CLASS COUNSEL MEMORANDUM:
HOW THE ALLOCATION MODEL WORKS

The allocation model for the Negotiation Class addresses how settlement funds intended for local governments would be distributed among them. It is designed to be as simple as possible, while still treating all cities, counties, and other municipal entities fairly. A number of cities and counties have been litigating actively and have been actively involved in developing the allocation mechanism. Some of them have stepped forward as Class Representatives of the Negotiation Class. The allocation mechanism does not use litigation as a factor and in no way favors these entities. The voting pools address litigating status, and Class members' own litigation costs may be recovered, upon application, from the Class Members' Special Needs Fund described below in Section F. The allocation model itself treats all Class members, regardless of litigating status, in precisely the same manner.

The allocation model uses three factors to determine the share of a global settlement that each county will receive. These three factors address the most critical causes and effects of the opioid crisis: (1) the number of persons suffering opioid use disorder in the county[1]; (2) the number of opioid overdose deaths that occurred in the county; and (3) the amount of opioids distributed within the county.

The allocation model gives each of these factors a straightforward, one-third weighting. The model is designed not to favor small, medium, or large counties based only on their population. Although population is taken into account indirectly, because each of the three factors above tends

[1] The term "county" as used in this explanatory document includes Louisiana parishes, New England townships, and Puerto Rico *municipios*.

to increase with population, the model allocates global settlement funds proportionally to where the opioid crisis has caused actual harm.

There are no perfect mechanisms to measure the three factors. To ensure that the model is as unbiased and transparent as possible, the model uses only data collected and reported by the federal government. This is critical because the model follows the reporting mechanisms deemed most relevant by federal public health authorities. The calculation process is explained below.

Note that the allocation model determines the percentage share of a settlement that each county will obtain, but does not itself determine how a county and the cities or other municipalities that are fully or partially within the county will divide this share. *See* Section E below.

A. Factor One: Opioid Use Disorder

"Opioid use disorder" refers to dependence upon or abuse of prescription pain relievers and/or heroin, including addiction.[2] Statistics on opioid use disorder are collected by the U.S. Department of Health and Human Services (DHHS), and reported in the National Survey on Drug Use and Health (NSDUH).[3]

The allocation model uses NSDUH data to count the number of persons with opioid use disorder, both by county and nationally.[4] Each county is then assigned a percentage representing

[2] *See* Substance Abuse & Mental Health Serv. Admin., Ctr. for Behavioral Health Statistics and Quality, 2017 *National Survey on Drug Use and Health: Methodological Summary and Definitions* (Sept. 2018), at 53, 128, 147, available at https://bit.ly/2LGmrLB [hereinafter "2017 NSDUH: Methodological Summary and Definitions"] (defining "Opioid Use Disorder" and "Heroin Use Disorder" for purposes of the survey).

[3] NSDUH data are accessible publicly at https://bit.ly/2HqF554.

[4] NSDUH survey respondents were classified as having an Opioid Use Disorder if they met criteria in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV, American Psychiatric Association, 1994), for either dependence upon or abuse of heroin,

its share of the total number of people with OUD in the nation. For example, during the operative time period, there was an annual average of 9,554 persons with opioid use disorder in Cuyahoga County, Ohio, and 2,138,591 persons nationally; so Cuyahoga County is assigned a score of 0.45% for this factor.[5]

B. Factor Two: Overdose Deaths

The Multiple Causes of Death (MCOD) data are county-level, national mortality data reported by the National Center for Health Statistics (NCHS), the Centers for Disease Control and Prevention (CDC), and DHHS. The CDC makes summarized MCOD data, including counts of deaths caused by opioid drug poisonings, accessible online through a reporting system known as WONDER (Wide-ranging ONline Data for Epidemiologic Research).[6] Because it is well established that deaths caused by opioid overdose are underreported, and that underreporting varies geographically in predictable ways, the model applies a standard, accepted method (the

capturing around 4.7% of the U.S. population ages 12 years or older in the recent past. Because opioid use disorder data are available by state but not by county, the model imputes the number of people with OUD in each county of a state by distributing the number of people with OUD in that state across counties in proportion to opioid misuse rates, which are available at a more granular level. Specifically, the NSDUH makes available opioid misuse rates at a sub-state level, including county-level data for some more populous counties and multi-county data for others. The model uses NSDUH data for the period 2007-16. Since the Court issued its Order Appointing Interim Class Counsel on August 19, 2019, the allocation model has been refined to impute the number of people with OUD in each county using the population ages 12 years or older, rather than total population, thereby improving the accuracy of these estimates. Population figures are taken from the Bridged-Race Population Estimates dataset produced by the U.S. Census Bureau and National Center for Health Statistics, and available online at https://wonder.cdc.gov/bridged-racepopulation.html.

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prescription pain relievers, or both in the past year. *See* 2017 NSDUH: Methodological Summary and Definitions, at 146. Around 0.8% of the U.S. population 12 years of age or older is estimated to meet this definition. NSDUH survey respondents were classified as having Opioid Misuse if they used prescription pain relievers for a non-medical purpose or used heroin any time during the past year. *See id.* at 146, 215. Opioid misuse is a broader measure than opioid use disorder,

[5] All figures cited herein are approximations. The allocation model itself uses figures that are precise to several decimal places.

[6] *See* CDC WONDER, *About Multiple Cause of Death Data, 1999-2017*, https://bit.ly/2p8hDkp (last visited June 13, 2019). The model uses MCOD death data for the period 2006-16.

"Ruhm adjustment") to un-summarized MCOD data to estimate opioid overdose deaths in each county.[5]

The allocation model uses adjusted MCOD data to count the number of deaths caused by opioid overdose, both by county and nationally. Each county is then assigned a percentage share. For example, during the operative time period, there were 2,139 opioid overdose deaths in Cuyahoga County, Ohio, and 348,554 deaths nationally; so Cuyahoga County is assigned a score of 0.61% for this factor.[6]

C. Factor Three: Amount of Opioids

The United States Drug Enforcement Agency (DEA) collects statistics on the amount of opioids shipped to a given location, and reports them in a database known as "ARCOS" (Automation of Reports and Consolidated Orders System). The model uses ARCOS data to

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[5] *See* Christopher J. Ruhm, *Geographic Variation in Opioid and Heroin Involved Drug Poisoning Mortality Rates*, 53 Am. J. Preventive Med. 745 (2017); Christopher J. Ruhm, *Corrected US Opioid-Involved Drug Poisoning Deaths and Mortality Rates, 1999-2015*, 113 Addiction 1339 (2018).

[6] The allocation model is based on the best available overdose data, which depends upon reporting. Opioid overdose deaths may have been systematically under-reported in Puerto Rico for a number of reasons. In addition, following Hurricane Marta in 2017, Puerto Rico has faced heightened challenges in gathering death data and its medical and social services infrastructure (and thus its ability to address the opioid crisis) has been severely affected. This is an example of one function of the Class Members' Special Needs Fund: to address and equalize special circumstances, affecting specific Class members, that cannot be captured in an overall allocation system.

measure opioid amounts by counting "morphine milligram equivalents," or MMEs.[7][8] The model counts MMEs instead of pills because different opioid drugs have different strengths—for example, a 10-mg hydrocodone pill has 10 MMEs, a 10-mg oxycodone pill has 15 MMEs, and a 10-mg hydromorphone pill has 30 MMEs.

The model measures the amount of MMEs that were shipped to a given location, both by county and nationally. Unlike with Factor One and Factor Two, however, the model does not simply examine, for each county, the percentage of all MMEs shipped nationally. Instead, the model first adjusts the number of MMEs in each county based on the extent to which those MMEs produced a negative outcome. The model makes this adjustment because the oversupply of opioids had more deleterious effects in some counties than in others.[9]

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[7] Specifically, the model uses detailed ARCOS data for the period 2006-14 produced by the DEA in *In re: National Prescription Opiate Litigation*, MDL No. 2804. Although data for

[8] -12 has been made public, data for 2013 and 2014 is subject to a confidentiality order.

[9] Mechanically, the MME adjustment works as follows. First, the model calculates for each county two separate ratios: (1) an opioid use disorder (OUD) ratio, and (2) an opioid overdose death ratio. The OUD ratio is calculated by dividing the percentage of people 12 years of older in a county with OUD by the percentage of people 12 years or older nationally with OUD. So, if OUD is 10% more common in a county than nationally, that county's OUD ratio is 1.1. Next, the model calculates an opioid overdose death ratio in the same way. The county's MMEs are then multiplied by the higher of the two ratios. To take Cuyahoga County, Ohio as an example: In Cuyahoga County, 0.87% of people ages 12 years or older have OUD; whereas, nationally, the rate is 0.81%. So Cuyahoga County has an OUD ratio of approximately 1.07 (i.e., 0.87% ÷ 0.81%), reflecting that residents of the county are 7% more likely to have OUD than the average American. Likewise, on average, slightly more than 15.2 out of every 100,000 people in Cuyahoga County died of an opioid overdose annually between 2006 and 2016; whereas, nationally, slightly fewer than 10.2 out of every 100,000 people died of an opioid overdose annually during the same period. So Cuyahoga County has a death ratio of approximately 1.50 (i.e., 15.2 ÷ 10.2), reflecting that residents of the county were 49% more likely to die of an opioid overdose during that period than was the average American. Because 1.50 is the higher of Cuyahoga's two ratios, its MMEs are scaled upwards by 50%. This does not mean that Cuyahoga will receive 50% more than it otherwise would receive. On the contrary, because all counties' MMEs are being scaled, this adjustment within Factor Three results in a 3.9% increase to Cuyahoga's ***total allocation***, from 0.46% of the national allocation to 0.48%. Ultimately, Factor Three takes into account not only

As with the other factors, each county is assigned a percentage representing its share of the national total for this factor. For example, and for illustrative purposes only, Cuyahoga County,

the number of MMEs that were shipped to each county, but also the degree of harm those MMEs caused.

Ohio's adjusted MMEs from 2006-14 are 8,550,855,474, and the sum of all counties' adjusted MMEs is 2,244,287,429,195, so Cuyahoga County is assigned a score of 0.38% for this factor.[10]

D. Final Calculation

As mentioned above, each of the three factors is given an equal, one-third weight. For example, and for illustrative purposes only, Cuyahoga County, Ohio would receive the following three scores: (1) 0.45% for Opioid Use Disorder; (2) 0.61% for Overdose Deaths; and (3) 0.38% for MMEs. The average of the County's three scores is 0.48%. Accordingly, Cuyahoga County would receive 0.48% of any global settlement amount. Put differently, if a defendant reaches a national, global settlement with all cities and counties that results in an initial disbursement of $750 million to cities and counties, Cuyahoga County would be allocated approximately $3.6 million of that amount.

E. Distribution Within Counties

The allocation model described above determines how funds will be allocated among *counties.*[11] The next step is for each county and the cities *within* that county to reach agreement on how allocated funds will be directed within the county to abate the crisis. The county and the cities within it may share the funds however they choose.

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[10] Since the Court issued its Order Appointing Interim Class Counsel on August 19, 2019, the allocation model has been revised to exclude from Factor Three any shipments to buyers identifiable as mail order pharmacies since those opioids for the most part were sent to other locations rather than being distributed locally. The national total for Factor Three (and the other two factors) previously had increased when the allocation model was expanded to include Puerto Rico in addition to the 50 states and the District of Columbia.

[11] See footnote 1 above as to the definition of the term "county" for purposes of this explanatory document.

If a county and the cities within it cannot reach agreement on how to share the county's allocation, then a court-appointed Special Master will divide the funds. Unless one of the local governments provides an alternative approach for the Special Master's consideration, he or she will divide the funds by applying a formula that relies on federal data showing how counties and the cities within them historically have split funding for government functions potentially relevant to opioid abatement.[12]

For example, and for illustrative purposes only, Cuyahoga County, Ohio contains 59 cities, including Cleveland and Parma. The federal data show that Cuyahoga County is responsible for 64.5% of local government spending in the county on functions potentially relevant to opioid abatement, while Cleveland is responsible for 17.4% of spending, Parma is responsible for 1.5%

[12] Specifically, the formula draws on US Census Bureau data on local government spending by function. The Census of Governments Survey of State and Local Government Finances polls all state, county, township, city, and special district governments every five years, with 2012 being the most recent data available. This data covers cities and counties for 98% of the U.S. population. Data for some additional jurisdictions was backfilled from a survey of a sample of jurisdictions performed in 2016. Finally, state-specific regression analyses were employed to create estimates for the very small number of remaining jurisdictions. The functions or expenditure categories examined for each jurisdiction were: elementary and secondary education net of capital outlay, public welfare (including child protective services), hospitals net of capital outlay, health, police protection, fire protection, corrections net of capital outlay, housing and community development, and judicial and legal. In this context, "net of capital outlay" means that capital costs—for constructing new facilities and renovating existing ones—are excluded for those expenditure categories. If data from the 2017 Survey becomes available before the Special Master decides on the division of funds, it is anticipated that the Special Master would take those data into consideration in making a decision. Under the default intra-county allocation formula, when a city's total share of a settlement would be less than $500, that amount will instead be distributed to the government of the county in which the city lies to promote practical application of the abatement remedy. In the vast majority of such cases, the county government supplies the majority of the relevant government services in the county. Affected cities could seek recovery through a negotiated intra-county allocation, or from the Class Members' Special Needs Fund. In the rare circumstance that the city in question lies in a county that does not have a county government, the amount would instead go to the Class Members' Special Needs Fund, and Class members could seek recovery therefrom. *See* Section F, below, discussing that fund.

of spending, and the other cities in Cuyahoga County together are responsible for 16.6% of spending. Accordingly, if a defendant reaches a national, global settlement with all cities and counties that results in an initial disbursement of $750 million, and Cuyahoga County is allocated

$3.6 million, then, under the default intra-county allocation formula, Cuyahoga County government ultimately would receive approximately $2.3 million (64.5%) of the settlement funds allocated to the County, Cleveland would receive $625,226 (17.4%), Parma would receive $53,581 (1.5%), and the remaining cities in Cuyahoga County would receive smaller amounts, totaling $600,953 (16.6%). As noted above, the County government and city governments may agree to share the funds however they choose; the formula applies *only* if they cannot agree and no party to such a dispute presents an acceptable alternative formula to the Special Master.

F. The Class Members' Special Needs Fund

The Allocation Plan for the Negotiation Class would set aside fifteen percent (15%) of any recovery for the Class Members' Special Needs Fund. The Class Members' Special Needs Fund is monetary relief and/or reimbursement that will flow to members of the Negotiation Class, litigating or not, through an application process (i.e., outside of the classwide allocation formula). The Class Members' Special Needs Fund recognizes that, while the allocation formula utilizes objective data and reflects the input of public health economists and Class members, there may nevertheless be special circumstances in which equity requires that the particular needs of Class members on a local or regional basis need to be addressed in order to promote the purposes of the settlement, to fight and abate the opioids epidemic. Thus, the Class Members' Special Needs Fund creates flexibility by serving two functions: (1) it provides a source of recovery for the special needs and expenditures of any Class member that may fall outside of, or are otherwise not addressed by, the classwide allocation formula, which is designed based upon objective nationwide statistical information and models to serve the majority of class members; and (2) it recognizes the reality that the litigating entities that have advanced the litigation not only for themselves, but to the benefit of all others, may have incurred out-of-pocket costs in prosecuting the litigation. These

costs, incurred by the entities themselves (as distinct from costs of litigation borne by outside attorneys) such as the time and costs of their law departments or legal staffs, would be subject to reimbursement out of this fund, upon application and approval by a Court appointed Special Master.

The Class Members' Special Needs Fund best promotes the equitable allocation of the settlement among all class members by paying costs, incurred by the Class members themselves, that redounded to the common benefit, and by providing flexibility to fill in any gaps in the overall allocation system. To the extent that the segregated Class Members' Special Needs Fund is not fully utilized, any remaining amount will revert to the overall Class settlement fund.

September 10, 2019 Negotiation Class Counsel