.9%
Santa Barbara	49,387	15.4%	5.0%
Santa Clara	152,287	10.7%	1.1%
Santa Cruz	27,647	14.9%	12.0%
Shasta	13,509	19.4%	29.3%
Sierra	159	13.6%	99.7%
Siskiyou	2,875	24.4%	65.8%

Table A2 (continued)

County	County population, males ages 18–29 (ACS)	Percent in poverty (USDA)	Percent rural (Census)
Solano	36,117	13.6%	3.7%
Sonoma	40,038	12.2%	12.4%
Stanislaus	45,587	23.3%	8.0%
Sutter	7,954	15.8%	14.8%
Tehama	4,628	19.5%	51.5%
Trinity	844	21.4%	100.0%
Tulare	40,765	25.6%	15.5%
Tuolumne	4,567	16.6%	49.0%
Ventura	70,176	11.5%	3.1%
Yolo	26,019	21.3%	6.9%
Yuba	6,635	19.6%	26.2%

SOURCES: County population estimates are drawn from the American Community Survey for the years 2007–2011 (United States Census Bureau 2013); poverty rates are drawn from the United States Department of Agriculture (2011); and urbanicity rates are drawn from the United States Census Bureau (2010).

TABLE A3

Recidivism rates for lower-level felons released from prison, 2010–2011

County	Reconviction		Returns to prison custody	
	Recidivism level	Change in recidivism rate	Recidivism level	Change in recidivism rate
Alameda	19.04%	4.32%	4.53%	-89.47%
Alpine	50.00%	n/a	0.00%	-100.00%
Amador	21.95%	104.88%	12.20%	-70.31%
Butte	21.84%	37.25%	10.13%	-80.02%
Calaveras	28.00%	58.67%	12.00%	-59.20%
Colusa	9.09%	-51.52%	0.00%	-100.00%
Contra Costa	16.18%	25.89%	3.82%	-92.38%
Del Norte	19.35%	6.45%	6.45%	-89.35%
El Dorado	24.27%	-10.08%	8.74%	-81.74%
Fresno	17.28%	26.34%	7.37%	-87.10%
Glenn	3.85%	-62.82%	0.00%	-100.00%
Humboldt	33.51%	13.27%	8.11%	-85.07%
Imperial	37.96%	15.47%	12.96%	-72.17%
Inyo	14.29%	-42.86%	14.29%	-71.43%
Kern	38.26%	21.26%	7.24%	-85.62%
Kings	23.62%	41.73%	9.45%	-81.77%
Lake	4.40%	-77.07%	4.40%	-91.06%
Lassen	4.00%	-83.56%	0.00%	-100.00%
Los Angeles	22.37%	1.32%	8.61%	-64.09%
Madera	17.11%	-8.25%	6.58%	-86.84%
Marin	23.64%	20.33%	5.45%	-85.45%
Mariposa	0.00%	-100.00%	0.00%	-100.00%
Mendocino	20.22%	-20.26%	7.87%	-86.26%
Merced	7.48%	39.52%	5.51%	-89.05%
Modoc	27.27%	200.00%	0.00%	-100.00%
Mono	0.00%	n/a	0.00%	-100.00%
Monterey	27.03%	-17.95%	8.35%	-80.98%
Napa	22.81%	-34.55%	8.77%	-75.88%
Nevada	28.00%	36.00%	8.00%	-79.08%
Orange	29.94%	12.84%	5.68%	-85.74%
Placer	19.40%	-4.06%	5.97%	-88.36%
Plumas	16.67%	-22.22%	0.00%	-100.00%
Riverside	18.97%	9.95%	9.97%	-79.58%
Sacramento	22.58%	7.49%	5.57%	-88.71%
San Benito	17.65%	-9.24%	8.82%	-71.12%
San Bernardino	20.80%	-0.43%	8.62%	-80.59%
San Diego	12.89%	-23.51%	7.24%	-85.66%
San Francisco	16.42%	-16.60%	3.79%	-93.07%
San Joaquin	27.05%	10.64%	9.43%	-82.93%
San Luis Obispo	20.23%	12.38%	4.84%	-85.57%

Table A3 (continued)

County	Reconviction		Returns to prison custody	
	Recidivism level	Change in recidivism rate	Recidivism level	Change in recidivism rate
San Mateo	26.99%	5.10%	3.07%	-92.93%
Santa Barbara	30.72%	-1.34%	3.31%	-91.66%
Santa Clara	21.05%	-14.53%	4.91%	-87.96%
Santa Cruz	38.00%	24.69%	5.00%	-89.60%
Shasta	18.07%	6.20%	6.93%	-85.01%
Sierra	33.33%	n/a	33.33%	-16.67%
Siskiyou	23.68%	89.47%	10.53%	-79.95%
Solano	23.14%	38.32%	3.71%	-93.04%
Sonoma	28.99%	-9.60%	5.88%	-87.70%
Stanislaus	29.30%	47.62%	7.68%	-85.13%
Sutter	26.12%	-0.09%	6.72%	-86.11%
Tehama	25.42%	69.88%	6.78%	-86.89%
Trinity	7.14%	-42.86%	0.00%	-100.00%
Tulare	24.08%	13.65%	7.38%	-85.25%
Tuolumne	8.57%	80.00%	2.86%	-94.00%
Ventura	25.55%	-2.23%	7.67%	-84.67%
Yolo	22.27%	33.19%	5.88%	-88.42%
Yuba	21.58%	-9.44%	7.89%	-85.14%

SOURCE: California Department of Corrections and Rehabilitation "Realignment Report" (2013).

TABLE A4
Proposed Year 4 model: Base allocation

County	Realignment population share	High-risk adult population share	Base allocation share
Alameda	1.37%	3.84%	2.85%
Alpine	0.01%	0.00%	0.00%
Amador	0.20%	0.08%	0.13%
Butte	1.04%	0.72%	0.85%
Calaveras	0.09%	0.08%	0.08%
Colusa	0.08%	0.05%	0.06%
Contra Costa	0.55%	2.23%	1.56%
Del Norte	0.06%	0.08%	0.07%
El Dorado	0.27%	0.34%	0.31%
Fresno	2.52%	2.67%	2.61%
Glenn	0.11%	0.07%	0.08%
Humboldt	0.52%	0.41%	0.46%
Imperial	0.35%	0.51%	0.44%
Inyo	0.06%	0.03%	0.04%
Kern	4.02%	2.48%	3.09%
Kings	1.23%	0.55%	0.82%
Lake	0.29%	0.13%	0.19%
Lassen	0.13%	0.17%	0.15%
Los Angeles	30.41%	27.03%	28.38%
Madera	0.46%	0.37%	0.41%
Marin	0.26%	0.42%	0.35%
Mariposa	0.05%	0.03%	0.04%
Mendocino	0.28%	0.19%	0.23%
Merced	0.73%	0.73%	0.73%
Modoc	0.01%	0.02%	0.01%
Mono	0.01%	0.05%	0.03%
Monterey	1.17%	1.23%	1.21%
Napa	0.27%	0.32%	0.30%
Nevada	0.10%	0.17%	0.14%
Orange	5.77%	7.78%	6.98%
Placer	0.95%	0.69%	0.79%
Plumas	0.04%	0.03%	0.03%
Riverside	6.39%	5.46%	5.83%
Sacramento	3.78%	3.67%	3.71%
San Benito	0.19%	0.13%	0.15%
San Bernardino	9.08%	5.62%	7.00%
San Diego	7.12%	9.55%	8.58%
San Francisco	0.77%	2.33%	1.71%
San Joaquin	1.97%	1.77%	1.85%
San Luis Obispo	0.56%	0.94%	0.79%
San Mateo	0.83%	1.57%	1.28%

Table A4 (continued)

County	Realignment population share	High-risk adult population share	Base allocation share
Santa Barbara	1.13%	1.44%	1.32%
Santa Clara	2.77%	4.45%	3.78%
Santa Cruz	0.33%	0.81%	0.62%
Shasta	1.25%	0.39%	0.74%
Sierra	0.00%	0.00%	0.00%
Siskiyou	0.14%	0.08%	0.11%
Solano	1.13%	1.06%	1.09%
Sonoma	0.86%	1.17%	1.05%
Stanislaus	2.08%	1.33%	1.63%
Sutter	0.42%	0.23%	0.31%
Tehama	0.57%	0.14%	0.31%
Trinity	0.04%	0.02%	0.03%
Tulare	2.02%	1.19%	1.52%
Tuolumne	0.17%	0.13%	0.15%
Ventura	1.51%	2.05%	1.83%
Yolo	1.08%	0.76%	0.89%
Yuba	0.39%	0.19%	0.27%

SOURCES: Realignment population numbers come from California Department of Finance, Projections of the Realignment Population; County population estimates are drawn from the American Community Survey for the years 2007–2011 (United States Census Bureau 2013); the base allocation is a weighted average of these two figures.

TABLE A5

Proposed Year 4 model: Allocation adjustments, incentive bonuses, and final allocation

County	Base allocation	Capacity adjustments		Incentive bonuses		Model allocation*
		Poverty rate	Percent rural	Reconviction rate	RTC rate	
Alameda	2.85%	0.00%	0.00%	10.00%	10.00%	3.05%
Alpine	0.00%	5.00%	10.00%	0.00%	10.00%	0.00%
Amador	0.13%	0.00%	10.00%	5.00%	0.00%	0.13%
Butte	0.85%	10.00%	5.00%	5.00%	0.00%	0.91%
Calaveras	0.08%	0.00%	10.00%	0.00%	0.00%	0.08%
Colusa	0.06%	0.00%	5.00%	10.00%	10.00%	0.07%
Contra Costa	1.56%	0.00%	0.00%	5.00%	10.00%	1.60%
Del Norte	0.07%	10.00%	5.00%	10.00%	10.00%	0.09%
El Dorado	0.31%	0.00%	5.00%	5.00%	0.00%	0.31%
Fresno	2.61%	10.00%	0.00%	5.00%	5.00%	2.80%
Glenn	0.08%	5.00%	5.00%	10.00%	10.00%	0.09%
Humboldt	0.46%	5.00%	5.00%	0.00%	0.00%	0.45%
Imperial	0.44%	10.00%	5.00%	0.00%	0.00%	0.45%
Inyo	0.04%	0.00%	10.00%	10.00%	0.00%	0.05%
Kern	3.09%	10.00%	0.00%	0.00%	0.00%	3.04%
Kings	0.82%	5.00%	0.00%	0.00%	0.00%	0.77%
Lake	0.19%	10.00%	5.00%	10.00%	10.00%	0.23%
Lassen	0.15%	5.00%	10.00%	10.00%	10.00%	0.18%
Los Angeles	28.38%	5.00%	0.00%	5.00%	0.00%	27.85%
Madera	0.41%	10.00%	5.00%	10.00%	10.00%	0.49%
Marin	0.35%	0.00%	0.00%	0.00%	5.00%	0.33%
Mariposa	0.04%	0.00%	10.00%	10.00%	10.00%	0.05%
Mendocino	0.23%	5.00%	5.00%	10.00%	5.00%	0.26%
Merced	0.73%	10.00%	0.00%	5.00%	10.00%	0.81%
Modoc	0.01%	10.00%	10.00%	0.00%	10.00%	0.02%
Mono	0.03%	0.00%	10.00%	5.00%	10.00%	0.04%
Monterey	1.21%	5.00%	0.00%	5.00%	0.00%	1.18%
Napa	0.30%	0.00%	0.00%	5.00%	0.00%	0.28%
Nevada	0.14%	0.00%	5.00%	0.00%	0.00%	0.14%
Orange	6.98%	0.00%	0.00%	0.00%	5.00%	6.53%
Placer	0.79%	0.00%	0.00%	10.00%	10.00%	0.85%
Plumas	0.03%	0.00%	10.00%	10.00%	10.00%	0.04%
Riverside	5.83%	5.00%	0.00%	5.00%	0.00%	5.72%
Sacramento	3.71%	5.00%	0.00%	0.00%	10.00%	3.81%
San Benito	0.15%	0.00%	5.00%	10.00%	0.00%	0.16%
San Bernardino	7.00%	5.00%	0.00%	10.00%	0.00%	7.19%
San Diego	8.58%	0.00%	0.00%	10.00%	0.00%	8.42%
San Francisco	1.71%	0.00%	0.00%	10.00%	10.00%	1.83%
San Joaquin	1.85%	5.00%	0.00%	0.00%	0.00%	1.73%
San Luis Obispo	0.79%	0.00%	5.00%	5.00%	5.00%	0.81%
San Mateo	1.28%	0.00%	0.00%	5.00%	10.00%	1.31%
Santa Barbara	1.32%	0.00%	0.00%	5.00%	10.00%	1.35%
Santa Clara	3.78%	0.00%	0.00%	10.00%	10.00%	4.05%
Santa Cruz	0.62%	0.00%	0.00%	0.00%	10.00%	0.60%
Shasta	0.74%	5.00%	5.00%	10.00%	0.00%	0.79%

Table A5 (continued)

County	Base allocation	Capacity adjustments		Incentive bonuses		Model allocation*
		Poverty rate	Percent rural	Reconviction rate	RTC rate	
Sierra	0.00%	0.00%	10.00%	0.00%	0.00%	0.00%
Siskiyou	0.11%	10.00%	10.00%	0.00%	0.00%	0.11%
Solano	1.09%	0.00%	0.00%	0.00%	10.00%	1.07%
Sonoma	1.05%	0.00%	0.00%	5.00%	10.00%	1.07%
Stanislaus	1.63%	10.00%	0.00%	0.00%	0.00%	1.60%
Sutter	0.31%	0.00%	0.00%	5.00%	0.00%	0.29%
Tehama	0.31%	5.00%	10.00%	0.00%	5.00%	0.33%
Trinity	0.03%	10.00%	10.00%	10.00%	10.00%	0.04%
Tulare	1.52%	10.00%	0.00%	0.00%	0.00%	1.50%
Tuolumne	0.15%	0.00%	10.00%	5.00%	10.00%	0.17%
Ventura	1.83%	0.00%	0.00%	5.00%	0.00%	1.72%
Yolo	0.89%	10.00%	0.00%	0.00%	10.00%	0.95%
Yuba	0.27%	5.00%	5.00%	10.00%	0.00%	0.29%

*Resulting model allocation without recommended Year 4 imposition of the minimum past allocation guarantee.

References

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