DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

44 CFR Part 206

[Docket ID FEMA–2016–0003]

RIN 1660–AA84

Establishing a Deductible for FEMA's Public Assistance Program

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Supplemental advance notice of proposed rulemaking.

SUMMARY: The Federal Emergency Management Agency (FEMA) is considering implementing a Public Assistance deductible that would condition States' receipt of FEMA reimbursement for the repair and replacement of public infrastructure damaged by a disaster event. The primary intent of the deductible concept is to incentivize greater State resilience to future disasters, thereby reducing future disaster costs nationally. On January 20, 2016, FEMA (the Agency) published an Advance Notice of Proposed Rulemaking (ANPRM) seeking comment on a Public Assistance deductible concept. The ANPRM provided a general description of the concept that many commenters found insufficient to provide meaningful comment. In an effort to offer the public a more detailed deductible concept upon which to provide additional feedback, the Agency is issuing a supplemental ANPRM (SANPRM) that presents a conceptual deductible program, including a methodology for calculating deductible amounts based on a combination of each State's fiscal capacity and disaster risk, a proposed credit structure to reward States for undertaking resilience-building activities, and a description of how FEMA could consider implementing the program. At this stage of the rulemaking process, the deductible remains only something that FEMA is considering. The policy conceived of in this document is not a proposal. In this document, FEMA is providing what is merely a description of a direction FEMA could take in future rulemaking in an effort to solicit further feedback from the public. After considering the comments it receives, or as a result of other factors, FEMA may expand on or redevelop this concept.

DATES: Comments must be submitted by April 12, 2017.

ADDRESSES: You may submit comments, identified by Docket ID FEMA–2016–0003, by one of the following methods:

Federal eRulemaking Portal: http://www.regulations.gov. Follow the instructions for submitting comments.

Mail/Hand Delivery/Courier: Regulatory Affairs Division, Office of Chief Counsel, Federal Emergency Management Agency, 8NE, 500 C Street SW., Washington, DC 20472.

FOR FURTHER INFORMATION CONTACT: Jotham Allen, Federal Emergency Management Agency, 500 C Street SW., Washington, DC 20472, 202–646–1957.

SUPPLEMENTARY INFORMATION:

I. Public Participation

We encourage you to participate in this rulemaking by submitting comments and related materials. We will consider all comments and material received during the comment period.

If you submit a comment, identify the agency name and the docket ID for this rulemaking, indicate the specific section of this document to which each comment applies, and give the reason for each comment. You may submit your comments and material by electronic means, mail, or delivery to the address under the **ADDRESSES** section. Please submit your comments and material by only one means.

Regardless of the method used for submitting comments or material, all submissions will be posted, without change, to the Federal e-Rulemaking Portal at *http://www.regulations.gov,* and will include any personal information you provide. Therefore, submitting this information makes it public. You may wish to read the Privacy Act notice that is available via a link on the homepage of *www.regulations.gov.*

Viewing comments and documents: For access to the docket to read supporting documents, a supplemental guidance document, and an annual notice template, and comments received, go to the Federal e-Rulemaking Portal at *http://www.regulations.gov.* Background documents and submitted comments may also be inspected at FEMA, Office of Chief Counsel, 500 C Street SW., Washington, DC 20472–3100.

II. Executive Summary

On January 20, 2016, FEMA published an Advance Notice of Proposed Rulemaking (ANPRM), 81 FR 3082, seeking comment on a concept that would incorporate a deductible requirement into the Public Assistance program. The ANPRM provided a general description of this concept, followed by a list of questions for the public, the answers to which would help FEMA assess all aspects of the deductible concept, including how to calculate the deductible, the scope of the deductible, how to satisfy the deductible, how this concept could influence change, implementation considerations and an estimated impact. With input received from the ANPRM, FEMA has developed a more detailed potential deductible concept and seeks further public comment via this SANPRM. The goal of this SANPRM is to gather additional public comment about the specific aspects of a programmatic approach that the Agency recognizes would represent a change to the existing Federal disaster support system.

The Public Assistance deductible would condition the States' receipt of FEMA reimbursement for the permanent repair and replacement of public infrastructure damaged by a disaster event. FEMA believes the deductible requirement could incentivize State risk reduction efforts, mitigate future disaster impacts, and lower recovery costs for the whole community. In addition, the deductible requirement addresses concerns raised by Members of Congress, the Government Accountability Office (GAO), and the Department of Homeland Security's Office of the Inspector General (DHS OIG) over the last several years, and potentially addresses concerns that the current disaster declaration process inadequately assesses State capacity to respond to and recover from a disaster without Federal assistance.

In this SANPRM, FEMA is presenting a model, or potential, deductible program to provide more specifics of what the deductible requirement may entail for detailed public feedback. Detailed public comments on this potential program, in particular on the methodologies for calculating each State's deductible and the estimates for each State's projected credits, could assist FEMA in the development of a future proposed rule.

Under the deductible concept, each State would be expected to expend a predetermined, annual amount of its own funds on emergency management and disaster costs before FEMA would provide Public Assistance for the repair and replacement of public infrastructure damaged by a disaster event. This annually predetermined amount is the State's deductible. However, satisfying the deductible would not be required before FEMA would provide assistance for other types of assistance, such as debris removal or emergency protective measures. Importantly, States may

choose to earn credits toward satisfying their deductible through a variety of activities that could reduce risk and improve preparedness, thereby reducing future disaster costs to both the State and Federal government.

FEMA could calculate annually the deductible amount (in dollars) for each State based on an index of State risk and fiscal capacity. FEMA anticipates a scaled implementation of a deductible requirement over a yet-to-be-determined period of years with starting deductibles in year one as follows in Table 1:

TABLE 1—FIRST YEAR STARTING DEDUCTIBLES BEFORE CREDITS [1]

First year starting deductibles (before credits)	
State	Year 1 starting deductible (in millions)
Alabama	$6.74
Alaska	1.00
Arizona	9.01
Arkansas	4.11
California	52.53
Colorado	7.08
Connecticut	5.04
Delaware	1.27
Florida	26.51
Georgia	13.66
Hawaii	1.92
Idaho	2.21
Illinois	14.43
Indiana	9.14
Iowa	4.30
Kansas	4.02
Kentucky	6.12
Louisiana	6.39
Maine	1.87
Maryland	8.14
Massachusetts	9.23
Michigan	13.94
Minnesota	7.48
Mississippi	4.18
Missouri	8.44
Montana	1.40
Nebraska	2.58
Nevada	3.81
New Hampshire	1.86
New Jersey	12.40
New Mexico	2.90
New York	27.32
North Carolina	13.45
North Dakota	1.00
Ohio	16.27
Oklahoma	5.29
Oregon	5.40
Pennsylvania	17.91
Rhode Island	1.48
South Carolina	6.52
South Dakota	1.15
Tennessee	8.95
Texas	35.46
Utah	3.90
Vermont	1.00
Virginia	11.28
Washington	9.48
West Virginia	2.61
Wisconsin	8.02
Wyoming	1.00

[1] For a full explanation of how the first year starting deductibles could be calculated under this model program, please refer to Section V, Subsections A–F of this notice.

To offset the deductible requirement, FEMA could provide each State with an opportunity to apply for credits. The credits could incentivize States to dedicate resources on activities that are demonstrated to promote and support readiness, preparedness, mitigation, and resilience. Such activities could include adopting and enforcing building codes that promote disaster resilience, funding mitigation projects, or investing in disaster relief, insurance, and emergency management programs. FEMA believes that every State is already undertaking activities that would qualify them for credits and reduce their deductible requirement, such as investing in mitigation projects or granting tax incentives for projects that reduce risk. Based on FEMA's projection of possible credits for activities each State is presently engaged in, FEMA estimates a potential adjusted deductible requirement in year one as follows in Table 2:

TABLE 2—POTENTIAL FIRST YEAR FINAL DEDUCTIBLES ADJUSTED FOR PROJECTED CREDITS [2]

Potential first year "final" deductibles (adjusted for projected credits)	
State	"Final" adjusted deductible (in millions)
Alabama	5.01
Alaska	0.74
Arizona	4.88
Arkansas	2.49
California	7.63
Colorado	5.24
Connecticut	3.72
Delaware	0.94
Florida	10.85
Georgia	9.99
Hawaii	1.68
Idaho	1.66
Illinois	3.47
Indiana	2.81
Iowa	1.70
Kansas	3.45
Kentucky	4.65
Louisiana	5.57
Maine	1.46
Maryland	5.78
Massachusetts	5.11
Michigan	8.53
Minnesota	1.25
Mississippi	2.51
Missouri	4.78
Montana	0.77
Nebraska	1.52
Nevada	2.03
New Hampshire	0.91
New Jersey	4.89
New Mexico	2.02
New York	19.59
North Carolina	2.48
North Dakota	0.30
Ohio	11.75
Oklahoma	3.33
Oregon	3.91
Pennsylvania	5.52
Rhode Island	1.20
South Carolina	4.92
South Dakota	0.92
Tennessee	7.06
Texas	26.99
Utah	1.99
Vermont	0.63
Virginia	4.89
Washington	8.91
West Virginia	1.91
Wisconsin	6.17
Wyoming	0.71

[2] For a full explanation of how each State's projected credits were calculated and how those credits impacted the projected first year's final deductibles under this model program, please refer to Section V, Subsections G–H of this notice.

Under the deductible concept, FEMA would continue to recommend whether a State should receive a major disaster declaration pursuant to the current factors outlined in Federal policy (44 CFR 206.48(a)). If a State receives a major disaster declaration authorizing Public Assistance reimbursement, the State would then be required to first satisfy its annual deductible requirement (as adjusted by credits) before FEMA would provide reimbursement for Public Assistance permanent work. If a State has not fully satisfied its deductible through earned credits, following a major disaster declaration the State would then identify one or more permanent work projects proposed under the disaster declaration to satisfy the remaining deductible amount (*i.e.,* the State chooses the selected project(s) and the project(s) would be ineligible for FEMA assistance). In order to ensure timely

and complete response to the evacuation and immediate protection of life and property, FEMA would fund eligible emergency protective measures and debris removal regardless of whether or not the State has met its deductible requirement.

FEMA could implement the deductible program by regulation, supplemented by a guidance document and annual notices. The regulation could set forth broadly that FEMA will annually calculate deductible and credit amounts and could describe how a deductible requirement could be applied post-declaration. The guidance document could set forth more specifically the annual schedule, and how FEMA will calculate deductible and credit amounts, and the annual notice could provide FEMA's determination on State deductible amounts for the following year. A draft guidance document and example annual notice are included in the docket for this rulemaking at *www.regulations.gov* under docket ID FEMA–2016–0003 for public review and comment.

Under this concept, FEMA would condition the provision of grant assistance for the permanent repair and replacement of building infrastructure that is damaged by a major disaster upon the State's meeting a Public Assistance deductible. It would not apply to any other form of FEMA assistance, including emergency assistance, Individual Assistance, or the Hazard Mitigation Grant Program. Since the Public Assistance deductible would condition States' receipt of FEMA funds, it would not apply to Indian Tribes, the District of Columbia, or US territories. The deductible would not change the official disaster declaration request process, or the factors that FEMA considers when making disaster declaration recommendations to the President.

A deductible program could leverage FEMA's Public Assistance program to reward States for investing in readiness, preparedness, mitigation, and resilience, thereby increasing the nation's ability to reduce disaster impacts and costs for all levels of government, individuals, and the private sector. FEMA seeks comment on all details of this concept, especially regarding how the deductible could be calculated and the types and amounts of deductible credit that could be granted.

III. Background and Development of the Deductible Concept

Although the Federal government has been providing supplemental disaster relief to States and localities since the early 1800s, the Disaster Relief Act of 1974,[3] which was amended and renamed the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) in 1988,[4] formally established the foundation of the current disaster assistance system. Generally, FEMA directly provides or coordinates this assistance.

Pursuant to this system, the Federal government provides various forms of financial and direct assistance following disasters. One of the primary types of support FEMA provides to affected jurisdictions is repair, restoration, and replacement assistance through the Public Assistance program.[5] The Public Assistance program is FEMA's principal means for assisting jurisdictions that are financially overwhelmed by the costs of repairing, restoring, and replacing public facilities damaged by disasters, such as buildings, roads, bridges, and other types of publicly-owned infrastructure.

On average, FEMA has distributed approximately $4.6 billion in grants each year through the Public Assistance program over the past decade. Of the nearly $60 billion awarded through the Public Assistance program between 2005 and 2014, over 65 percent was for eligible recovery projects termed ''permanent work'' and for project management costs. Permanent work includes expenses for repair, restoration, and replacement that are not related to debris removal or emergency protective measures.[6]

Before an affected jurisdiction can receive funding through the Public Assistance program, the President of the United States must authorize it.[7] The Governor typically makes a request through FEMA for a Presidential declaration of an emergency or major disaster authorizing the Public Assistance program.[8] Upon receipt, FEMA is responsible for evaluating the Governor's request and providing a recommendation to the President regarding its disposition.[9]

When considering a jurisdiction's request for a major disaster declaration authorizing the Public Assistance program, FEMA considers six factors.[10] These factors include:

1. Estimated cost of the assistance; [11]
2. Localized impacts; [12]
3. Insurance coverage in force; [13]
4. Hazard mitigation; [14]
5. Recent multiple disasters; [15] and
6. Programs of other Federal assistance.[16]

FEMA evaluates every request with regard to each of these delineated factors, to the extent applicable. However, there is a very strong correlation between the first factor, estimated cost of the assistance, and the likelihood that FEMA will recommend that the President issue a major disaster declaration.

Under the current system, if a State demonstrates that an incident has caused a certain level of damage to a State to address the damage caused, FEMA would likely recommend that the President declare a major disaster. A major disaster indicates that the President has determined that the incident has caused ''damage of sufficient severity and magnitude to warrant major disaster assistance under [the Stafford Act] to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.'' [17] Consequently, if the President declares a major disaster authorizing Public Assistance, FEMA will provide supplemental financial assistance grants, which pay for not less than 75 percent of eligible costs.[18]

Conversely, if the President does not issue a major disaster declaration, the amount of damage is presumed to be within the capabilities of the affected jurisdictions and any supporting disaster relief organizations. In that case, the affected State is responsible for all of the costs of the incident, although the State will often pass many of the costs on to local jurisdictions. For example, under current regulations FEMA may determine a particular State based on its population is able to independently handle up to $1,000,000 in damage without the need for supplemental Federal assistance. Under the current approach, an incident need only identify damage at that amount to suggest that supplemental Federal assistance is needed. If the governor of that State requests a major disaster declaration for an incident causing $999,999 in damage, it is likely that

[3] Disaster Relief Act of 1974, Public Law 93–288 (1974).

[4] Public Law 100–707 (1988). Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93–288 (1974), as amended; 42 U.S.C. 5121 *et seq.*

[5] *See* 42 U.S.C. 5172.

[6] *See* 44 CFR 206.201(j).

[7] *See* 42 U.S.C. 5170b, 5192; see also 44 CFR 206.38, 206.40.

[8] 42 U.S.C. 5170, 5191.

[9] *See* 44 CFR 206.37(c).

[10] *See* 44 CFR 206.48(a).

[11] *Id.* at § 206.48(a)(1).

[12] *Id.* at § 206.48(a)(2).

[13] *Id.* at § 206.48(a)(3).

[14] *Id.* at § 206.48(a)(4).

[15] *See* 44 CFR 206.48(a)(5).

[16] *Id.* at § 206.48(a)(6).

[17] 42 U.S.C. 5122(2) (defining a major disaster for purposes of the Act).

[18] 42 U.S.C. 5170b(b).

supplemental Federal assistance will not be authorized and the State will be responsible for the entirety of the loss. However, if instead the incident caused exactly $1,000,000 in damage, supplemental Federal assistance may be authorized and FEMA would provide reimbursement grants through the Public Assistance program for at least $750,000 (75 percent of eligible costs). This has the effect of FEMA providing Public Assistance funding for activities and damage that are identified to be within State capabilities.

Since 1986, FEMA has used a per capita indicator to compare the estimated cost of the incident and the capabilities of the requesting jurisdiction.[19] This per capita indicator was originally set at $1.00 per person and is based on the jurisdiction's decennial census population. FEMA selected $1.00 because it appeared at the time to be a reasonable portion of per capita personal income (PCPI) for a State to contribute towards the cost of a disaster.[20] Collectively, this amount also ''correlate[d] closely to about one-tenth of one percent of estimated General Fund expenditures by States.'' [21] The per capita indicator remained at $1.00 from 1986 until 1999 when FEMA began to add inflation to the value annually. FEMA did not, however, adjust the per capita indicator for inflation retroactively. Consequently, since 1999, the per capita indicator has risen to its 2016 value of $1.41.[22]

FEMA publishes the updated per capita indicator in the **Federal Register** each year. FEMA then multiplies the indicator by the State's most recent decennial population to determine the amount of damage that a State is expected to be able to independently manage without the need for supplemental Federal assistance. For example, if a State had a population at the time of the 2010 decennial census population of 1,500,000, FEMA would multiply that by the 1.41 indicator and arrive at a State-level indicator of 2,115,000. In other words, FEMA would expect that the State would be able to handle at least 2,115,000 in eligible damage without the need for supplemental Federal assistance.

FEMA has established, through regulation, a 1,000,000 minimum for any major disaster, regardless of the calculated indicator.[23] The 1,000,000 floor is not subject to inflationary adjustments. Although FEMA considers every request for a Presidential major disaster declaration in the light of each applicable regulatory factor, the probability of an incident being declared based on the amount of disaster damage and the State-specific per capita indicator has been over 80 percent for the past 10 years (494 of 589 declared major disasters). In other words, whether damage assessments find an amount of damage that meets or exceeds the Public Assistance per capita indicator is highly correlated to whether that State will ultimately receive supplemental Federal assistance for that incident.

Since the per capita indicator was initially adopted in 1986, it has lost its relation to both of the metrics upon which it was first calculated. In 1986, PCPI in the United States was 11,687.[24] By 2015, PCPI had risen to 48,112, an increase of over 300 percent.[25] FEMA has applied inflation adjustments since 1999, and the per capita indicator has risen by just 41 percent over that same period.

A retrospective analysis conducted by FEMA suggests that if the per capita indicator had kept pace with PCPI, 70 percent of the major disasters between 2005 and 2014 would not have been declared. This would have transferred all of the costs for 408 disasters to the 49 States that would likely have each had at least one less major disaster declared. As an example, Missouri and Oklahoma would have each have had 19 fewer major disasters declared.

Overall, Public Assistance grants would have been reduced by 10 percent had these 408 major disasters not been declared, resulting in 5 billion dollars less in Federal disaster assistance to the States.[26] Twenty-one States would have each received over 100 million less in Public Assistance, with California having received 761 million less, New York more than 600 million less, and Texas over 366 million less.

Table 3 presents a State-by-State retrospective synopsis of the likely impacts a PCPI-adjusted per capita indicator would have had on declared major disasters between 2005 and 2014. To conduct this analysis, FEMA adjusted the per capita indicator for each year by multiplying the previous year's national per capita personal income value for each State by 0.0001. This maintains the 0.01% ratio of the per capita indicator to per capita personal income that FEMA noted when it established the original per capita indicator.

TABLE 3—IMPACT OF PCPI-ADJUSTED PER CAPITA INDICATOR ON PAST DISASTER ACTIVITY

[2005–2014]

State	Change in numbers of disasters	Public assistance change (actual in 2015$)
Alabama	−12	−$156,634,854
Alaska	−8	−16,686,176
Arizona	−5	−32,864,734
Arkansas	−15	−105,560,705
California	−12	−761,414,191
Colorado	−3	−12,035,081

[19] The per capita indicator is applied at the State level for major disaster declarations; however, a second indicator is also used at the local level to determine which counties are declared within the State.

[20] Disaster Assistance; Subpart C, the Declaration Process and State Commitments, 51 FR 13332, Apr. 18, 1986.

[21] *Id.*

[22] Notice of Adjustment of Statewide Per Capita Indicator, 80 FR 61836, Oct. 14, 2015.

[23] 44 CFR 206.48(a)(1).

[24] *See* Disaster Assistance; Subpart C, the Declaration Process and State Commitments, 51 FR 13332, Apr. 18, 1986

[25] Per Capita Personal Income (PCPI) is calculated annually by the United States Department of Commerce's Bureau of Economic Analysis. The 2015 PCPI data is available at *http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=6%20-%20reqid=70&step=30&isuri=1&7022=21&7023=0&7024=non-industry&7033=-1&7025=0&7026=00000&7027=2015&7001=421&7028=3&7031=0&7040=-1&7083=levels&7029=21&7090=70#reqid=70&step=30&isuri=1&7022=21&7023=0&7024=non-industry&7033=-1&7025=0&7026=00000&7027=2015&7001=421&7028=3&7031=0&7040=-1&7083=levels&7029=21&7090=70.* [1) Select *Annual State Personal Income and Employment.* 2) Select *Personal Income, Population, Per Capita Personal Income, Disposable Personal Income, and Per Capita Disposable Personal Income (SA1, SA51).* 3) Select *SA1—Personal Income Summary: Personal Income, Population, Per Capita Personal Income.* 4) *Select United States, Levels, and Per Capita Personal Income (Dollars).* 5) Select *2015.*

[26] Dollar amounts were adjusted to 2015 dollars (2015).

TABLE 3—IMPACT OF PCPI-ADJUSTED PER CAPITA INDICATOR ON PAST DISASTER ACTIVITY—Continued
[2005–2014]

State	Change in numbers of disasters	Public assistance change (actual in 2015$)
Connecticut	−4	−34,539,160
Delaware	−2	−2,734,920
Florida	−7	−170,847,001
Georgia	−5	−105,365,782
Hawaii	−5	−19,758,046
Idaho	−5	−11,113,622
Illinois	−11	−279,253,502
Indiana	−8	−98,604,662
Iowa	−13	−103,292,537
Kansas	−12	−74,419,056
Kentucky	−11	−98,057,973
Louisiana	−6	−40,610,199
Maine	−11	−31,102,969
Maryland	−7	−120,907,360
Massachusetts	−7	−135,316,467
Michigan	−3	−36,000,794
Minnesota	−10	−114,692,904
Mississippi	−7	−37,337,169
Missouri	−19	−275,421,878
Montana	−5	−11,589,893
Nebraska	−16	−67,235,065
Nevada	−4	−15,984,383
New Hampshire	−11	−39,448,267
New Jersey	−11	−207,572,077
New Mexico	−6	−37,173,106
New York	−15	−600,294,475
North Carolina	−8	−124,991,358
North Dakota	−6	−11,015,041
Ohio	−6	−131,629,728
Oklahoma	−19	−120,128,934
Oregon	−8	−61,741,829
Pennsylvania	−7	−144,293,529
Rhode Island	−1	−641,448
South Carolina	−1	−12,859,770
South Dakota	−8	−11,791,000
Tennessee	−13	−113,576,960
Texas	−9	−366,759,151
Utah	−6	−33,421,146
Vermont	−8	−10,790,332
Virginia	−8	−159,073,446
Washington	−8	−158,351,021
West Virginia	−10	−59,884,181
Wisconsin	−6	−55,046,806
Total	−408	−5,429,864,688

The Public Assistance per capita indicator has also fallen short of keeping pace with State general fund expenditures. According to the National Association of State Budget Officers (NASBO), State general fund spending in 2015 totaled 759.4 billion.[27] Collectively, the States' per capita indicators equaled 435.3 million in 2015. Consequently, the relation of the per capita indicator to State general fund expenditures is just 57 percent of what it was in 1986.

The failure of the per capita indicator to keep pace with changing economic conditions and the increasing frequency and costs of disasters has led to criticism of the per capita indicator. Those critiques have emphasized that the per capita indicator is artificially low. Many have called for FEMA to find ways to decrease the frequency of disaster declarations and Federal disaster costs, by increasing the per capita indicator to transfer costs back to State and local jurisdictions. These have included recommendations from GAO,[28] reports of the DHS OIG,[29] and proposed legislation.[30]

[27] NASBO, Fiscal Survey of States, Fall 2015, located at *https://higherlogicdownload.s3.amazonaws.com/NASBO/9d2d2db1-c943-4f1b-b750-fca152d64c2/UploadedImages/Fiscal%20Survey/Fall%202015%20Fiscal%20Survey%20of%20States%20(S).pdf.*

[28] *See, e.g.,* GAO, Disaster Assistance: Improvements Needed in Disaster Declaration Criteria and Eligibility Assurance Procedures, GAO–01837 (2001); See also, GAO, GAO–12–838, Federal Disaster Assistance: Improved Criteria Needed to Assess Eligibility and a Jurisdiction's Capability to Respond and Recover On Its Own, 29 (2012).

[29] *See* Office of Inspector General, OIG–12–79, Opportunities to Improve FEMA's Public Assistance Preliminary Damage Assessment Process 3, Department of Homeland Security (2012).

[30] *See, e.g.,* S.1960, Fairness in Federal Disaster Declarations Act of 2014, 113th Cong.; H.R. 3925, Fairness in Federal Disaster Declarations Act of 2014, 113th Cong. (establishing criteria for FEMA to incorporate in rulemaking with specific weighted factors); H.R. 1859, Disaster Declaration Improvement Act of 2013, 113th Cong. (requiring

Concluding that the per capita indicator is artificially low,[31] the GAO recommended that the FEMA Administrator ''develop and implement a methodology that provides a more comprehensive assessment of a jurisdiction's capability to respond and to recover from a disaster without federal assistance.'' [32]

As FEMA considered these observations and recommendations, FEMA was finalizing its 2014–2018 Strategic Plan [33] that includes Strategic Priority 4: Enable Disaster Risk Reduction Nationally.[34] Objective 4.2 of the Strategic Plan is to ''incentivize and facilitate investments to manage current and future risk'' [35] through ''facilitate[ing] collaboration to strengthen risk standards, leverage market forces, and guide resilient investments'' [36] as well as through ''reshap[ing] funding agreements with States, tribal governments, and localities to expand cost-sharing and deductibles,'' [37] inter alia.

FEMA also considered the President's emphasis on advancing national resilience. The President issued three related Executive Orders in the past two years to build resilience through (1) establishing a Federal flood risk management standard,[38] (2) establishing a Federal earthquake risk management standard,[39] and (3) requiring agencies to enhance the resilience of buildings to wildfire in the wildland-urban interface.[40] FEMA has been seeking ways to leverage its programs and resources to further other resilience-building efforts as well. For example, FEMA has instituted a policy to establish hazard resistant minimum standards for Public Assistance projects.[41]

In early 2014, FEMA began to explore the possibility of introducing a deductible to the Public Assistance program as a way to leverage the program to encourage resilience and address some of the concerns raised by GAO. Accordingly, FEMA convened a working group of subject-matter experts from within the agency. During the ensuing months, the working group extensively explored the declaration process, the policies and workings of the Public Assistance program, the applicable legal authorities and limitations, and many other areas that would be necessary to inform the development of a deductible concept.

In the course of this research, FEMA reviewed a related rulemaking effort that was a contemporary to the 1986 development of the per capita indicator. FEMA had proposed a regulation that sought to establish (1) ''capability indicators'' for the major disaster declaration decision-making process, (2) a requirement for Governors to make commitments on behalf of their States and local governments to assume a portion of the Public Assistance costs, and (3) a sliding cost-share based on the capability indicators.[42] The proposed rule was met with vocal and widespread criticism by Congress and the emergency management community and FEMA ultimately abandoned the effort.[43] Two of the primary criticisms of FEMA's proposed 1986 rulemaking:

1. FEMA did not recognize the efforts and expenditures that States were already committing to disaster response and recovery; and

2. FEMA did not offer sufficient engagement with key stakeholders during the developmental process.

Considering this background, the FEMA working group developed three guiding principles that were designed to control and direct the impact of the deductible concept:

1. Encourage and incentivize risk-informed mitigation strategies on a broad scale, while also recognizing current State activities;

2. Incentivize consistent fiscal planning by all States for disasters and establish mechanisms to better assess State fiscal capacity to respond to disasters; and

3. Ensure the supplemental nature of FEMA assistance.

Through these guiding principles, the working group designed an initial deductible concept that could leverage the Public Assistance program to recognize risk reduction investments that the States were already undertaking and to incentivize risk reduction best practices nationwide as a means to reduce future disaster impacts and costs for the whole community rather than simply transferring response and recovery costs from the Federal government to State and local jurisdictions. The working group also determined further exploration of the deductible concept should be cognizant of the two primary criticisms of FEMA's proposed 1986 rulemaking: The failure to recognize the efforts and expenditures that States were already committing to disaster response and recovery and the insufficient engagement with key stakeholders.

In its 2015 updated response to the GAO recommendations, FEMA presented three options that it planned to continue investigating:

1. Adjust the per capita indicator to better reflect current national and State-specific economic conditions;

2. Develop an improved methodology for considering factors in addition to the per capita indicator; and

3. Implement a State-specific deductible concept for States to satisfy before qualifying for Public Assistance.

After further investigation and consideration of the alternatives, FEMA decided to further develop the deductible concept because of its relationship to Strategic Priority 4 and its potential for reducing risk and disaster costs for the whole community through incentivizing targeted investments. Moving forward, FEMA plans to pursue closeout of the GAO recommendation through development of the deductible concept for the Public Assistance program. However, FEMA will continue to consider alternatives to the deductible concept going forward, including the GAO's recommendation to significantly increase the current per capita indicator as described in Sections III and VI(A).

IV. Advance Notice of Proposed Rulemaking

FEMA issued the ANPRM to introduce the deductible concept with the emergency management community and the public. The ANPRM consisted of basic background information concerning the declarations process and a very high-level overview of a deductible concept. In keeping with the preliminary and developmental state of the concept at that time, the ANPRM offered few specifics concerning the

new regulations concerning major disaster declarations).

[31] GAO 12–838, supra FN22, at 24.

[32] *Id.* at 50.

[33] *See generally* FEMA Strategic Plan: 2014–2018, available at *http://www.fema.gov/media-library-data/1405716454795-3abe60aec989ecce518c4cdba67722b8/July18FEMAStratPlanDigital508HiResFINALh.pdf.*

[34] *Id.* at 23.

[35] *Id.* at 26.

[36] *Id.* at 27.

[37] *Ibid.*

[38] Executive Order 13,690, 80 FR 6425, Feb. 4, 2015.

[39] Executive Order 13,717, 81 FR 6407, Feb. 2, 2016.

[40] Executive Order 13,728, 81 FR 32223, May 20, 2016.

[41] Public Assistance Required Minimum Standards Policy, FP–104–109–4, Sep. 30, 2016, available at *https://www.fema.gov/media-library/assets/documents/124326.*

[42] *See* Disaster Assistance; Subpart C, the Declaration Process and State Commitments, 51 FR 13332, Apr. 18, 1986; see also Disaster Assistance; Subpart E—Public Assistance—Eligibility Criteria, 51 FR 13341, Apr. 18, 1986; Disaster Assistance; Subpart H, Public Assistance Project Administration, 51 FR 13357, Apr. 18, 1986.

[43] Inquiry into FEMA's Proposed Disaster Relief Regulations: Hearing Before the Subcomm. on Investigations and Oversight of the H. Comm. On Public Works and Transportation, 99th Cong. (1986).

organization or implementation of a deductible. Chiefly, the ANPRM included an extensive list of questions that FEMA was seeking to answer regarding how a deductible program could be best structured and applied to achieve the principles outlined above. These questions were wide ranging in specificity to address all potential aspects of the deductible concept. FEMA presented these questions in an impartial manner to solicit as many relevant responses as possible. This was effective in generating varied responses to questions upon which opinions differed, but in many cases commenters noted it was difficult if not impossible to answer specific questions without a more detailed description of the deductible concept. As a result, commenters provided more general and conceptual responses to the questions asked. FEMA believes that it would have benefited from receiving more specific and detailed feedback, and that the information contained in those types of comments would have been very helpful to the rulemaking process.

In all, FEMA received approximately 150 comments on the ANPRM.[44] These comments came from 35 entities representing 28 individual States, 28 local jurisdictions, and 2 Indian Tribal Nations. FEMA also received comments from 19 professional industry groups, 3 governmental associations, and 9 research and policy organizations.

FEMA reviewed the comments that were received and incorporated the concerns and suggestions into the potential deductible program presented in this SANPRM. FEMA noted many concerns in the comments regarding how the deductible could be applied, or the burdens, either financial or administrative, that it could create for the States. FEMA addressed these concerns in the design concept. In other cases, it was clear that FEMA had not provided enough background information for commenters to offer practicable suggestions. Some comments may have benefited from FEMA providing additional explanation of the current disaster declaration processes, more specificity regarding the Public Assistance program, and a more expansive description of the deductible concept itself. FEMA concluded that it had not offered sufficient information in the ANPRM to enable the public to fully participate in commenting on all aspects of the concept. Consequently, FEMA is providing the public more detail on its concept for a deductible program in this SANPRM.

Notwithstanding the limitations on specificity in the ANPRM, FEMA received support for the concept as a means by which to achieve the goals of reducing disaster impacts and costs through improved preparedness activities and expanded investments in mitigation and risk reduction. Many commenters pointed out that the deductible program could be a preferred outcome compared to increasing the per capita indicator and the potential transfer of financial responsibility to State and local governments that would result. Some commenters found merit in the deductible concept as a way through which to reduce costs, but also to improve disaster resiliency by investing before an incident and incurring reduced costs related to response and recovery over the long term.

In addition to seeking comment via the ANPRM, FEMA continued to conduct research to inform the design of the deductible concept. FEMA recognizes that establishing the methodology for calculating the deductible in an equitable, accurate, and transparent way is essential to any future deductible proposal. Further, for any approach to sustain the rigors of analytic and economic review, FEMA recognized that it would benefit from leveraging external expertise to better develop a methodology that was defensible and reproducible.

With the assistance of the Department of Homeland Security (DHS) Science and Technology Directorate's Office of University Programs, FEMA contracted with the Center for Risk and the Economic Analysis of Terrorism Events (CREATE), a DHS Center of Excellence, to support development of the deductible calculation. CREATE is known for its experience in hazard assessment research, as well as statistical and economic modeling capabilities. CREATE dedicated a team of research and academic experts to develop a reliable methodology for calculating a deductible that is cognizant of the principles established by the FEMA working group; namely that the proposed formula be reflective of the individual capabilities and risks unique to each State and that the calculus function in a transparent and replicable way utilizing publically available information and data.

FEMA also contracted with a leading emergency management consulting firm to conduct additional research pertinent to developing the deductible. With the assistance of the National Emergency Management Association, this firm reached out to nine States on FEMA's behalf to assist those States with identifying information pertinent to the development of the deductible concept.[45] At the next stage of development, FEMA will make every effort to gather data from a larger sample of States, preferably all States, so that the proposal may be as representative as possible. FEMA also invites States to specifically correct any erroneous assumptions made for purposes of developing this SANPRM deductible concept during the comment period.

Specifically, the consulting firm assisted FEMA with understanding the methods and strategies currently used by these nine States to pay for the costs of emergency management programs, mitigation initiatives, and disaster response and recovery. The firm also researched innovative preparedness programs that the nine States have developed to further encourage planning and resiliency-building, such as tax credit incentive programs for individuals, localities, and State entities.

FEMA primarily used the information it obtained from the consulting firm to estimate baselines of current State investments that FEMA then used to set initial credit approvals at levels likely to encourage additional investment and program growth. FEMA also leveraged the information to assist in preparing targeted outreach efforts during the comment period of the ANRPM, such as those held with the National Governor's Association, the National Association of Counties, the National Emergency Management Association, Big City Emergency Managers, National League of Cities, and the International Association of Emergency Managers. These targeted engagements enabled FEMA to draw attention to the ANPRM, explain the purpose and background of the deductible concept with key stakeholders, and to solicit additional details that could be particularly pertinent to informing FEMA's deductible design considerations.

Following closure of the ANPRM comment period, FEMA compiled the comments received, the research performed by CREATE, and the research on State disaster funding and incentive programs and formulated the potential deductible program concept described in this SANPRM.

FEMA believes that this deductible concept is capable of meaningfully reducing the nation's overall risk profile over time. Calculating a deductible is, however, complex. FEMA also

[44] The comments can be viewed on the docket for this rulemaking at *www.regulations.gov* under docket ID FEMA–2016–0003.

[45] The States contacted were California, Florida, Minnesota, New York, Pennsylvania, Texas, Washington, Wyoming, and Vermont.

understands a deductible could be a significant change to FEMA's largest supplemental disaster assistance program. FEMA is therefore committed to continuing to dialogue with its emergency management partners on how best to design a program that will achieve mutually-beneficial goals without the undue transfer of responsibility or the creation of unnecessarily burdensome administrative bureaucracy.

V. Potential Deductible Program

A. Calculation Methodology

There is innate uncertainty in the likelihood of disaster events that prevents perfection in a deductible concept and complicates a complete understanding of the complex disaster environment within which the deductible program would operate. However, not unlike the commercial insurance markets, these uncertainties can be quantified and analyzed over geographic areas and over long periods of time with increasing precision. These calculations could be used to approximate the relative exposure of certain regions, in this case the States, to future disaster costs. These estimates could then be reflected in the relative value of a State's deductible.

Arriving at a calculation methodology is thus one of the most critical aspects of moving the deductible program beyond the conceptual stage and requires public comment. FEMA believes that the methodology should be transparent, reproducible, defensible, and equitable. Additionally, FEMA believes that the approach should reflect fundamental purposes of the Stafford Act, namely that the Federal government support those States that are overwhelmed by the response to and recovery from a natural disaster. Therefore, it is most appropriate to calculate each State's deductible based upon the aspects of fiscal capacity and disaster risk that are unique to the State. FEMA could do this through a four-step process: (1) Establishing the base deductible, (2) calculating the fiscal capacity index, (3) calculating the risk index, and (4) normalizing the deductible amounts. FEMA has included a step-by-step table in the rulemaking docket that demonstrates how each State's starting deductible amount was calculated for purposes of this SANPRM. That table and those deductible amounts are included only as an example of how the deductible concept may function. If implemented, the actual deductible amounts will be dictated by the parameters of the proposal ultimately adopted.

B. Establishing the Base Deductible

As with the rest of the SANPRM all numbers, figures, criteria and processes detailed in this section are notional. They are intended to aid the public in understanding how a potential deductible program could operate and to spur discussion and feedback.

FEMA begins its conceptual methodology by establishing an annual base deductible that would be shared nationwide (*i.e.,* the same amount for each State), and would then be increased or decreased for each State based upon a State's fiscal capacity and risk profile relative to the other States. FEMA utilized historic annual amounts of Public Assistance provided to States to establish the model base deductible. Although FEMA hopes to incentivize risk reduction and resilience that could reduce overall disaster impacts and costs, not solely those eligible for reimbursement through the Public Assistance program, FEMA believes it is important that the base deductible for the Public Assistance program shares a nexus with the program itself.[46]

As developed by FEMA, the base deductible utilized in this conceptual model is the median average amount of Public Assistance received across all 50 States in the past 17 years.[47] FEMA summed the total amount of Public Assistance delivered to each State from 1999 to 2015 and then divided by 17 to determine the per State average annual amount of Public Assistance. FEMA then created a ranked list of those average amounts and determined the median value. Because there are 50 States, the median value is the average of the results for the States situated at the 25th and 26th positions, which was 22,202,726. FEMA rounded the median average amount to 22.2M and imputed this amount to every State as the initial base deductible for the subsequent year.

FEMA believes that this may be a reasonable approach to establishing a base deductible because it would leverage approximately 25 percent of the average amount that FEMA awards in Public Assistance each year to incentivize reducing risk. Based on comments received in response to the ANPRM, FEMA believes that States are already making investments that would offset a portion of this amount through credits. By adjusting each State's base deductible amount to account for its individual risk and fiscal capacity, as described in the subsequent subsections, this approach could yield a meaningful deductible amount for each State, while still providing the greatest incentive to States that have the greatest potential for effectively reducing risk and future disaster costs. FEMA believes this could balance the potential benefits of the disaster deductible program with the need to continue supporting our State partners when disasters exceed their capabilities. See Table 4 for a breakdown of the cumulative and average amount of Public Assistance that each State received from 1999 through 2015.

TABLE 4—STATE RANK OF FEDERAL ASSISTANCE FROM 1999–2015

[In 2015 dollars]

No.	State	Total federal share obligated (1999–2015)	Annual average federal share obligated
1	New York	$21,671,388,334	$1,274,787,549
2	Louisiana	16,621,415,286	977,730,311
3	Florida	6,399,822,001	376,460,118

[46] See generally Section 406 of the Stafford Act which authorizes FEMA to provide funding to assist State, territorial, Tribal and local governments, as well as certain private nonprofit organizations that provide governmental-type services, with the restoration of disaster damaged infrastructure. Because this underlying authority for the program is for public infrastructure, FEMA believes that it is important that the deductible remains connected to Public Assistance funding for that infrastructure.

[47] FEMA used Public Assistance data from 1999 to 2015 adjusted for inflation to 2015 dollars where necessary using the Consumer Price Index inflation calculator provided by the Bureau of Labor Statistics and available at *http://www.bls.gov/data/inflation_calculator.htm.* Prior to 1999, FEMA utilized a data management process that was different from the current system. Furthermore, prior to 1999, FEMA had different policies in place that would have also affected the way that Public Assistance was awarded. The data from the 1999–2015 period is the most reliable that FEMA has available. FEMA expects to add additional data to the calculation each year to increase accuracy over time and to account for long-term shifts in Public Assistance, rather than using a rolling window of data for the annual calculation. This will also limit the impact of any outlier years in terms of Public Assistance awards, both for high and low extremes.

TABLE 4—STATE RANK OF FEDERAL ASSISTANCE FROM 1999–2015—Continued

[In 2015 dollars]

No.	State	Total federal share obligated (1999–2015)	Annual average federal share obligated
4	Mississippi	4,180,836,633	245,931,567
5	Texas	4,094,422,168	240,848,363
6	New Jersey	2,357,737,579	138,690,446
7	Iowa	1,826,578,453	107,445,791
8	California	1,437,292,282	84,546,605
9	Oklahoma	1,131,691,340	66,570,079
10	Kansas	1,080,772,444	63,574,850
11	North Carolina	953,206,418	56,070,966
12	Missouri	888,379,570	52,257,622
13	Alabama	841,956,023	49,526,825
14	Arkansas	744,651,963	43,803,057
15	North Dakota	679,833,405	39,990,200
16	Virginia	643,863,349	37,874,315
17	Kentucky	615,307,272	36,194,545
18	Tennessee	602,295,312	35,429,136
19	Pennsylvania	557,230,633	32,778,273
20	Nebraska	435,308,536	25,606,384
21	Washington	428,584,871	25,210,875
22	Minnesota	426,982,553	25,116,621
23	Massachusetts	422,663,583	24,862,564
24	Colorado	408,338,653	24,019,921
25	South Carolina	384,041,986	22,590,705
M	Median	377,446,341	22,202,726
26	Ohio	370,850,697	21,814,747
27	Georgia	328,820,892	19,342,405
28	West Virginia	311,011,683	18,294,805
29	Illinois	309,990,918	18,234,760
30	Vermont	297,996,556	17,529,209
31	Connecticut	284,870,352	16,757,080
32	South Dakota	284,612,022	16,741,884
33	New Mexico	274,303,673	16,135,510
34	Maryland	265,115,281	15,595,017
35	Indiana	237,955,033	13,997,355
36	Alaska	203,258,189	11,956,364
37	Wisconsin	174,472,096	10,263,064
38	Oregon	144,641,218	8,508,307
39	New Hampshire	137,674,702	8,098,512
40	Maine	91,683,905	5,393,171
41	Hawaii	87,697,345	5,158,667
42	Montana	70,196,126	4,129,184
43	Arizona	68,642,964	4,037,821
44	Rhode Island	63,361,303	3,727,135
45	Michigan	42,583,629	2,504,919
46	Delaware	39,007,437	2,294,555
47	Utah	34,208,312	2,012,254
48	Nevada	30,275,261	1,780,898
49	Wyoming	12,973,750	763,162
50	Idaho	11,695,737	687,985

After establishing this base deductible that is shared by every State, FEMA differentiated the States and ascribed individual deductibles according to each State's relative fiscal capacity and unique disaster risk profile. Fiscal capacity is important because the intent of FEMA's Stafford Act programs, including Public Assistance, is to supplement the capabilities of State and local jurisdictions. Disaster risk is important because it is the primary driver of Public Assistance expenditures and its reduction is the primary purpose of the deductible concept.

Because FEMA is seeking to reduce risk through the deductible, and it is precisely through this risk reduction that the nation could realize the promise of the deductible program in decreasing disaster impacts and costs, FEMA has considered in this calculation prioritizing the risk portion of the deductible calculation by a ratio of 3:1 compared to the fiscal capacity portion. In other words, when a State's base deductible is adjusted, 75 percent of the adjustment results from the State's relative risk profile and the remaining 25 percent stems from the State's relative fiscal capacity.

C. Calculating the Fiscal Capacity Index

As with the rest of the SANPRM all numbers, figures, criteria and processes detailed in this section are notional. They are intended to aid the public in understanding how a potential deductible program could operate and to spur discussion and feedback.

To calculate a State's relative fiscal capacity, FEMA, with the assistance of CREATE, developed a composite of four individual fiscal capacity indices. FEMA and CREATE considered multiple potential indicators of fiscal capacity. The four indicators selected to

comprise the composite fiscal capacity index were each determined to represent a separate and distinct aspect of a State's economy and governmental resources; however. FEMA welcomes comment on whether these are the best indicators to leverage and whether there are others that should be considered as well. The four fiscal capacity indices that FEMA includes in the model deductible calculation are based on each State's per capita Total Taxable Resources (TTR), per capita surplus/deficit, per capita reserve funding, and the State's bond rating. FEMA will use the most recent indices.

TTR is an annual measure of fiscal capacity calculated by the United States Department of Treasury.[48] Essentially, TTR considers all of the income streams available within each State, including gross domestic product, corporate withheld earnings, and other capturable revenue. TTR does not measure how much revenue a State actually captures, but instead, measures how much revenue, in real dollars, a State has access to as compared to other States. As a per capita index, the State's total TTR in real dollars is then divided by the State's population. This places high-population States on equal footing with low-population States with regard to the index.

The surplus/deficit and the reserve fund indices operate in similar fashion. In each case, the State's value (surplus/deficit or reserve) is divided by the State's population. That amount is then compared with the per capita value of the median State. This creates indices of relative strength for each.

The surplus/deficit index is built using data provided by the Annual Survey of State Government Finances provided by the United States Census Bureau of the Department of Commerce.[49] The reserve fund index is built using data provided by the Fiscal Survey of the States conducted regularly by NASBO.[50] FEMA believes that both the surplus or deficit that a State is running and the amount of funding that a State holds in reserve are relevant indicators of a State's overall fiscal well-being and ability to independently address the financial costs of disasters.

Finally, the bond rating index is similarly calculated by dividing the State's bond rating by the median State's bond rating. In this model, FEMA calculates the bond rating index based upon data provided by the Pew Charitable Trusts from Standard & Poor's State Credit Ratings.[51] FEMA believes that the resulting relative index is an indicative proxy of the State's ability to quickly raise the funding liquidity necessary to respond to and recover from disaster incidents.

FEMA averaged these four indices of relative fiscal strength into a consolidated fiscal capacity index, each factor being equally weighted. This index accounts for 25 percent of a State's base deductible adjustment. However, FEMA also realized that, due to diversity in economic drivers and varying population sizes, some States may demonstrate a particular fiscal capacity indicator that is a statistical outlier compared with its other factors and the indicators of other States. To minimize the impact of these outliers on the disaster deductible formula, FEMA capped the impact of any individual fiscal capacity indicator at five times the median State's relative strength. In other words, if the median State's per capita reserve fund is $100 and is ascribed a value of 1.0 on the index, a State with an outlier per capita reserve fund value of $800 could be imputed the maximum per capita reserve fund value of $500, and therefore still receive an index value of 5.0, instead of the 8.0 index value that could otherwise be warranted. FEMA capped each fiscal capacity indicators in this way to contain the variability of the overall index and smooth the impact on outlier States.

D. Calculating the Composite Risk Index

As with the rest of the SANPRM, all numbers, figures, criteria and processes detailed in this section are notional. They are intended to aid the public in understanding how a potential deductible program could operate and to spur discussion and feedback.

FEMA explored multiple leading alternatives for predicting disaster losses. For the model described in this SANPRM, FEMA used an Average Annualized Loss (AAL) methodology for calculating each State's relative disaster risk level.

AAL is a proxy for risk commonly used in risk modeling that considers the expected losses from a particular hazard per year when averaged over many years. Generally, AAL is calculated by multiplying the likelihood of the hazard occurring in a particular year by the likely cost of the event if it does occur. For example, if the likelihood of a hazard occurring is 0.2 percent, such as for a 500-year event, and the likely loss generated by that level of event is $1 billion, the AAL for the hazard in the vulnerable area would be $2 million ($1B x 0.002).[52]

There are numerous sources of AAL data for hazards. Proprietary catastrophic risk models developed by companies such as AIR Worldwide (AIR), Risk Management Solutions (RMS), and CoreLogic (EQECAT) are three primary sources of AAL and risk information used by the reinsurance industry.[53] FEMA considered these sources, but did not pursue them due to the proprietary, closed nature of the underlying risk models. Instead, FEMA used the AAL values produced using FEMA's Hazus platform.

Hazus is a nationally applicable standardized methodology that contains models for estimating potential losses from earthquakes, floods, and hurricanes. Hazus uses Geographic Information Systems (GIS) technology to estimate physical, economic, and social impacts of disasters.[54] FEMA used AAL estimates generated using Hazus because it is a well-established and familiar platform for many emergency managers and, most importantly, it is an open-source platform that will provide complete transparency to stakeholders concerning FEMA's deductible calculations.

FEMA used the Hazus-based AAL estimates to create a simplified risk index for each State. Specifically, FEMA summed the most recently available AAL estimates [55] for each State for each

[48] Additional information regarding Total Taxable Resources (TTR), including the methods for calculating and the current TTR estimates, can be found on the Web site of the Department of the Treasury at *https://www.treasury.gov/resource-center/economic-policy/taxable-resources/Pages/Total-Taxable-Resources.aspx.*

[49] Additional information concerning the Annual Survey of State Government Finances, including the survey methodology and latest survey results, can be found on the Web site of the United States Census Bureau at *https://www.census.gov/govs/state/.*

[50] Additional information concerning the Fiscal Survey of States, including the survey methodology and latest survey results, can be found on the Web site of the National Association of State Budget Officers at *https://www.nasbo.org/mainsite/reports-data/fiscal-survey-of-states.*

[51] Additional information concerning the data provided by the Pew Charitable Trusts can be found on their Web site at *http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2014/06/09/sp-ratings-2014.*

[52] A 500-year event is an event that has the statistical likelihood of occurring once every 500 years, or in other words, a 1 in 500 chance (0.2%).

[53] A short discussion about catastrophic modeling and a description of the three proprietary AAL models identified here can be found on the Marsh, LLC Web site at *https://www.marsh.com/content/dam/marsh/Documents/PDF/US-en/Marsh-Insights-Property-Fall-2012.pdf.*

[54] For additional information, visit FEMA's Hazus Web site at *http://www.fema.gov/hazus.*

[55] FEMA uses estimates of AAL generated using FEMA's Hazus software. Cited AAL estimates were inflation-adjusted to 2015 dollars where necessary using the Consumer Price Index inflation calculator provided by the Bureau of Labor Statistics and available at *http://www.bls.gov/data/inflation_calculator.htm.*

of the three Hazus hazards: Earthquakes,[56] floods (both coastal and riverine),[57] and hurricanes (wind only).[58] Collectively, these three hazards accounted for more than 75 percent of all Public Assistance awarded during the 10-year period between 2005 and 2014.

FEMA created a composite risk index around the median cumulative AAL. FEMA arranged each State's cumulative AAL (the sum of the State's earthquake, flooding, and hurricane AALs) in order from the largest cumulative AAL to the smallest. Because there is an even number of States, FEMA averaged the cumulative AALs of the States in the 25th and 26th positions to determine the overall median cumulative AAL. FEMA assigned this amount a value of 1.0 and indexed each State's relative cumulative AAL to determine the State's risk index score.

For example, consider a State with the following Hazus-based AALs:

Hurricane: $875 million
Flooding: $2 billion
Earthquake: $25 million

Cumulative: $2.9 billion (Hurricane AAL + Flooding AAL + Earthquake AAL) FEMA conducted the same calculation for each State and then ordered them from largest to smallest in terms of each State's cumulative AAL.

If the median cumulative AAL across all of the States is $1.45 billion, that would be ascribed a score of 1.0 on the risk index, the hypothetical State above would receive a risk index score of 2.0 because its cumulative AAL is twice as large as the median cumulative AAL ($2.9 billion versus $1.45 billion, respectively). For purposes of calculating the State's Public Assistance deductible, the State could be considered to have twice the risk of the median State.

[56] KS Jaiswal, et al. (2015). Estimating Annualized Earthquake Losses for the Conterminous United States. Earthquake Spectra: December 2015, Vol. 31, No. S1, pp. S221–S243. FEMA is unable to post a copy of the document in the docket due to copyright restrictions. A summary of the document and purchase information is available at *http://dx.doi.org/10.1193/010915EQS005M.*

[57] Hazus AAL results for flood (coastal and riverine) are available at *https://data.femadata.com/Hazus/FloodProjects/AAL/StateAAL_proj.zip* and *http://www.arcgis.com/home/item.html?id=cb8228309e9d405ca6b4db6027df36d9.* Accessed June 2, 2016. Note that Hazus flood AAL estimates are not available for Hawaii and Alaska; these losses are estimated by indexing against National Oceanic and Atmospheric Administration (NOAA) flood loss estimates from 2011–2014, available at *http://www.nws.noaa.gov/hic/summaries/.*

[58] FEMA Mitigation Directorate, Hazus-MH Estimated Annualized Hurricane Losses for the United States (unpublished draft report), September 2006.

The AALs produced using Hazus vary from State to State depending upon the types of hazards that each State is prone to and the levels of loss that those hazards have the ability to create in those States. Consequently, the per capita cumulative AALs are not evenly distributed across the States and a few States have higher risk index scores because of that. Every State should be assigned a deductible that is reasonable and achievable. In this model, FEMA capped the composite risk index values in a manner similar to the way FEMA capped the components of the fiscal capacity index.

FEMA capped the fiscal capacity components at a value of 5.0. This means that FEMA ignored any computed fiscal capacity that is greater than five times the median State's fiscal capacity for that factor. Because of the overall emphasis on risk, and similar to the deductible formula ratio of 3:1 risk to fiscal capacity, FEMA capped a State's risk index at a score of 15.0. In other words, FEMA ignored any calculated risk that is in excess of 15 times the risk of the median State.

E. Normalizing the Deductible Amounts

As with the rest of the SANPRM, all numbers, figures, criteria and processes detailed in this section are notional. They are intended to aid the public in understanding how a potential deductible program could operate and to spur discussion and feedback.

FEMA used the base deductible, composite risk index, and fiscal capacity index established above to calculate the post-indexed deductible value for each State. As explained previously, 75 percent of the total index adjustment to the base deductible is determined by the State's relative risk profile and the remaining 25 percent is determined by the State's relative fiscal capacity. For the final step in the deductible calculation process, FEMA normalized the post-indexed values to establish each State's final deductible amount. Normalization is a statistical term that can mean different things in different contexts. In the case of the deductible, FEMA uses normalization to mean adjusting the post-indexed values to equal the pre-indexed values overall.

Specifically, FEMA multiplied the base deductible that it established in the first step by 50 to establish the overall deductible ceiling for the 50 States. FEMA then summed all of the post-indexed deductible values of each State. If the sum of these post-indexed values exceeded the deductible ceiling established by the base deductible, FEMA made a downward adjustment to each State's post-indexed deductible so that its final amount remained the same relative to every other State, but so that the sum of all of the States' post-indexed deductibles equaled the base deductible ceiling.

For example, assume that the base deductible is calculated to be $25 million. This is the amount that each State begins with prior to the application of the fiscal capacity index and risk index. FEMA multiplies the base deductible ($25 million) by 50 to calculate the cumulative deductible ceiling for that year. In this case the deductible ceiling would be $1.25 billion for the year ($25 million $\times$ 50 = $1.25 billion).

If, after applying the indices to each State's base deductible, the sum of all of the resulting, post-indexed deductibles exceeded the $1.25 billion dollar ceiling, FEMA would normalize the deductible amounts so that the sum of all of them equals $1.25 billion. This would decrease the final deductible amounts of every State, but each State would remain in the same position relative to every other State. If a State had a post-indexed deductible that was twice that of another State that State would still have a final deductible that was twice the deductible of the other State, but both final deductibles would be lower.

Normalization is a common statistical approach for addressing variations that occur when adjustments are made to values through indices of relativity, which both the fiscal capacity and risk index are. This important step could ensure that the Public Assistance deductibles remain rooted in their nexus to the Public Assistance program. This final step, normalization, will establish the Starting Deductible for each state.

F. Calculating Each State's Starting Deductible

As with the rest of the SANPRM, all numbers, figures, criteria and processes detailed in this section are notional. They are intended to aid the public in understanding how a potential deductible program could operate and to spur discussion and feedback.

As summarized above, the base deductible will be multiplied by the sum of: 0.75 multiplied by the State's Composite Risk Index and 0.25 multiplied by the State's Composite Fiscal Capacity Index. That calculation establishes an adjusted deductible for each State. FEMA will then normalize the adjusted deductibles to ensure that the total sum of all of the adjusted deductibles equals the sum of the base deductibles. This methodology yields

the following model normalized deductibles for each State in 2016:

TABLE 5—MODEL 2016 STARTING DEDUCTIBLES

State	Starting deductible ($M)
Alabama	$12.96
Alaska	19.42
Arizona	18.67
Arkansas	8.01
California	141.03
Colorado	7.08
Connecticut	20.85
Delaware	8.03
Florida	141.53
Georgia	17.65
Hawaii	9.17
Idaho	7.68
Illinois	14.43
Indiana	12.23
Iowa	10.63
Kansas	9.54
Kentucky	9.47
Louisiana	73.90
Maine	8.52
Maryland	9.26
Massachusetts	30.34
Michigan	23.20
Minnesota	9.44
Mississippi	13.32
Missouri	11.38
Montana	6.23
Nebraska	9.93
Nevada	8.81
New Hampshire	7.92
New Jersey	29.28
New Mexico	11.11
New York	51.70
North Carolina	17.50
North Dakota	10.09
Ohio	25.86
Oklahoma	10.40
Oregon	24.62
Pennsylvania	21.88
Rhode Island	12.30
South Carolina	11.60
South Dakota	8.25
Tennessee	16.68
Texas	73.72
Utah	7.73
Vermont	8.64
Virginia	13.51
Washington	27.30
West Virginia	23.39
Wisconsin	13.50
Wyoming	10.47
Average	22.20
Median	12.26
Minimum	6.23
Maximum	141.53

These deductibles represent FEMA's assessment of each State's fiscal capacity and risk profile as of 2016. FEMA has included a table in the rulemaking docket for this SANPRM that shows every step for each State with regard to how these notional deductibles were calculated for purposes of this concept. These deductibles would be reduced by any credits that FEMA approves for the State pursuant to the annual deductible credit menu. The following section will detail the types of credits that FEMA expects to initially offer.

G. Credit Structure

As with the rest of the SANPRM all numbers, figures, criteria and processes detailed in this section are notional. They are intended to aid the public in understanding how a potential deductible program could operate and to spur discussion and feedback.

A potential credit structure could offer States the ability to partially or fully satisfy their deductible in advance of a major disaster declaration. While simply raising the per capita indicator to qualify for Public Assistance would reduce Federal costs, a potential credit structure, if successful, could eventually deliver the true benefits of reduced risk and realized disaster response and recovery cost savings nationwide. FEMA's goal is to design a model credit structure that would create financial and economic incentives for meaningful State investments in preparedness and risk-reduction measures.

FEMA believes that the model credit structure described in this SANPRM would allow every State to earn credits for activities that each would already be undertaking, and also improve risk reduction and resilience building for States that choose to expand those activities. To that end, the deductible model described in this SANPRM includes seven potential categories of credits.

Due to the differences among the credit categories and their likely effects upon reducing risk, each category offers a unique credit-to-cost ratio, and a few have caps to provide States with an opportunity to develop a potentially diverse portfolio of risk reduction strategies.

FEMA would monitor which credits States elect to earn and would continue to refine its credit offerings each year. FEMA would provide an annual notice of credit offerings so that States would have ample opportunity to carefully consider all of their options. FEMA would also continue to engage with the States and with key intergovernmental organizations to ensure that the credit structure is calibrated to provide the right levels of reward to incentivize continuous improvement for each State in the disaster resilience and emergency management contexts.

FEMA recognizes that any additional program could create some additional administrative burden to State and Federal governments. However, FEMA is committed to limiting that burden to successfully carry out the program and ensure that it is applied effectively. The following sections detail the administrative steps and timelines currently envisioned for the program. FEMA has carefully considered both the likely burden and the likely benefit underlying each of the seven credit categories and believes that each category represents potential activities worth pursuing and incentivizing. Each of the seven credit categories received generally favorable support from those who commented on the ANPRM. FEMA seeks additional public input on these categories and on the potential administrative burdens of assembling the supporting information.

1. Dedicated Funding for Emergency Response/Recovery Activities

A State that has planned for and taken fiscal steps to address the financial impacts of potential disasters ahead of time is better prepared to immediately respond to and to rapidly recover from a major disaster. FEMA recognizes that States use multiple strategies for addressing the financial consequences of a disaster, including: Supplemental State appropriations, issuing recovery bonds, diverting funding from other State programs or cutting State agency operating budgets, and imposing special tax assessments to raise recovery resources. FEMA, however, has also observed that the time required to enact many of these ad-hoc funding strategies can significantly delay a State's ability to rapidly respond to a disaster.

FEMA believes that response and recovery efforts could be improved if the affected States maintain dedicated disaster relief funds. By having this funding available, these States also could potentially obviate the need to reduce or eliminate other planned State services to divert funding to disaster operations and infrastructure repair. For example, a State could divert funding for summer roadway maintenance or improvements to cover debris removal costs following a hurricane or snow removal costs following a major winter storm. States that maintain a dedicated disaster relief fund may be able to more rapidly ameliorate disaster consequences, leverage supplemental Federal assistance programs, and repair public buildings and infrastructure, without diverting funding from other important initiatives.

Furthermore, States without dedicated disaster relief funds could find themselves in the position of incurring new public obligations, or in some cases debt, while simultaneously suffering from the tax losses of disaster-

induced decreased economic activity. By having a dedicated fund available to address the direct costs of disaster response and damage restoration, States could be better positioned to address these secondary disaster consequences.

In order to incentivize States to take the proactive step of establishing and funding a dedicated disaster relief fund in advance, this potential model credit structure includes $1.00 in deductible credit for every $1.00 of State funding that the State has appropriated and deposited in a qualifying disaster relief fund during the course of the previous year. This credit may account for up to 20 percent of the State's annual deductible. Funds that are carried over or that expire and are reappropriated for the same limited purpose could still qualify for the credit.

2. Expenditures for Non-Stafford Act Response and Recovery Activities

FEMA received multiple comments during the ANPRM comment period that emphasized that FEMA does not fully understand or appreciate the amount of investment that States already make in emergency management and disaster recovery. Commenters pointed out that for every major disaster declared, that there are multiple smaller incidents that do not rise to the level of warranting supplemental Federal assistance, but nonetheless exceed local capabilities and often require State funding support for response and recovery activities. FEMA seeks to encourage States to continue providing State-level assistance to overwhelmed localities, even when Federal assistance may be unavailable.

Commenters also noted that counties and cities often lack the independent ability to raise the necessary financial resources to address the costs of significant localized impacts. In these cases, the support provide by their State partners is invaluable to ensuring that adequate funding is available to support the response and recovery operations necessary to assist the affected localities and survivors. Additionally, commenters explained that, even following a major disaster declaration, supplemental Federal assistance is typically only made available to the most severely impacted jurisdictions within the affected State. However, there are other communities that are not designated, but nonetheless have experienced damage resulting from the same incident. The commenters postulated that the damage experienced within these non-declared jurisdictions may nevertheless still exceed their individual capacities to effectively respond and recover, necessitating additional support from their State partners. This is, the commenters offered, an additional burden upon the State that the current system of Public Assistance does not recognize or incentivize.

FEMA seeks to preserve and strengthen this important State-local relationship and to incentivize States to continue providing assistance when jurisdictional capabilities are exceeded, regardless of the availability of supplemental Federal assistance. In order to do so, this potential deductible model includes $1.00 in deductible credit for every $1.00 of annual State funding that the State expends to respond and/or recover from an incident that either: (1) Does not receive a Stafford Act declaration or, (2) affects a locality not designated for Public Assistance by a major disaster declaration. In either case, the Governor of the State would be required to declare a State of emergency, or issue a similar proclamation, pursuant to applicable State law. In this model, this credit could account for up to 20 percent of the State's annual deductible.

3. Expenditures for Mitigation Activities

Integral to any effort to lessen the risks associated with and consequences of disaster is effective mitigation. Mitigation is the act of lessening or avoiding the impacts of a hazard, typically through engineered solutions. The linkage between advanced mitigation and lowering disaster impacts and costs has been demonstrated many times, both through academia and research, and also in practical application.

FEMA provides funding assistance for mitigation projects through several programs, including the Hazard Mitigation Grant Program and the Pre-Disaster Mitigation Grant Program, as well as to mitigation-enhanced restoration projects through the Public Assistance program authorized by Section 406 of the Stafford Act.[59] FEMA recognizes, however, that States often invest significantly in mitigation efforts apart from these Federal assistance programs. FEMA seeks to recognize those continued investments and incentivize additional investments by providing significant credit for direct mitigation-related expenditures through the Public Assistance deductible program.

This model includes $3.00 in deductible credit for every $1.00 in State spending on qualifying mitigation activities. FEMA will not count State matching funds toward the calculation of the credit, so therefore these State expenditures must be either independent of any other Federal assistance program or must be in excess of the minimum cost-share requirement of any applicable Federal assistance program. For purposes of this credit, FEMA defined qualifying mitigation activities as it does under FEMA's Hazard Mitigation Assistance Guidance.[60]

Due to the importance of incentivizing mitigation activities to the success of the deductible program in reducing future disaster impacts and costs nationwide, FEMA is not currently considering capping the potential mitigation credit that may be earned in this model. In other words, a State could fully satisfy its annual deductible by investing at least one-third of its deductible amount in qualifying mitigation activities each year. This could not only fully satisfy the State's deductible well in advance of any declaration activity, thereby eliminating application of the deductible in the State for that year, but could also deliver the State future savings by reducing the severity or consequences of forthcoming disasters. FEMA also seeks comment specifically on whether incentivizing further spending by State governments using credit mechanisms of mitigation expenditure credits and non-Stafford expenditure credits could potentially dampen or crowd out private mitigation expenditures.

4. Insurance Coverage for Public Facilities, Assets, and Infrastructure

States have choices when it comes to how they elect to address their disaster risks. Some States have chosen to establish dedicated disaster relief funds that can be leveraged to address the costs of disasters without jeopardizing other services and operations. Other States have elected to purchase third-party insurance to cover some of those costs, while others have established self-insurance risk pools to better distribute the risk. Regardless of the choice that is made, FEMA may choose to encourage pre-disaster financial preparedness through the deductible program.

The model FEMA is currently contemplating includes percentage deductible credits for States that elect to utilize insurance policies as a means to address future disaster costs. To qualify for credit, the insurance policy must cover costs related to losses that would otherwise qualify for reimbursement

[59] 42 U.S.C. 5172.

[60] *See* Hazard Mitigation Assistance Guidance, Part III, section E.1.3.1, available at this link *https://www.fema.gov/media-library-data/1424983165449-38f5dfc69c0bd4ea8a161e8bb7b79553/HMA_Guidance_022715_508.pdf.*

assistance through the Public Assistance program. For purposes of the credit, the policies must provide guaranteed coverage for losses from natural hazards, fires, explosions, floods, or terrorist attacks. For a self-insurance fund or risk pool, FEMA would verify through the State Insurance Commissioner, or similar State official, that the fund or pool is actuarially sound and solvent.

This model includes credit based on the aggregate limits of applicable State policies, rather than on the premiums paid for coverage. Consequently, FEMA believes that States choosing to insure against future disaster risk would have very large overall limits, even though a particular incident would likely only affect a fraction of the total insured property. For example, if a State maintains $1M policies on 10 facilities across the State, the aggregate limit of the policy coverage is $10M, even though it is unlikely that all 10 facilities will suffer an insured loss at the same time. FEMA believes this could be a reasonable and equitable approach because both the deductible and insurance coverage levels should largely be driven by each State's individual risk profile.

This model includes a potential three-tier incentive structure for insurance coverage based upon multiples of each State's annual deductible amount as follows:

TABLE 6—INSURANCE COVERAGE CREDIT SCHEDULE

Coverage amount	Credit (percentage of deductible)
50x Deductible ≤ Coverage <100x Deductible	5
100x Deductible ≤Coverage <150x Deductible	10
150x Deductible ≤ Coverage	15

For example, if a State has an annual deductible of $30 million and carries insurance policies on public facilities with an aggregate limit of $3.6 billion, the State could receive a credit equal to 10 percent of its initial deductible, or $3 million. This is because $3.6 billion is 120 times the amount of the State's deductible ($30 million) and is within the range of 100 to 150 times the deductible that FEMA suggests should receive a 10 percent credit. This outcome could be the same whether the State chose to purchase its insurance through third-party insurers or reinsurers or chose to self-insure and self-manage the risk. FEMA could confirm coverage level through the insurance contract or, for self-insurance, through the appropriate State official that the self-insurance fund is actuarially sound up to the $3.6 billion limit. Given the specific goal of incentivizing mitigation, FEMA seeks comment on the inclusion of insurance coverage credits in the deductible model.

5. Building Code Effectiveness Grade Schedule (BCEGS®)

The Insurance Services Office, Inc. (ISO), a leading provider of information concerning risk assessment and property and casualty insurance, has explored the relationship of building codes to risk reduction. According to a recent ISO report:

> [M]odel building codes have most clearly addressed the hazards associated with wind, earthquake, and fire. Experts maintain that buildings constructed according to the requirements of model building codes suffer fewer losses from those perils. If municipalities adopt and rigorously enforce up-to-date codes, losses from other risks (including man-made perils) may also decrease.[61]

FEMA agrees with the ISO's analysis that building codes, when adopted and properly enforced, have the ability to reduce future disaster risk on a broad scale. Consequently, in this model FEMA incorporated deductible credits to States that have committed to adopting, promoting, and enforcing building codes.

This model includes an escalating credit structure that provides moderate incentive to simply participate in ISO's Building Code Effectiveness Grading Schedule (BCEGS®) program and increasing incentives as States reach higher levels of adoption and enforcement. ISO provides BCEGS® scores for both residential and commercial codes and enforcement, each on an improving scale from 10 to 1. In 2015, over 60 percent of States had BCEGS® scores of 4 or 5 in each category.

The following model incentive structure is based on each State's annual BCEGS® score for both residential and commercial building codes:

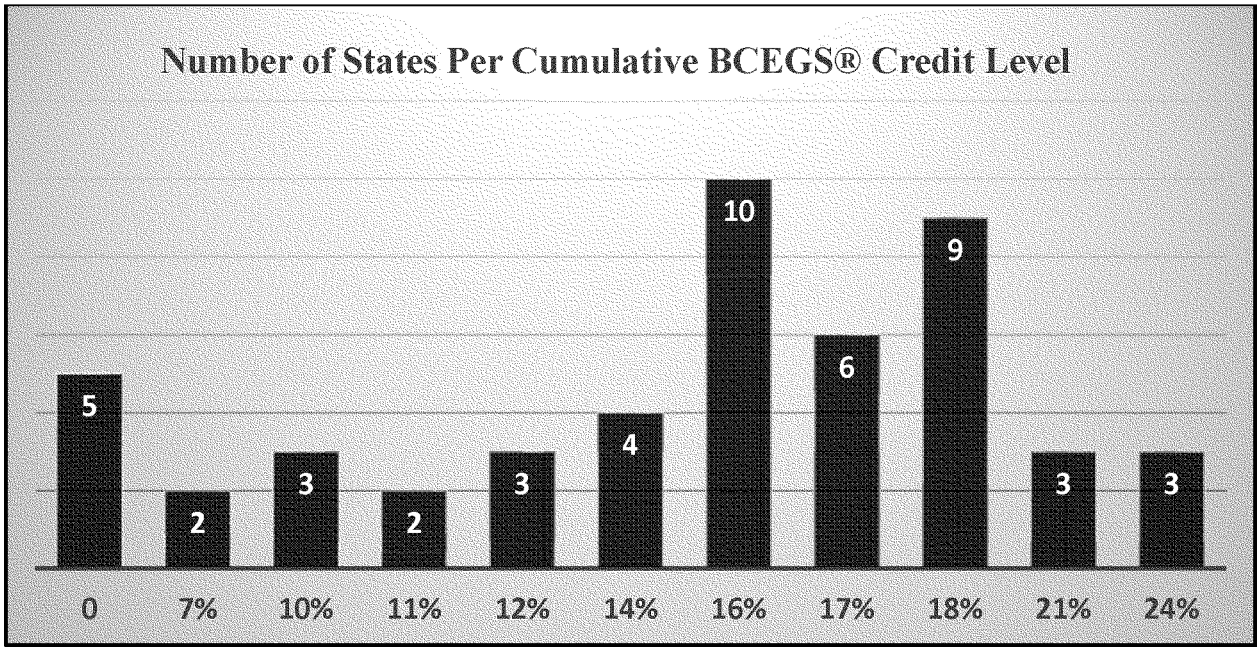
TABLE 7—BCEGS CREDIT SCHEDULE

BCEGS® score	Residential credit (percentage of deductible)	Commercial credit (percentage of deductible)
1	20	20
2	15	15
3	12	12
4	9	9
5	8	8
6	6	6
7	5	5
8	4	4
9	3	3
10	2	2

This structure could allow States to earn between 4 percent and 40 percent credits based upon their residential and commercial BCEGS® scores. As of 2015, 45 States participate in the BCEGS® program and could have received, at a minimum, the 4 percent credit for doing so under this structure. Based on 2015 scores, the average participating State could receive a 16 percent reduction to their deductible amount. The smallest credit would have been 7 percent and the largest would have been 24 percent. The following chart depicts the number of States per credit level in 2015.

[61] Insurance Services Office, Inc., *National Building Code Assessment Report: ISO's Building Code Effectiveness Grading Schedule* (2015), 8, available at *https://www.isomitigation.com/downloads/ISO-BCEGS-State-Report_web.pdf.*

Figure 1: Number of States per Cumulative BCEGS Credit Level



6. Tax Incentive Programs

FEMA recognizes that the most effective ways to reduce risk across the entire nation employ a whole-community approach that involves every level of government, the private sector, and the citizenry in taking steps to promote and increase resilience. With that in mind, FEMA included in this model credit to States for tax-incentive programs designed to encourage preparedness or mitigation activities.

For example, a State may offer an income tax credit for elevating homes or host a sales-tax holiday for personal preparedness supplies. FEMA would defer to the States to decide what types of programs would be most successful and appropriate given each State's unique considerations and risks, however the program would still need to maintain a clear nexus with preparedness, mitigation, or resilience building. In some cases, a State may offer a program that incentivizes general preparedness, or it may decide to target a program to a specific hazard, such as the installation of hurricane straps or seismic retrofits to existing building foundations.

Regardless, this model includes credits to States for these types of innovative tax incentive programs. FEMA would allow States to request credit for both the direct costs of the program (administration, advertising, etc.), and for the indirect costs, such as forgone tax revenue. In both cases, FEMA would approve $2.00 in deductible credit for every $1.00 in State funding expended or foregone.

Because FEMA sees this credit as a type of whole-community risk reduction, in this model FEMA is not currently including a cap on this particular credit. In other words, a State with a large enough tax incentivize program(s) could largely offset its deductible by annually foregoing tax revenue, through credits/deductions offered to businesses and/or citizens, equal to half of its deductible amount. FEMA specifically requests comment on the types of tax incentive programs that have a nexus to preparedness and disaster risk reduction and their effectiveness, both in terms of cost effectiveness and outcome effectiveness.

7. Expenditures on State Emergency Management Programs

Perhaps the most visible factor in a State's ability to address disasters in the broad sense is the quality of its emergency management program. States have organized their emergency management function in a number of different ways. In some States, emergency management is a standalone office, whereas in other States the function is embedded in a broader public safety or military organization.

The Federal government provides numerous types of assistance to States to develop, maintain, and implement their emergency management programs. At FEMA, assistance is generally available through the Emergency Management Performance Grant Program,[62] the Homeland Security Grant Program,[63] including both the State Homeland Security Program[64] and the Urban Area Security Initiative,[65] and through management costs awarded in administering Stafford Act declarations.

In order to further incentivize States to allocate their own resources to their emergency management enterprises, this model includes a deductible credit for annual State expenditures supporting State emergency management programs beyond any cost-share required by a Federal assistance program or grant. FEMA solicits comments on what types of emergency management enterprises and activities could be eligible for deductible credit within this category and information relating to the current level of State investment in these enterprises and activities.

FEMA includes in this model $1.00 in deductible credit for every $1.00 that a State invests in emergency management beyond the cost-share required by a Federal program. A State could satisfy up to 20 percent of its annual Public Assistance deductible through this credit.

8. Emergency Management Accreditation Program (EMAP®) Credit Enhancement

The Emergency Management Accreditation Program (EMAP®) is an independent non-profit organization

[62] 6 U.S.C. 762.
[63] 6 U.S.C. 603.
[64] 6 U.S.C. 605.
[65] 6 U.S.C. 604.

that offers an emergency management program review and recognition program.[66] EMAP® is a completely voluntary program and accreditation is not presently a factor in any FEMA program. However, FEMA recognizes that EMAP® provides a valuable resource to accredited programs by establishing best practices and offering a level of independent accountability.

This model includes a credit enhancement to States that voluntarily seek and achieve provisional or full EMAP® accreditation. FEMA could increase the credit amount by 5 percent for three credit types for EMAP® accreditation, but specifically seeks comment on the appropriate value of this credit amount. These three credits could be:

1. Dedicated funding for emergency response and recovery activities;

2. expenditures for non-Stafford Act response and recovery activities; and

3. expenditures on State emergency management programs.

Specifically, instead of offering $1.00 in deductible credit for each $1.00 in qualifying State funding and expenditures, FEMA would instead approve $1.05 for each $1.00 in qualifying State funding and expenditures for States maintaining current EMAP® provisional or full accreditation. The credit caps applicable to each credit category would remain unchanged. FEMA believes that applying the credit enhancement in this manner could encourage States to seek and/or maintain EMAP® accreditation and that by doing so, could demonstrate improved readiness to confront the consequences of disasters.

9. Credit Summary

Table 8 provides an overview of the credits that FEMA is envisioning, the amount of credit that could be approved, any cap that FEMA envisions applying, and whether an enhancement is available to the credit.

TABLE 8—SUMMARY CREDIT MENU

Credit No.	Credit name	Credit amount	Credit cap	EMAP® enhancement
1	Dedicated Funding for Emergency Response/ Recovery Activities.	$1.00 in credit for each $1.00 in qualifying deposits.	20%	Yes.
2	Expenditures for Non-Stafford Act Response and Recovery Activities.	$1.00 in credit for each $1.00 in qualifying expenditures.	20%	Yes.
3	Expenditures for Mitigation Activities	$3.00 in credit for each $1.00 in qualifying expenditures.	No Cap	No.
4	Insurance Coverage for Public Facilities, Assets, and Infrastructure.	% reduction based on qualifying coverage above deductible amount.	N/A	No.
5	Building Code Effectiveness Grade Schedule (BCEGS®).	% reduction to the starting deductible based on BCEGS®.	N/A	No.
6	Tax Incentive Programs	$2.00 in credit for every $1.00 in qualifying costs.	No Cap	No.
7	Expenditures on State Emergency Management Programs.	$1.00 in credit for every $1.00 in qualifying expenditures.	20%	Yes.

H. Estimates of Initial Credits

Based upon the preliminary research discussed above and interviews with key stakeholders and subject matter experts, FEMA believes that every State would receive deductible credit under the preceding credit structure for activities and investments that each State is already undertaking; however, there may be some States that have been able to undertake more credit-qualifying activities than others.

As with the rest of the SANPRM, all numbers, figures, criteria and processes detailed in this section are notional. They are intended to aid the public in understanding how a potential deductible program could operate and to spur discussion and feedback.

FEMA has used the information that it has available to estimate the amount of credit that each State might qualify for initially. In many cases, however, FEMA anticipates offering credit for activities for which there is very little information readily available. Where information is lacking, FEMA attempted to use assumptions as to current State activities. For instance, FEMA was unable to identify annual amounts of forgone revenue from a State tax incentive program and thus assumed an amount equal to 1 percent of a State's starting deductible.[67] FEMA intentionally utilized what it believes are conservative estimates where uncertainty exists and assumptions were needed. FEMA has attempted to estimate the amount of credit that each State might qualify for initially to provide context on the potential impact of the deductible requirement. FEMA welcomes comments on its assumptions with information more readily available to each State.

Overall, based on this analysis, FEMA anticipates that the average State would receive initial credits worth approximately 40 percent of its first deductible without making any changes to its current spending or activities. Across the States, FEMA expects that these initial credits would range from a minimum of approximately 6 percent to a maximum of approximately 85 percent. Table 9 depicts FEMA's estimates for each State under this model. Specifically, Table 9 indicates each State's applicable model starting deductible, the credit amount from each of the seven categories of credits, the total estimated credits (shown both as a dollar value and percentage of the starting deductible amount), and the model final deductible amount that the State would carry into the new year.

This potential final deductible amount represents what each State would potentially need to satisfy if it experiences a disaster that results in disaster damages that exceed the amount of credits that FEMA has approved. It is the remaining amount that is not offset by the credits that a State has earned.

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[66] Additional information on EMAP can be found at *https://www.emap.org/index.php.*

[67] For example, given Alabama's starting deductible of $12.96 million, FEMA assumes forgone revenues from the State's tax incentive program of $129,574.

Table 9: Initial Estimated Deductible Credit Amounts - Expected 2016 Investments Only (in millions)

State	Full Starting Deductible	Dedicated Fund Credit (20% cap)	Non-Stafford Expenditures Credit (20% cap)	Mitigation Activity Credit	Insurance Coverage Credit	Building Code Credit	Tax Incentives Credit	Emergency Management Credit (20% cap)	Total Estimated Credits	Credit % of Full Deductible	Full Final Deductible
Alabama	**$12.96**	$0.00	$0.51	$0.51	$0.00	$1.55	$0.26	$0.50	**$3.33**	25.7%	**$9.63**
Alaska	**$19.42**	$0.00	$0.20	$0.37	$0.00	$3.11	$0.39	$0.89	**$4.96**	25.5%	**$14.46**
Arizona**	**$18.67**	$3.73 *	$0.10	$0.58	$0.00	$3.36	$0.37	$0.39	**$8.55**	45.8%	**$10.12**
Arkansas**	**$8.01**	$1.60 *	$0.11	$0.32	$0.00	$0.96	$0.16	$0.00	**$3.15**	39.4%	**$4.85**
California**	**$141.03**	$28.21 *	$6.34	$21.13	$0.00	$33.85	$2.82	$28.21 *	**$120.55**	85.5%	**$20.48**
Colorado**	**$7.08**	$0.01	$0.06	$0.14	$0.35	$1.13	$0.14	$0.00	**$1.84**	26.0%	**$5.24**
Connecticut	**$20.85**	$0.00	$0.23	$0.73	$0.00	$1.67	$0.42	$2.41	**$5.46**	26.2%	**$15.39**
Delaware	**$8.03**	$0.00	$0.01	$0.30	$0.00	$1.28	$0.16	$0.35	**$2.09**	26.1%	**$5.93**
Florida**	**$141.53**	$0.00	$9.80	$8.71	$0.00	$33.97	$2.83	$28.31 *	**$83.60**	59.1%	**$57.92**
Georgia**	**$17.65**	$0.00	$0.20	$0.48	$0.88	$2.82	$0.35	$0.00	**$4.74**	26.9%	**$12.91**
Hawaii	**$9.17**	$0.00	$0.01	$0.36	$0.00	$0.00	$0.18	$0.61	**$1.17**	12.7%	**$8.00**
Idaho	**$7.68**	$1.54 *	$0.00	$0.23	$0.00	$0.00	$0.15	$0.00	**$1.92**	25.0%	**$5.76**
Illinois**	**$14.43**	$0.00	$0.46	$4.87	$0.72	$1.73	$0.29	$2.89 *	**$10.96**	76.0%	**$3.47**
Indiana**	**$12.23**	$0.32	$0.76	$3.11	$0.61	$0.98	$0.24	$2.45 *	**$8.47**	69.3%	**$3.76**
Iowa**	**$10.63**	$2.13 *	$0.41	$0.55	$0.00	$1.70	$0.21	$1.43	**$6.43**	60.5%	**$4.20**
Kansas**	**$9.54**	$0.00	$0.17	$0.24	$0.00	$0.76	$0.19	$0.00	**$1.36**	14.2%	**$8.18**
Kentucky**	**$9.47**	$0.00	$0.10	$0.28	$0.00	$1.71	$0.19	$0.00	**$2.27**	23.9%	**$7.21**
Louisiana**	**$73.90**	$0.00	$2.72	$1.03	$0.00	$0.00	$1.48	$4.21	**$9.44**	12.8%	**$64.46**
Maine	**$8.52**	$0.00	$0.17	$0.17	$0.00	$1.36	$0.17	$0.00	**$1.87**	21.9%	**$6.66**
Maryland**	**$9.26**	$0.00	$0.04	$0.33	$0.46	$1.67	$0.19	$0.00	**$2.69**	29.0%	**$6.57**
Massachusetts **	**$30.34**	$0.00	$0.07	$1.94	$0.00	$4.85	$0.61	$6.07 *	**$13.54**	44.6%	**$16.80**
Michigan**	**$23.20**	$3.15	$0.01	$0.74	$0.00	$4.18	$0.46	$0.47	**$9.01**	38.8%	**$14.19**
Minnesota	**$9.44**	$1.89 *	$0.06	$1.66	$0.47	$1.70	$0.19	$1.89 *	**$7.86**	83.3%	**$1.58**
Mississippi**	**$13.32**	$0.70	$0.84	$0.86	$0.00	$0.00	$0.27	$2.66 *	**$5.33**	40.0%	**$7.99**
Missouri**	**$11.38**	$0.00	$1.94	$0.37	$0.57	$1.82	$0.23	$0.00	**$4.93**	43.4%	**$6.45**
Montana	**$6.23**	$1.25 *	$0.11	$0.19	$0.00	$1.12	$0.12	$0.00	**$2.79**	44.9%	**$3.44**

State	Full Starting Deductible	Dedicated Fund Credit (20% cap)	Non-Stafford Expenditures Credit (20% cap)	Mitigation Activity Credit	Insurance Coverage Credit	Building Code Credit	Tax Incentives Credit	Emergency Management Credit (20% cap)	Total Estimated Credits	Credit % of Full Deductible	Full Final Deductible
Nebraska**	**$9.93**	$1.99 *	$0.60	$0.28	$0.00	$0.99	$0.20	$0.00	**$4.07**	40.9%	**$5.87**
Nevada**	**$8.81**	$1.76 *	$0.00	$0.06	$0.00	$2.11	$0.18	$0.00	**$4.11**	46.7%	**$4.70**
New Hampshire	**$7.92**	$0.00	$0.31	$0.72	$0.00	$1.27	$0.16	$1.58 *	**$4.04**	51.0%	**$3.88**
New Jersey**	**$29.28**	$0.00	$0.97	$3.30	$0.00	$7.03	$0.59	$5.86 *	**$17.74**	60.6%	**$11.55**
New Mexico**	**$11.11**	$0.00	$0.13	$0.39	$0.00	$2.00	$0.22	$0.62	**$3.36**	30.2%	**$7.75**
New York**	**$51.70**	$0.00	$7.46	$0.96	$0.00	$5.17	$1.03	$0.00	**$14.63**	28.3%	**$37.07**
North Carolina**	**$17.50**	$3.50 *	$1.08	$1.82	$0.88	$3.15	$0.35	$3.50 *	**$14.27**	81.5%	**$3.23**
North Dakota	**$10.09**	$1.50	$0.17	$1.40	$0.00	$1.82	$0.20	$2.02 *	**$7.11**	70.5%	**$2.98**
Ohio**	**$25.86**	$0.00	$0.10	$0.90	$0.00	$4.66	$0.52	$1.01	**$7.19**	27.8%	**$18.67**
Oklahoma**	**$10.40**	$1.05	$0.85	$0.09	$0.00	$1.66	$0.21	$0.00	**$3.85**	37.1%	**$6.54**
Oregon	**$24.62**	$0.05	$0.02	$0.31	$0.00	$5.91	$0.49	$0.00	**$6.78**	27.5%	**$17.84**
Pennsylvania**	**$21.88**	$2.10	$0.90	$2.29	$1.09	$3.94	$0.44	$4.38 *	**$15.14**	69.2%	**$6.74**
Rhode Island	**$12.30**	$0.00	$0.01	$0.29	$0.00	$1.48	$0.25	$0.30	**$2.32**	18.9%	**$9.98**
South Carolina**	**$11.60**	$0.00	$0.06	$0.44	$0.00	$2.09	$0.23	$0.04	**$2.85**	24.6%	**$8.75**
South Dakota	**$8.25**	$0.00	$0.04	$0.12	$0.00	$1.32	$0.16	$0.00	**$1.64**	19.9%	**$6.61**
Tennessee**	**$16.68**	$0.00	$0.09	$0.44	$0.00	$2.67	$0.33	$0.00	**$3.53**	21.2%	**$13.15**
Texas	**$73.72**	$0.00	$3.56	$0.79	$0.00	$11.79	$1.47	$0.00	**$17.61**	23.9%	**$56.10**
Utah**	**$7.73**	$1.55 *	$0.01	$0.22	$0.00	$1.86	$0.15	$0.00	**$3.78**	48.9%	**$3.95**
Vermont**	**$8.64**	$0.00	$0.12	$0.37	$0.00	$1.56	$0.17	$0.98	**$3.20**	37.0%	**$5.44**
Virginia**	**$13.51**	$0.00	$0.10	$1.47	$0.68	$2.43	$0.27	$2.70 *	**$7.65**	56.7%	**$5.85**
Washington	**$27.30**	$0.00	$0.60	$0.50	$0.00	$0.00	$0.55	$0.00	**$1.64**	6.0%	**$25.66**
West Virginia	**$23.39**	$0.00	$0.29	$0.48	$0.00	$3.74	$0.47	$1.30	**$6.29**	26.9%	**$17.10**
Wisconsin	**$13.50**	$0.14	$0.43	$0.50	$0.00	$1.62	$0.27	$0.15	**$3.11**	23.0%	**$10.39**
Wyoming	**$10.47**	$0.75	$0.00	$0.15	$0.00	$1.88	$0.21	$0.00	**$3.00**	28.6%	**$7.47**
Average	**$22.20**	$1.18	$0.87	$1.37	$0.13	$3.59	$0.44	$2.16	**$9.74**	38.7%	**$12.46**

State	Full Starting Deductible	Dedicated Fund Credit (20% cap)	Non-Stafford Expenditures Credit (20% cap)	Mitigation Activity Credit	Insurance Coverage Credit	Building Code Credit	Tax Incentives Credit	Emergency Management Credit (20% cap)	Total Estimated Credits	Credit % of Full Deductible	Full Final Deductible
Median	**$12.26**	$0.00	$0.17	$0.48	$0.00	$1.72	$0.25	$0.37	**$4.43**	29.6%	**$7.61**
Minimum	**$6.23**	$0.00	$0.00	$0.06	$0.00	$0.00	$0.12	$0.00	**$1.17**	6.0%	**$1.58**
Maximum	**$141.53**	$28.21	$9.80	$21.13	$1.09	$33.97	$2.83	$28.31	**$120.55**	85.5%	**$64.46**

* Values marked with an asterisk in Table 9 indicate that the State has reached the applicable cap for that credit category.

** States marked with a double asterisk in Table 9 indicate that the State received a 5 percent EMAP bonus in the dedicated fund, non-Stafford expenditures, and emergency management credit categories.

I. Deductible Program Timeline and Procedures

FEMA is committed to developing a Public Assistance deductible program that is effective, but that also minimizes the cost and administrative burden required of our State partners. FEMA expects to request the minimum amount of information and reporting necessary for the program to be successful. To do this, FEMA's model concept could follow a strict and consistent programmatic schedule throughout the year so that States could have a clear understanding of current and upcoming expectations. FEMA designed this potential model schedule to operate on the calendar year to provide simplicity and standardization across jurisdictions that operate on various iterations of the fiscal year.

As with the rest of the SANPRM all numbers, figures, criteria, timeframes, and processes detailed in this section are notional. They are intended to aid the public in understanding how a potential deductible program could operate and to spur discussion and feedback.

1. Model Timeline

On August 1 of each year, FEMA could issue an Annual Notice of Public Assistance Deductible Amounts (Annual Notice). This notice could be published in the **Federal Register** and would indicate each State's pre-credit deductible amount. The Annual Notice could provide sufficient detail regarding the calculation methodology to provide transparency regarding the source of the deductible figures. If a State believes that FEMA has made a technical error in calculating its deductible, the State could be able to appeal the amount. In addition, FEMA would not expect to otherwise change the calculation methodology without advance notice to the States and an opportunity for each State to offer feedback.

Contemporaneously with the issuance of the Annual Notice, FEMA would publish in the **Federal Register** the Application and Submission Information for Public Assistance Deductible credits to provide guidance concerning the deductible credits that could be offered during the next year and an application form for credits. FEMA does not anticipate making significant changes to the credit structure year over year, but could constantly and actively be monitoring credit types and amounts and may adjust the structure as necessary to improve the program's effectiveness over time. FEMA anticipates engaging extensively with States in making any adjustments to the credit structure.

Credit applications could be due to FEMA by September 1 of each year. Because there might be a limited period of about one month to complete the application for deductible credits, it would be important that States assess and account for their past year's activities before the Annual Notice is published or quickly thereafter.

The actual application could be minimal compared to other Federal applications, grant applications in particular. FEMA envisions a simple form in which a State could request the appropriate amount of credit for each credit category, include a brief description of the activity for which the credit is requested, provide the contact information for a subject matter expert that can answer questions about the activity, and affix the signatures of the appropriate State officials.

For example, a State may request $1.5 million in credit for spending $500,000 moving a fire station out of a flood hazard area (mitigation would be credited $3.00:$1.00). Likewise, a State may request a 16 percent reduction for maintaining BCEGS® scores of 5 for both the commercial and residential building code categories. Generally, the State would not need to submit any additional information or supporting documentation to support its request.

FEMA would review the State's submission and make a determination of the amount of deductible credit to be approved. FEMA could actively reach out to the State-identified subject matter expert if any additional information would be needed for purposes of determining whether the activity would qualify for credit. If the activity appeared to qualify, either from the face of the credit application or after consulting with the State subject matter expert, FEMA would approve the appropriate amount of credit up to the credit category cap (for the categories to which a cap applies).

FEMA envisions notifying each State individually by October 1 of the amount of credit approved and the remaining deductible, if any, that would apply during the subsequent calendar year. If FEMA approved any less credit than what the State requested, FEMA would include an explanation of the rationale for the discrepancy. In the case that FEMA did not fully approve the State's credit request, the State could be able to appeal the determination to FEMA. For this model timeline, FEMA envisions appeals of credit determinations would be due by December 1.

Once FEMA has adjudicated any appeals and all credit has been approved, FEMA could issue a notice in the **Federal Register** no later than January 1 of the subsequent year announcing each State's beginning deductible amount, the amount of credit approved, and the final remaining deductible, if any.

TABLE 10—NOTIONAL DEDUCTIBLE PROGRAM ANNUAL MILESTONES

Date	Actor	Activity
		• FEMA publishes *Annual Notice of Public Assistance Deductible Amounts* in the **Federal Register.**
August 1	*FEMA*	• FEMA publishes *Application and Submission information for Public Assistance Deductible Credits* in the **Federal Register**, which provides formal credit guidance and the credit application form.
September 1	*States*	• Deadline for States to submit the *Application for Public Assistance Deductible Credits.*[68]
October 1	*States*	• Deadline for States to appeal FEMA's determination of the pre-credit deductible amounts.
October 1	*FEMA*	• FEMA completes review of the credit applications and notifies each State of the credit amounts approved and FEMA's proposed final deductible amount.
November 1	*FEMA*	• FEMA notifies States of the outcome of any pre-credit deductible amount appeals.
December 1	*States*	• Deadline for States to appeal FEMA's approved credit amounts and/or proposed final deductible amount.
January 1	*FEMA*	• FEMA notifies States of the outcome of any pending appeals and publishes each State's final deductible and credit amounts in the **Federal Register**.

[68] Activities undertaken after the cutoff date for applying for credits would be applied to the next year's deductible. For example, activities undertaken in October would not be applied to the deductible in effect 3 months later, but instead to the one in effect 15 months later.

TABLE 10—NOTIONAL DEDUCTIBLE PROGRAM ANNUAL MILESTONES—Continued

Date	Actor	Activity
Beginning January 1.	*FEMA*	• FEMA provides supplemental Public Assistance for all of the credits that a State has earned in every disaster. • For any permanent work disaster costs exceeding the State's earned credits, FEMA applies the remaining final deductible amount, if any.

2. Post Disaster Deductible Procedures

FEMA believes it is important that for every major disaster, the States receive assistance for emergency protective measures and debris removal. FEMA does not want to delay those essential activities in the immediate aftermath of a disaster incident. Under FEMA's deductible concept, FEMA assistance for debris removal and emergency protective measure projects could follow the normal procedures and receive funding at the applicable cost share for that disaster.

FEMA envisions applying the deductible amount (*i.e.,* the portion of a State's deductible not fully satisfied by the credits earned, if any) on an annual basis and only to the provision of supplemental Federal assistance for permanent repair and replacement activities. For repair and replacement assistance, the State would receive supplemental Federal assistance only after it has satisfied its deductible requirement.

If in a given year the affected State has not fully satisfied its annual Public Assistance deductible with the credits that it earned and a major disaster is declared, after the declaration the State would be asked to identify projects that have a preliminary cost estimate (Federal and non-Federal share combined) equal to the unsatisfied deductible amount. With agreement by FEMA as to the preliminary cost estimate, those projects the State selects to satisfy the remaining deductible would be deemed ineligible under Section 406 of the Stafford Act.[69] The State would assume responsibility for these projects.[70] FEMA would require that the States identify these projects within the first 60 calendar days after a disaster declaration so as not to impede the provision of supplemental Federal assistance for other projects.

After the State satisfies its deductible in any major disaster event, any remaining eligible repair and replacement projects resulting from disasters declared in that year could receive supplemental Federal assistance in accordance with the standard procedures of the Public Assistance program. If there are insufficient projects to satisfy the full remaining deductible requirement, the unsatisfied portion of the deductible could be carried forward to any additional major disasters declared within the State that year. Any deductible that is remaining unsatisfied at the end of the year would expire. Each year could start the deductible cycle anew with regards to the starting deductibles, credits earned, and final deductibles.

If a State has an unsatisfied deductible requirement remaining after a major disaster, and it receives a second major disaster declaration that year, pursuant to this initial version of the deductible concept, the State would be required to identify a project or grouping of projects that have a preliminary cost estimate (Federal and non-Federal share combined) equal to the unsatisfied deductible requirement. With agreement by FEMA as to the preliminary cost estimate, these projects would be deemed ineligible costs pursuant to Section 406 of the Stafford Act. Once the State has satisfied its annual deductible requirement, all eligible costs in subsequent disaster declarations could be processed for reimbursement through standard Public Assistance program procedures.

Consider a State that has a starting deductible of $25 million and has earned credits of $15 million. The State's final deductible would be $10 million. This is the amount that the State would need to satisfy before it can receive permanent repair and replacement assistance. Suppose the State experiences a major disaster that requires $3 million in debris removal and causes $8 million in damage to public infrastructure. FEMA would document the debris removal costs on Project Worksheets and process all of those eligible costs for reimbursement assistance at the applicable disaster cost share, typically 75 percent Federal. The State could be responsible for paying for all of the permanent work repairs because the $8 million in damage is less than the State's $10 million final deductible for that calendar year.

If the State receives a second major disaster declaration in the same calendar year, the State would need to identify $2 million in permanent work to satisfy the deductible remaining after the first disaster. After the deductible is fully met, all additional eligible costs could be documented on Project Worksheets and processed for reimbursement assistance pursuant to the applicable cost share and standard rules and procedures of FEMA's Public Assistance program.

Any deductible amount remaining unsatisfied due to lack of eligible disaster costs at the end of a year would be canceled. For example, consider a State with a starting deductible of $30 million. The State then requests and is granted credits worth $20 million. FEMA notifies the State on January 1 that it has a final deductible amount of $10 million for the following calendar year. The State does not experience any incidents during the calendar year for which the President declares a major disaster. The $10 million final deductible could expire and be cancelled at the end of the calendar year and the State could receive a new final deductible amount for the next year.

J. Validation Procedures

FEMA desires for the deductible program to recognize, reward, and incentivize mitigation and resilience building best practices.

As with the rest of the SANPRM all numbers, figures, criteria and processes detailed in this section are notional. They are intended to aid the public in understanding how a potential deductible program could operate and to spur discussion and feedback.

In order to ensure that the program is both effective in truly incentivizing risk reduction and is being continually improved, FEMA would seek to validate a portion of the credits that States are approved each year.

FEMA believes that its analysis will ultimately show that reviewing a sample of credit approvals would be sufficient to ensure the fidelity of the approvals and ultimately, confidence in the credibility of the deductible program. FEMA solicits comment on this

[69] Stafford Act, supra FN4, § 406(b) (providing the ''Federal share of assistance under this section shall be not less than 75 percent of the *eligible cost* of repair, restoration, reconstruction, or replacement carried out under this section'') (emphasis added).

[70] Costs of satisfying the deductible, like cost share costs, would not qualify for credit towards the next year's deductible.

assumption and the ideal portion of credit submissions that would be subject to validation. Whatever the case, FEMA would notify the State of its intent to validate credits and would specify precisely which credits are to be validated.

During the validation process, FEMA would review the records and documentation that States maintain to support their credit requests. Every State would likely have different standards for documentation and each credit may require a different type of documentation, none of which FEMA plans to prescribe; however, each State would be responsible for maintaining and providing, upon FEMA's notice of intent to validate a credit, sufficient documentation to reasonably and objectively substantiate the credit approval. FEMA anticipates that States would have to maintain the relevant documentation for at least 5 years. FEMA requests comment from States regarding the capital and startup costs that may be involved in this recordkeeping requirement as well as suggestions for how FEMA may minimize the burden on States to keep this information.

In the event that FEMA is unable to validate a credit award, either because the underlying State activity did not actually qualify for deductible credit or because the State was unable to produce sufficient documentation to objectively validate the credit approval, FEMA would notify the State of its failure to validate the credit. FEMA would detail the applicable requirements of the deductible credit that was approved and specifically why FEMA was unable to validate it.

Once FEMA notifies the State that FEMA was unable to validate a credit, FEMA could permit the State 60 days to appeal the determination. If the State's appeal is denied, FEMA would add any credit approval that could not be validated to the applicable State's deductible amount in the next year. If FEMA was able to validate the credit on appeal, the credit approval would stand and FEMA would make no further inquiry or take any other adverse action. FEMA seeks comment on whether and when further action could be appropriate in the case of a State which has submitted consistently unverifiable credits.

For example, consider a State that has received a credit approval of $3 million for a tax incentive program that allows consumers to purchase hurricane preparedness supplies without paying sales tax during the first weekend of hurricane season each year. In this case, this particular credit has been included within the sample of credit approvals selected for validation. FEMA notifies the State of its intent to validate the credit and requests the necessary supporting documentation. The State is able to produce documentation for $100,000 of qualifying advertising costs and $1.1 million worth of foregone sales tax receipts. Because the credit concept offers a deductible credit at a ratio of $2.00:$1.00 for this credit, FEMA would be able to validate $2.4 million worth of credit. FEMA notifies the State of its failure to validate $600,000 of credit and of FEMA's intent to increase the State's next annual deductible by $600,000 to compensate for the amount of the previous credit approval that FEMA was unable to validate.

In this case, the State appeals the approval and is able to produce documentation of an additional $600,000 in forgone tax receipts from the sales tax holiday. FEMA is now able to validate the entire credit approval and would not add any additional amount to the State's next deductible.

K. Possible Implementation Strategy

FEMA will gather the suggestions and concerns that have been expressed through the ANPRM and SANPRM and use them to determine whether it can design a deductible concept that achieves FEMA's overall guiding principles, but does so in a way that is both appreciative of and responsive to the needs and concerns of its emergency management partners, particularly the States to which it would apply. If FEMA decides the deductible program has continued merit, FEMA would issue a Notice of Proposed Rulemaking (NPRM) before possibly issuing a final rule. No aspect of the deductible concept would be implemented prior to publishing a final rule in the **Federal Register**.

Even if a final rule is published, FEMA also recognizes that implementing such a fundamental change would require sufficient time to enable all parties to thoughtfully and strategically adapt to the new structure in the form best befitting each.

Consequently, FEMA would likely not apply any deductible for at least one year following publication of a final rule. Thereafter, FEMA's concept envisions a phased implementation strategy that would make most States responsible for only a partial deductible amount in the beginning of the program and delaying full application of the deductible requirement for most States over a scheduled implementation period.

Specifically, FEMA is considering capping the first year deductible at each State's then-current per capita indicator as determined by FEMA pursuant to 44 CFR 206.48(a)(1). FEMA could then increase each State's deductible by a share of the unapplied deductible, which for the purposes of this model is 50 percent, each year thereafter until the State reaches the full deductible amount. FEMA could recalculate the full deductible amount annually based on the fiscal capacity and risk index methodology described above. Through this method and based on the model FEMA provides in this SANPRM, half of the States could reach their full deductible within 4 years and all of the States could reach their full deductible within 9 years. Two States, Illinois and Colorado, could potentially reach their full deductible in the first year because the contemplated deductible methodology produces deductibles below their current Public Assistance per capita indicators. Figure 2 depicts the application of this implementation strategy over the first 3 years of the deductible program. Figure 3 depicts the number of States that are forecast to reach their full deductible, as calculated in this model, in each year. Table 11 depicts the model starting deductibles for each State in each year based on current calculations.

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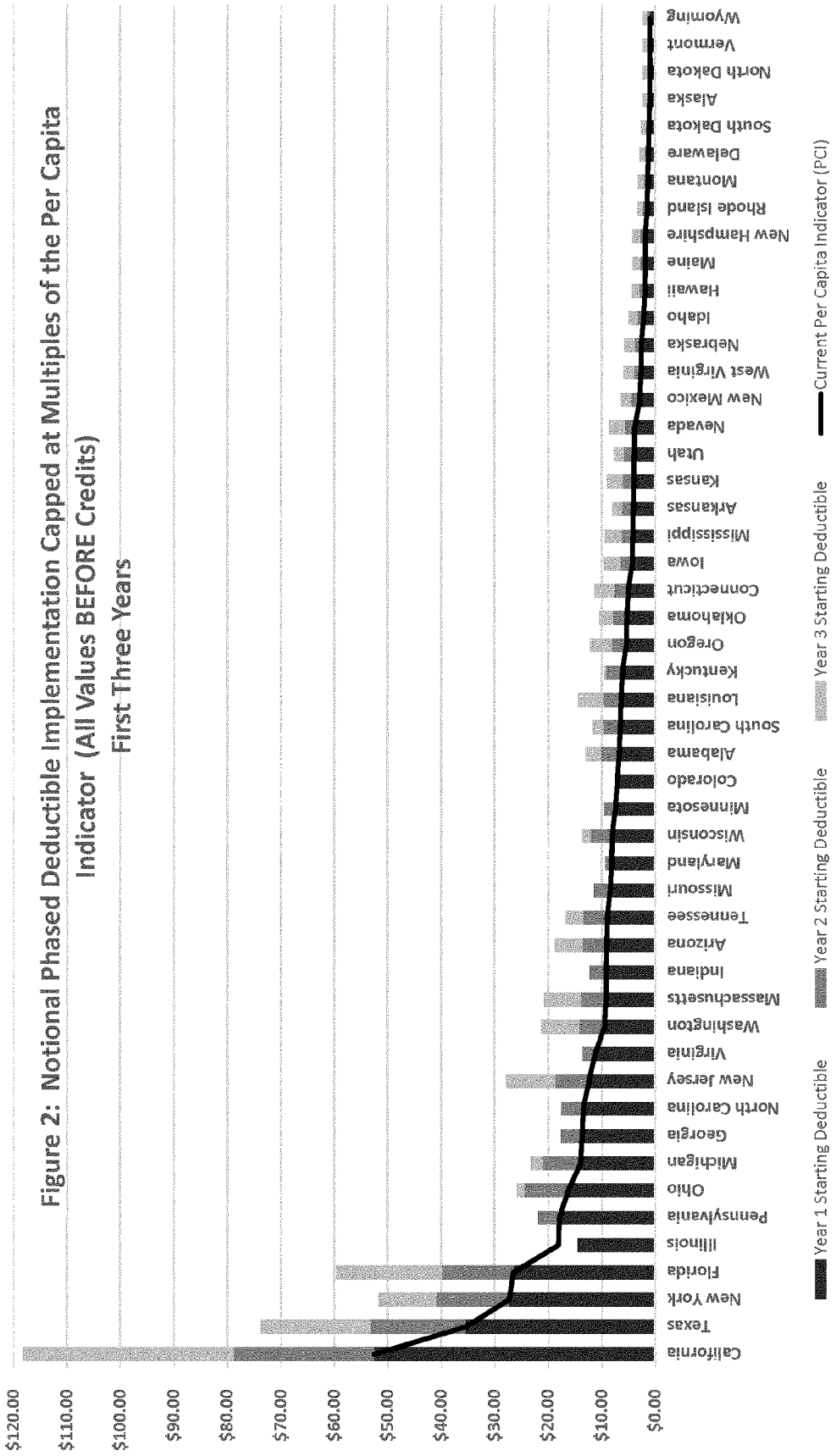
Figure 2: Notional Phased Deductible Implementation Capped at Multiples of the Per Capita Indicator (All Values BEFORE Credits)
First Three Years
$120.00
$110.00
$100.00
$90.00
$80.00
$70.00
$60.00
$50.00
$40.00
$30.00
$20.00
$10.00
$0.00
California
Texas
New York
Florida
Illinois
Pennsylvania
Ohio
Michigan
Georgia
North Carolina
New Jersey
Virginia
Washington
Massachusetts
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Alabama
South Carolina
Louisiana
Kentucky
Oregon
Oklahoma
Connecticut
Iowa
Mississippi
Arkansas
Kansas
Utah
Nevada
New Mexico
West Virginia
Nebraska
Idaho
Hawaii
Maine
New Hampshire
Rhode Island
Montana
Delaware
South Dakota
Alaska
North Dakota
Vermont
Wyoming
Year 1 Starting Deductible
Year 2 Starting Deductible
Year 3 Starting Deductible
Current Per Capita Indicator (PCI)

Figure 3: Number of Years Until Application of the Full Starting Deductible – Notional

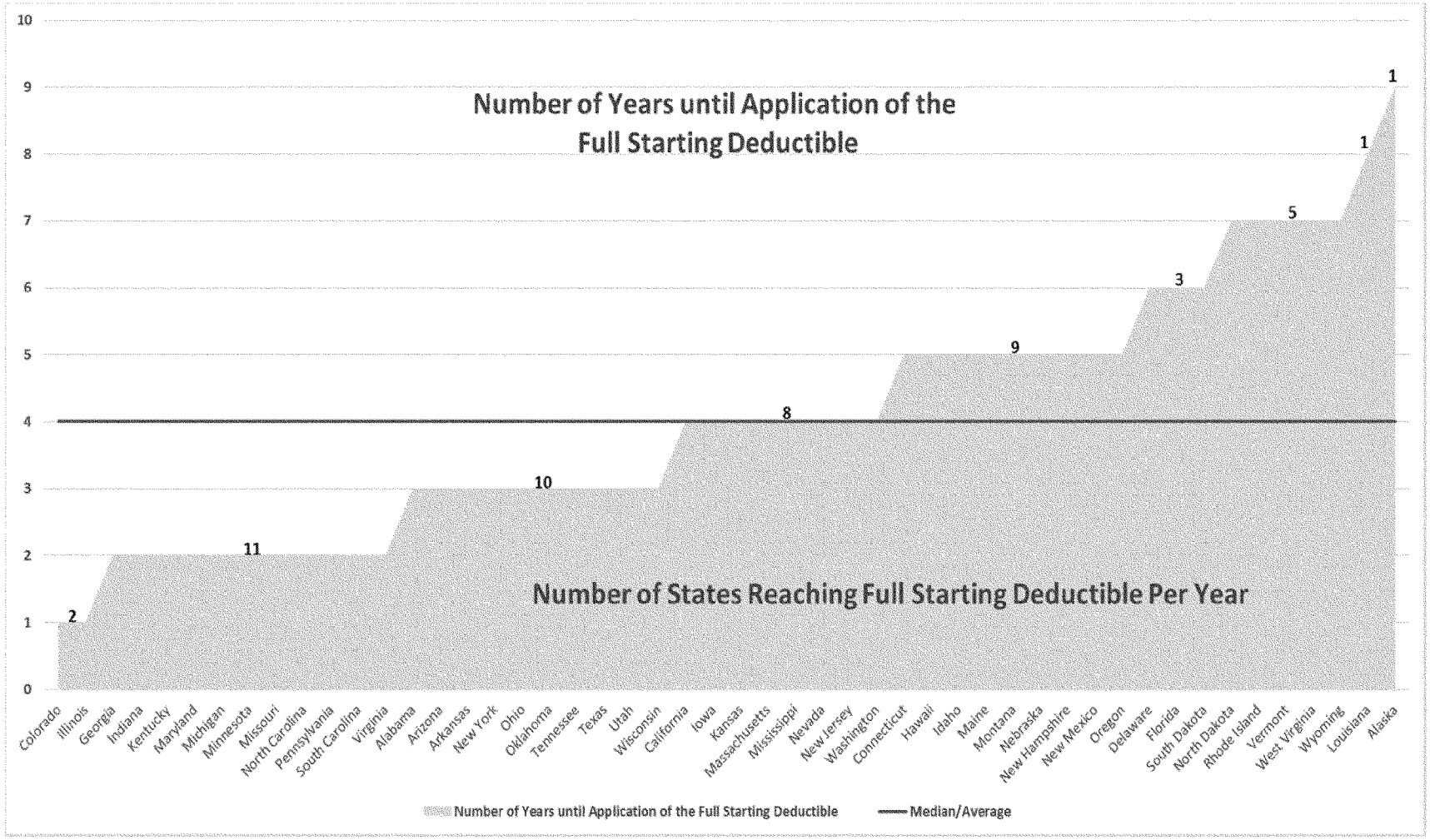


Table 11: Notional Phased Deductible Implementation with Starting Cap at the Current Per Capita Indicator and Subsequent Annual Caps at 1.5x the Previous Year's Deductible Amount

All Amounts in Millions $ Shaded Cells Indicate Capped Values		Year 1 Starting Deductible	Year 2 Starting Deductible	Year 3 Starting Deductible	Year 4 Starting Deductible	Year 5 Starting Deductible	Year 6 Starting Deductible	Year 7 Starting Deductible	Year 8 Starting Deductible	Year 9 Starting Deductible	Full Starting Deductible
State	Current Per Capita Indicator (PCI)	Cap Applied is Lesser of: PCI or Full Starting Deductible	Cap Applied is Lesser of: 1.5x Previous Year's Starting Deductible or Full Starting Deductible								
Alabama	$6.74	$6.74	$10.11	$12.96	$12.96	$12.96	$12.96	$12.96	$12.96	$12.96	$12.96
Alaska	$1.00	$1.00	$1.50	$2.25	$3.38	$5.06	$7.59	$11.39	$17.09	$19.42	$19.42
Arizona	$9.01	$9.01	$13.52	$18.67	$18.67	$18.67	$18.67	$18.67	$18.67	$18.67	$18.67
Arkansas	$4.11	$4.11	$6.17	$8.01	$8.01	$8.01	$8.01	$8.01	$8.01	$8.01	$8.01
California	$52.53	$52.53	$78.80	$118.19	$141.03	$141.03	$141.03	$141.03	$141.03	$141.03	$141.03
Colorado	$7.09	$7.08	$7.08	$7.08	$7.08	$7.08	$7.08	$7.08	$7.08	$7.08	$7.08
Connecticut	$5.04	$5.04	$7.56	$11.34	$17.01	$20.85	$20.85	$20.85	$20.85	$20.85	$20.85
Delaware	$1.27	$1.27	$1.91	$2.86	$4.29	$6.43	$8.03	$8.03	$8.03	$8.03	$8.03
Florida	$26.51	$26.51	$39.77	$59.65	$89.47	$134.21	$141.53	$141.53	$141.53	$141.53	$141.53
Georgia	$13.66	$13.66	$17.65	$17.65	$17.65	$17.65	$17.65	$17.65	$17.65	$17.65	$17.65
Hawaii	$1.92	$1.92	$2.88	$4.32	$6.48	$9.17	$9.17	$9.17	$9.17	$9.17	$9.17
Idaho	$2.21	$2.21	$3.32	$4.97	$7.46	$7.68	$7.68	$7.68	$7.68	$7.68	$7.68
Illinois	$18.09	$14.43	$14.43	$14.43	$14.43	$14.43	$14.43	$14.43	$14.43	$14.43	$14.43
Indiana	$9.14	$9.14	$12.23	$12.23	$12.23	$12.23	$12.23	$12.23	$12.23	$12.23	$12.23
Iowa	$4.30	$4.30	$6.45	$9.68	$10.63	$10.63	$10.63	$10.63	$10.63	$10.63	$10.63
Kansas	$4.02	$4.02	$6.03	$9.05	$9.54	$9.54	$9.54	$9.54	$9.54	$9.54	$9.54
Kentucky	$6.12	$6.12	$9.18	$9.47	$9.47	$9.47	$9.47	$9.47	$9.47	$9.47	$9.47
Louisiana	$6.39	$6.39	$9.59	$14.38	$21.57	$32.35	$48.52	$72.79	$73.90	$73.90	$73.90
Maine	$1.87	$1.87	$2.81	$4.21	$6.31	$8.52	$8.52	$8.52	$8.52	$8.52	$8.52
Maryland	$8.14	$8.14	$9.26	$9.26	$9.26	$9.26	$9.26	$9.26	$9.26	$9.26	$9.26
Massachusetts	$9.23	$9.23	$13.85	$20.77	$30.34	$30.34	$30.34	$30.34	$30.34	$30.34	$30.34
Michigan	$13.94	$13.94	$20.91	$23.20	$23.20	$23.20	$23.20	$23.20	$23.20	$23.20	$23.20
Minnesota	$7.48	$7.48	$9.44	$9.44	$9.44	$9.44	$9.44	$9.44	$9.44	$9.44	$9.44

Mississippi	$4.18	$4.18	$6.27	$9.41	$13.32	$13.32	$13.32	$13.32	$13.32	$13.32	$13.32
Missouri	$8.44	$8.44	$11.38	$11.38	$11.38	$11.38	$11.38	$11.38	$11.38	$11.38	$11.38
Montana	$1.40	$1.40	$2.10	$3.15	$4.73	$6.23	$6.23	$6.23	$6.23	$6.23	$6.23
Nebraska	$2.58	$2.58	$3.87	$5.81	$8.71	$9.93	$9.93	$9.93	$9.93	$9.93	$9.93
Nevada	$3.81	$3.81	$5.72	$8.57	$8.81	$8.81	$8.81	$8.81	$8.81	$8.81	$8.81
New Hampshire	$1.86	$1.86	$2.79	$4.19	$6.28	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92
New Jersey	$12.40	$12.40	$18.60	$27.90	$29.28	$29.28	$29.28	$29.28	$29.28	$29.28	$29.28
New Mexico	$2.90	$2.90	$4.35	$6.53	$9.79	$11.11	$11.11	$11.11	$11.11	$11.11	$11.11
New York	$27.32	$27.32	$40.98	$51.70	$51.70	$51.70	$51.70	$51.70	$51.70	$51.70	$51.70
North Carolina	$13.45	$13.45	$17.50	$17.50	$17.50	$17.50	$17.50	$17.50	$17.50	$17.50	$17.50
North Dakota	$1.00	$1.00	$1.50	$2.25	$3.38	$5.06	$7.59	$10.09	$10.09	$10.09	$10.09
Ohio	$16.27	$16.27	$24.41	$25.86	$25.86	$25.86	$25.86	$25.86	$25.86	$25.86	$25.86
Oklahoma	$5.29	$5.29	$7.94	$10.40	$10.40	$10.40	$10.40	$10.40	$10.40	$10.40	$10.40
Oregon	$5.40	$5.40	$8.10	$12.15	$18.23	$24.62	$24.62	$24.62	$24.62	$24.62	$24.62
Pennsylvania	$17.91	$17.91	$21.88	$21.88	$21.88	$21.88	$21.88	$21.88	$21.88	$21.88	$21.88
Rhode Island	$1.48	$1.48	$2.22	$3.33	$5.00	$7.49	$11.24	$12.30	$12.30	$12.30	$12.30
South Carolina	$6.52	$6.52	$9.78	$11.60	$11.60	$11.60	$11.60	$11.60	$11.60	$11.60	$11.60
South Dakota	$1.15	$1.15	$1.73	$2.59	$3.88	$5.82	$8.25	$8.25	$8.25	$8.25	$8.25
Tennessee	$8.95	$8.95	$13.43	$16.68	$16.68	$16.68	$16.68	$16.68	$16.68	$16.68	$16.68
Texas	$35.46	$35.46	$53.19	$73.72	$73.72	$73.72	$73.72	$73.72	$73.72	$73.72	$73.72
Utah	$3.90	$3.90	$5.85	$7.73	$7.73	$7.73	$7.73	$7.73	$7.73	$7.73	$7.73
Vermont	$1.00	$1.00	$1.50	$2.25	$3.38	$5.06	$7.59	$8.64	$8.64	$8.64	$8.64
Virginia	$11.28	$11.28	$13.51	$13.51	$13.51	$13.51	$13.51	$13.51	$13.51	$13.51	$13.51
Washington	$9.48	$9.48	$14.22	$21.33	$27.30	$27.30	$27.30	$27.30	$27.30	$27.30	$27.30
West Virginia	$2.61	$2.61	$3.92	$5.87	$8.81	$13.21	$19.82	$23.39	$23.39	$23.39	$23.39
Wisconsin	$8.02	$8.02	$12.03	$13.50	$13.50	$13.50	$13.50	$13.50	$13.50	$13.50	$13.50
Wyoming	$1.00	$1.00	$1.50	$2.25	$3.38	$5.06	$7.59	$10.47	$10.47	$10.47	$10.47
Average	$8.70	$8.62	$12.29	$15.94	$18.39	$20.28	$21.24	$22.02	$22.16	$22.20	$22.20
Median	$6.26	$6.26	$8.64	$10.04	$11.01	$11.49	$11.49	$11.92	$12.27	$12.27	$12.27
Maximum	$52.53	$52.53	$78.80	$118.19	$141.03	$141.03	$141.53	$141.53	$141.53	$141.53	$141.53
Minimum	$1.00	$1.00	$1.50	$2.25	$3.38	$5.06	$6.23	$6.23	$6.23	$6.23	$6.23

FEMA believes that this approach would allow States the opportunity to adapt to the deductible concept and to take steps that would earn additional credits and begin to address their future disaster risk, without applying deductibles at levels that would be punitive.

Similar to the phased implementation of the deductible amounts, FEMA envisions a phased application of credits in lockstep to each State's deductible amount. This would be done by applying the credits earned each year in the same proportion of the State's capped deductible to its full deductible. For example, if a State's starting deductible is equal to its full deductible in a given year, FEMA would apply all of the credits earned in that year. However, if because of phased implementation the starting deductible is a lesser amount, for example 25 percent of the full deductible, FEMA would apply the same percentage as a cap to the credits earned, or in this case 25 percent.

Table 12 depicts each State's notional starting deductible for the first 9 years of the deductible program. It also depicts the model final deductibles that FEMA expects would be applied in each year. As described above, these model final deductibles are the model starting deductibles minus the amount of credits that each State earns in that particular year. For the purposes of this model, FEMA has estimated the amount of credit that each State might earn in the first year based on activities that FEMA believes every State is already undertaking. These amounts were depicted in Table 9. To extrapolate into the out years, FEMA assumed that each State would increase the amount of credit earned by 5 percent year-over-year. FEMA then deducted that amount, in proportion of the starting deductible to full deductible as described above, to calculate the model projected final deductible amounts for each State in each of the first 9 years.

These amounts are only estimates, however, and will be affected by many factors, including changes to the base deductible, changes to each State's relative risk or fiscal capacity, the amount of credit each State earns in the first year for activities already underway, and changes to those activities that result in more or less than 5 percent year-over-year credit increases. All shaded values are capped.

Table 12: Phased Deductible Implementation Including Projected Credits (in millions)

Cap Applied is Lesser of:		PCI or Full Starting Deductible		1.5x Previous Year's Starting Deductible or Full Starting Deductible																
State	Current Per Capita Indicator (PCI)	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8		Year 9		Full Starting Deductible
		Year 1 Starting Deductible	Year 1 Final Deductible	Year 2 Starting Deductible	Year 2 Final Deductible	Year 3 Starting Deductible	Year 3 Final Deductible	Year 4 Starting Deductible	Year 4 Final Deductible	Year 5 Starting Deductible	Year 5 Final Deductible	Year 6 Starting Deductible	Year 6 Final Deductible	Year 7 Starting Deductible	Year 7 Final Deductible	Year 8 Starting Deductible	Year 8 Final Deductible	Year 9 Starting Deductible	Year 9 Final Deductible	
Alabama	$6.74	$6.74	**$5.01**	$10.11	**$7.38**	$12.96	**$9.29**	$12.96	**$9.11**	$12.96	**$8.91**	$12.96	**$8.71**	$12.96	**$8.50**	$12.96	**$8.27**	$12.96	**$8.04**	$12.96
Alaska	$1.00	$1.00	**$0.74**	$1.50	**$1.10**	$2.25	**$1.62**	$3.38	**$2.38**	$5.06	**$3.49**	$7.59	**$5.12**	$11.39	**$7.49**	$17.09	**$10.95**	$19.42	**$12.09**	$19.42
Arizona	$9.01	$9.01	**$4.88**	$13.52	**$7.02**	$18.67	**$9.24**	$18.67	**$8.77**	$18.67	**$8.28**	$18.67	**$7.76**	$18.67	**$7.21**	$18.67	**$6.64**	$18.67	**$6.04**	$18.67
Arkansas	$4.11	$4.11	**$2.49**	$6.17	**$3.62**	$8.01	**$4.54**	$8.01	**$4.36**	$8.01	**$4.18**	$8.01	**$3.99**	$8.01	**$3.79**	$8.01	**$3.58**	$8.01	**$3.36**	$8.01
California	$52.53	$52.53	**$7.63**	$78.80	**$8.07**	$118.19	**$6.81**	$141.03	**$1.48**	$141.03	**$0.00**	$141.03	**$0.00**	$141.03	**$0.00**	$141.03	**$0.00**	$141.03	**$0.00**	$141.03
Colorado	$7.09	$7.08	**$5.24**	$7.08	**$5.15**	$7.08	**$5.05**	$7.08	**$4.95**	$7.08	**$4.84**	$7.08	**$4.73**	$7.08	**$4.61**	$7.08	**$4.49**	$7.08	**$4.36**	$7.08
Connecticut	$5.04	$5.04	**$3.72**	$7.56	**$5.48**	$11.34	**$8.07**	$17.01	**$11.85**	$20.85	**$14.21**	$20.85	**$13.88**	$20.85	**$13.53**	$20.85	**$13.17**	$20.85	**$12.78**	$20.85
Delaware	$1.27	$1.27	**$0.94**	$1.91	**$1.38**	$2.86	**$2.04**	$4.29	**$2.99**	$6.43	**$4.40**	$8.03	**$5.36**	$8.03	**$5.23**	$8.03	**$5.09**	$8.03	**$4.94**	$8.03
Florida	$26.51	$26.51	**$10.85**	$39.77	**$15.10**	$59.65	**$20.80**	$89.47	**$28.29**	$134.21	**$37.85**	$141.53	**$34.83**	$141.53	**$29.50**	$141.53	**$23.90**	$141.53	**$18.01**	$141.53
Georgia	$13.66	$13.66	**$9.99**	$17.65	**$12.67**	$17.65	**$12.42**	$17.65	**$12.16**	$17.65	**$11.89**	$17.65	**$11.60**	$17.65	**$11.30**	$17.65	**$10.98**	$17.65	**$10.65**	$17.65
Hawaii	$1.92	$1.92	**$1.68**	$2.88	**$2.49**	$4.32	**$3.71**	$6.48	**$5.52**	$9.17	**$7.75**	$9.17	**$7.68**	$9.17	**$7.60**	$9.17	**$7.52**	$9.17	**$7.44**	$9.17
Idaho	$2.21	$2.21	**$1.66**	$3.32	**$2.44**	$4.97	**$3.60**	$7.46	**$5.30**	$7.68	**$5.35**	$7.68	**$5.23**	$7.68	**$5.11**	$7.68	**$4.98**	$7.68	**$4.84**	$7.68
Illinois	$18.09	$14.43	**$3.47**	$14.43	**$2.92**	$14.43	**$2.35**	$14.43	**$1.74**	$14.43	**$1.11**	$14.43	**$0.44**	$14.43	**$0.00**	$14.43	**$0.00**	$14.43	**$0.00**	$14.43
Indiana	$9.14	$9.14	**$2.81**	$12.23	**$3.34**	$12.23	**$2.89**	$12.23	**$2.42**	$12.23	**$1.93**	$12.23	**$1.42**	$12.23	**$0.88**	$12.23	**$0.31**	$12.23	**$0.00**	$12.23
Iowa	$4.30	$4.30	**$1.70**	$6.45	**$2.35**	$9.68	**$3.22**	$10.63	**$3.19**	$10.63	**$2.81**	$10.63	**$2.42**	$10.63	**$2.01**	$10.63	**$1.58**	$10.63	**$1.13**	$10.63
Kansas	$4.02	$4.02	**$3.45**	$6.03	**$5.13**	$9.05	**$7.62**	$9.54	**$7.97**	$9.54	**$7.89**	$9.54	**$7.80**	$9.54	**$7.72**	$9.54	**$7.63**	$9.54	**$7.53**	$9.54
Kentucky	$6.12	$6.12	**$4.65**	$9.18	**$6.87**	$9.47	**$6.97**	$9.47	**$6.84**	$9.47	**$6.71**	$9.47	**$6.57**	$9.47	**$6.43**	$9.47	**$6.28**	$9.47	**$6.12**	$9.47
Louisiana	$6.39	$6.39	**$5.57**	$9.59	**$8.30**	$14.38	**$12.35**	$21.57	**$18.38**	$32.35	**$27.33**	$48.52	**$40.61**	$72.79	**$60.33**	$73.90	**$60.62**	$73.90	**$59.95**	$73.90
Maine	$1.87	$1.87	**$1.46**	$2.81	**$2.16**	$4.21	**$3.19**	$6.31	**$4.71**	$8.52	**$6.25**	$8.52	**$6.13**	$8.52	**$6.01**	$8.52	**$5.89**	$8.52	**$5.76**	$8.52
Maryland	$8.14	$8.14	**$5.78**	$9.26	**$6.44**	$9.26	**$6.29**	$9.26	**$6.15**	$9.26	**$5.99**	$9.26	**$5.83**	$9.26	**$5.66**	$9.26	**$5.47**	$9.26	**$5.29**	$9.26
Massachusetts	$9.23	$9.23	**$5.11**	$13.85	**$7.36**	$20.77	**$10.55**	$30.34	**$14.67**	$30.34	**$13.88**	$30.34	**$13.06**	$30.34	**$12.20**	$30.34	**$11.29**	$30.34	**$10.34**	$30.34
Michigan	$13.94	$13.94	**$8.53**	$20.91	**$12.38**	$23.20	**$13.27**	$23.20	**$12.77**	$23.20	**$12.25**	$23.20	**$11.70**	$23.20	**$11.13**	$23.20	**$10.52**	$23.20	**$9.89**	$23.20
Minnesota	$7.48	$7.48	**$1.25**	$9.44	**$1.19**	$9.44	**$0.77**	$9.44	**$0.34**	$9.44	**$0.00**	$9.44	**$0.00**	$9.44	**$0.00**	$9.44	**$0.00**	$9.44	**$0.00**	$9.44
Mississippi	$4.18	$4.18	**$2.51**	$6.27	**$3.64**	$9.41	**$5.26**	$13.32	**$7.15**	$13.32	**$6.84**	$13.32	**$6.52**	$13.32	**$6.18**	$13.32	**$5.82**	$13.32	**$5.45**	$13.32
Missouri	$8.44	$8.44	**$4.78**	$11.38	**$6.20**	$11.38	**$5.94**	$11.38	**$5.67**	$11.38	**$5.39**	$11.38	**$5.09**	$11.38	**$4.77**	$11.38	**$4.44**	$11.38	**$4.10**	$11.38
Montana	$1.40	$1.40	**$0.77**	$2.10	**$1.11**	$3.15	**$1.59**	$4.73	**$2.28**	$6.23	**$2.84**	$6.23	**$2.67**	$6.23	**$2.49**	$6.23	**$2.30**	$6.23	**$2.11**	$6.23
Nebraska	$2.58	$2.58	**$1.52**	$3.87	**$2.20**	$5.81	**$3.18**	$8.71	**$4.58**	$9.93	**$4.98**	$9.93	**$4.74**	$9.93	**$4.48**	$9.93	**$4.20**	$9.93	**$3.92**	$9.93
Nevada	$3.81	$3.81	**$2.03**	$5.72	**$2.92**	$8.57	**$4.16**	$8.81	**$4.05**	$8.81	**$3.81**	$8.81	**$3.56**	$8.81	**$3.30**	$8.81	**$3.03**	$8.81	**$2.74**	$8.81
New Hampshire	$1.86	$1.86	**$0.91**	$2.79	**$1.30**	$4.19	**$1.83**	$6.28	**$2.57**	$7.92	**$3.01**	$7.92	**$2.76**	$7.92	**$2.51**	$7.92	**$2.24**	$7.92	**$1.95**	$7.92
New Jersey	$12.40	$12.40	**$4.89**	$18.60	**$6.77**	$27.90	**$9.26**	$29.28	**$8.74**	$29.28	**$7.72**	$29.28	**$6.64**	$29.28	**$5.51**	$29.28	**$4.32**	$29.28	**$3.07**	$29.28
New Mexico	$2.90	$2.90	**$2.02**	$4.35	**$2.97**	$6.53	**$4.35**	$9.79	**$6.36**	$11.11	**$7.03**	$11.11	**$6.82**	$11.11	**$6.61**	$11.11	**$6.38**	$11.11	**$6.15**	$11.11
New York	$27.32	$27.32	**$19.59**	$40.98	**$28.80**	$51.70	**$35.57**	$51.70	**$34.76**	$51.70	**$33.92**	$51.70	**$33.03**	$51.70	**$32.09**	$51.70	**$31.11**	$51.70	**$30.08**	$51.70
North Carolina	$13.45	$13.45	**$2.48**	$17.50	**$2.52**	$17.50	**$1.77**	$17.50	**$0.98**	$17.50	**$0.15**	$17.50	**$0.00**	$17.50	**$0.00**	$17.50	**$0.00**	$17.50	**$0.00**	$17.50
North Dakota	$1.00	$1.00	**$0.30**	$1.50	**$0.39**	$2.25	**$0.50**	$3.38	**$0.62**	$5.06	**$0.73**	$7.59	**$0.76**	$10.09	**$0.56**	$10.09	**$0.09**	$10.09	**$0.00**	$10.09
Ohio	$16.27	$16.27	**$11.75**	$24.41	**$17.28**	$25.86	**$17.93**	$25.86	**$17.54**	$25.86	**$17.12**	$25.86	**$16.68**	$25.86	**$16.22**	$25.86	**$15.74**	$25.86	**$15.24**	$25.86
Oklahoma	$5.29	$5.29	**$3.33**	$7.94	**$4.85**	$10.40	**$6.16**	$10.40	**$5.94**	$10.40	**$5.72**	$10.40	**$5.49**	$10.40	**$5.24**	$10.40	**$4.98**	$10.40	**$4.71**	$10.40
Oregon	$5.40	$5.40	**$3.91**	$8.10	**$5.76**	$12.15	**$8.46**	$18.23	**$12.41**	$24.62	**$16.38**	$24.62	**$15.97**	$24.62	**$15.53**	$24.62	**$15.08**	$24.62	**$14.60**	$24.62
Pennsylvania	$17.91	$17.91	**$5.52**	$21.88	**$5.98**	$21.88	**$5.19**	$21.88	**$4.35**	$21.88	**$3.48**	$21.88	**$2.56**	$21.88	**$1.59**	$21.88	**$0.58**	$21.88	**$0.00**	$21.88
Rhode Island	$1.48	$1.48	**$1.20**	$2.22	**$1.78**	$3.33	**$2.64**	$5.00	**$3.90**	$7.49	**$5.77**	$11.24	**$8.53**	$12.30	**$9.19**	$12.30	**$9.04**	$12.30	**$8.87**	$12.30
South Carolina	$6.52	$6.52	**$4.92**	$9.78	**$7.26**	$11.60	**$8.46**	$11.60	**$8.30**	$11.60	**$8.14**	$11.60	**$7.96**	$11.60	**$7.78**	$11.60	**$7.59**	$11.60	**$7.39**	$11.60
South Dakota	$1.15	$1.15	**$0.92**	$1.73	**$1.36**	$2.59	**$2.02**	$3.88	**$2.99**	$5.82	**$4.42**	$8.25	**$6.16**	$8.25	**$6.05**	$8.25	**$5.94**	$8.25	**$5.83**	$8.25
Tennessee	$8.95	$8.95	**$7.06**	$13.43	**$10.44**	$16.68	**$12.79**	$16.68	**$12.59**	$16.68	**$12.39**	$16.68	**$12.17**	$16.68	**$11.95**	$16.68	**$11.71**	$16.68	**$11.46**	$16.68
Texas	$35.46	$35.46	**$26.99**	$53.19	**$39.85**	$73.72	**$54.30**	$73.72	**$53.33**	$73.72	**$52.31**	$73.72	**$51.24**	$73.72	**$50.12**	$73.72	**$48.94**	$73.72	**$47.70**	$73.72
Utah	$3.90	$3.90	**$1.99**	$5.85	**$2.85**	$7.73	**$3.56**	$7.73	**$3.35**	$7.73	**$3.14**	$7.73	**$2.91**	$7.73	**$2.66**	$7.73	**$2.41**	$7.73	**$2.15**	$7.73
Vermont	$1.00	$1.00	**$0.63**	$1.50	**$0.92**	$2.25	**$1.33**	$3.38	**$1.93**	$5.06	**$2.78**	$7.59	**$4.00**	$8.64	**$4.35**	$8.64	**$4.14**	$8.64	**$3.91**	$8.64
Virginia	$11.28	$11.28	**$4.89**	$13.51	**$5.48**	$13.51	**$5.08**	$13.51	**$4.65**	$13.51	**$4.21**	$13.51	**$3.75**	$13.51	**$3.26**	$13.51	**$2.75**	$13.51	**$2.21**	$13.51
Washington	$9.48	$9.48	**$8.91**	$14.22	**$13.32**	$21.33	**$19.92**	$27.30	**$25.40**	$27.30	**$25.31**	$27.30	**$25.21**	$27.30	**$25.10**	$27.30	**$24.99**	$27.30	**$24.88**	$27.30
West Virginia	$2.61	$2.61	**$1.91**	$3.92	**$2.81**	$5.87	**$4.13**	$8.81	**$6.07**	$13.21	**$8.89**	$19.82	**$13.02**	$23.39	**$14.96**	$23.39	**$14.54**	$23.39	**$14.10**	$23.39
Wisconsin	$8.02	$8.02	**$6.17**	$12.03	**$9.12**	$13.50	**$10.07**	$13.50	**$9.90**	$13.50	**$9.72**	$13.50	**$9.53**	$13.50	**$9.33**	$13.50	**$9.12**	$13.50	**$8.91**	$13.50
Wyoming	$1.00	$1.00	**$0.71**	$1.50	**$1.05**	$2.25	**$1.54**	$3.38	**$2.26**	$5.06	**$3.30**	$7.59	**$4.82**	$10.47	**$6.45**	$10.47	**$6.25**	$10.47	**$6.04**	$10.47
Average	$8.70	$8.62	**$4.62**	$12.29	**$6.39**	$15.94	**$7.87**	$18.39	**$8.58**	$20.28	**$9.14**	$21.24	**$9.35**	$22.02	**$9.49**	$22.16	**$9.14**	$22.20	**$8.72**	$22.20
Median	$6.26	$6.26	**$3.46**	$8.64	**$4.99**	$10.04	**$5.13**	$11.01	**$5.60**	$11.49	**$5.88**	$11.49	**$6.15**	$11.92	**$6.11**	$12.27	**$5.92**	$12.27	**$5.79**	$12.27
Maximum	$52.53	$52.53	**$26.99**	$78.80	**$39.85**	$118.19	**$54.30**	$141.03	**$53.33**	$141.03	**$52.31**	$141.53	**$51.24**	$141.53	**$60.33**	$141.53	**$60.62**	$141.53	**$59.95**	$141.53
Minimum	$1.00	$1.00	**$0.30**	$1.50	**$0.39**	$2.25	**$0.50**	$3.38	**$0.34**	$5.06	**$0.00**	$6.23	**$0.00**	$6.23	**$0.00**	$6.23	**$0.00**	$6.23	**$0.00**	$6.23

VI. Alternatives Considered

Over the course of developing this deductible model, FEMA has considered many alternatives, and selected the attributes that FEMA believes could best achieve the intended outcomes of the program, adhere to the program's guiding principles, and minimize administrative burdens. The options that FEMA has considered included alternatives to specific aspects of the program, such as which credits could be offered or the value that FEMA could approve for those credits, but also included alternatives to the entire deductible concept itself. FEMA believes that the deductible program has the potential to improve the nation's resilience and reduce disaster risk and costs on a broad scale, but FEMA welcomes comment on alternative methodologies for achieving these results.

The following subsections detail a few of the alternatives and options that FEMA is considering in developing its potential deductible program concept. FEMA did not use these alternatives in the model described in this SANPRM, but believes that they demonstrated enough promise that including a brief discussion of each could facilitate improved engagement and transparency in this process.

FEMA has not made a final determination regarding the most appropriate approach moving forward. In addition to the potential deductible model described in this SANPRM, FEMA is still considering the alternatives described below and may consider and pursue other alternatives that may not necessarily be a logical outgrowth of this SANPRM.

A. Increasing the Per Capita Indicator

FEMA originally began consideration of the deductible concept in the context of repeated calls—by the GAO, DHS OIG, Congress, and others—to change the Public Assistance per capita indicator.[71] Instead, FEMA suggests that the Public Assistance deductible program may be a better option for reducing the costs of future disasters because it incentivizes State investments in risk reduction. FEMA believes simply increasing the per capita indicator, to the levels suggested by the GAO, would likely maintain the same level of disaster risk that exists today and transfer the future costs of disaster to impacted State and local governments. FEMA seeks comment on this assumption.

However, recognizing that the status quo is unsustainable in the long term, FEMA has seriously considered adjusting the per capita indicator and may still do so in the future. Increasing the per capita indicator, to include an additional consideration of State fiscal capacity, is the only viable alternative to a deductible that FEMA has identified at this time.

As was explained earlier in this SANPRM, the Public Assistance per capita indicator was initially set in 1986 at $1.00 based upon PCPI. At the time, that amount represented approximately one-hundredth of one percent (0.01% or 0.0001) of PCPI. Had FEMA adjusted the per capita indicator each year so that it maintained its ratio to rising PCPI, more than 70 percent of major disasters between 2005 and 2014 would not have been declared. Additionally, the per capita indicator would have risen to $4.81 for 2016.[72] For comparison, the current 2016 per capita indicator is just $1.41. Switching to this alternative methodology would result in a nearly a 250-percent increase to the average per capita indicator, which could be phased in over a number of years or decades through accelerated upward adjustment of the per capita indicator at rates higher than inflation.

Under this alternative FEMA has explored also adjusting the PCPI-adjusted per capita indicator value by the current TTR index for each State.[73] GAO recommended adjusting the per capita indicator values by the current TTR index.[74] Finally, for purposes of comparison, because the Public Assistance per capita indicator is applied on a disaster-by-disaster basis and FEMA envisions an annual deductible, under this alternative FEMA has multiplied the PCPI-adjusted per capita indicator by each State's 10-year average disaster frequency to provide a more comparable comparison. Table 13 indicates the amount of cumulative damage that a State would need to experience before FEMA would recommend that the President issue a major disaster declaration in 2016 if the per capita indicator were raised to $4.81 and adjusted by the TTR Index.

TABLE 13—CURRENT PER CAPITA INDICATOR COMPARED WITH NATIONAL PCPI GROWTH ADJUSTMENTS

Data by state			Current per capita indicator 2016 = $1.41	Indicator adjusted for national PCPI growth 2016 = $4.81	Annual average major disaster declarations	Annualized PCPI-Adjusted per capita indicator
State	2010 population	Current TTR index	Current indicator total	National PCPI adjusted total (with TTR adjustment)		
Alabama	4,779,736	75.9	$6,739,428	$17,449,812	1.6	$27,919,700
Alaska	710,231	126.8	1,001,426	4,331,756	1.6	6,930,809
Arizona	6,392,017	70.7	9,012,744	21,737,140	0.9	19,563,426
Arkansas	2,915,918	75.9	4,111,444	10,645,404	1.9	20,226,268
California	37,253,956	104.9	52,528,078	187,971,913	1.5	281,957,870
Colorado	5,029,196	107.9	7,091,166	26,101,477	0.7	18,271,034
Connecticut	3,574,097	138.2	5,039,477	23,758,524	1.2	28,510,229
Delaware	897,934	115.3	1,266,087	4,979,879	0.6	2,987,927
Florida	18,801,310	82.2	26,509,847	74,336,996	1.6	118,939,193
Georgia	9,687,653	90.7	13,659,591	42,264,033	0.8	33,811,226
Hawaii	1,360,301	84.8	1,918,024	5,548,505	0.9	4,993,654
Idaho	1,567,582	70.9	2,210,291	5,345,909	0.6	3,207,546
Illinois	12,830,632	107.1	18,091,191	66,097,129	1.5	99,145,694
Indiana	6,483,802	90.7	9,142,161	28,286,688	1.2	33,944,026
Iowa	3,046,355	98.8	4,295,361	14,477,132	2.3	33,297,403
Kansas	2,853,118	93.3	4,022,896	12,804,023	2.3	29,449,253

[71] *See* GAO, *supra* note 28; OIG *supra* note 29; *see also* 44 CFR 206.48.

[72] Per Capita Personal Income in 2015 was $48,112 × 0.0001 = $4.81.

[73] Per State PCPI Adjusted Total = $4.81 Per Capita Indicator × (State's TTR Index/100).

[74] *See* GAO, supra FN28, at 50.

TABLE 13—CURRENT PER CAPITA INDICATOR COMPARED WITH NATIONAL PCPI GROWTH ADJUSTMENTS—Continued

Data by state			Current per capita indicator 2016 = $1.41	Indicator adjusted for national PCPI growth 2016 = $4.81	Annual average major disaster declarations	Annualized PCPI-Adjusted per capita indicator
State	2010 population	Current TTR index	Current indicator total	National PCPI adjusted total (with TTR adjustment)		
Kentucky	4,339,367	78.6	6,118,507	16,405,671	1.5	24,608,507
Louisiana	4,533,372	97.6	6,392,055	21,282,187	1.2	25,538,624
Maine	1,328,361	77.6	1,872,989	4,958,187	2	9,916,374
Maryland	5,773,552	120.3	8,140,708	33,408,254	1	33,408,254
Massachusetts	6,547,629	133.3	9,232,157	41,981,629	1.7	71,368,770
Michigan	9,883,640	85.3	13,935,932	40,551,883	0.4	16,220,753
Minnesota	5,303,925	110.7	7,478,534	28,241,650	1.8	50,834,971
Mississippi	2,967,297	68.1	4,183,889	9,719,708	1.4	13,607,591
Missouri	5,988,927	89.6	8,444,387	25,810,838	2.4	61,946,011
Montana	989,415	75.8	1,395,075	3,607,387	0.8	2,885,910
Nebraska	1,826,341	105.5	2,575,141	9,267,859	2.3	21,316,075
Nevada	2,700,551	82.3	3,807,777	10,690,482	0.7	7,483,338
New Hampshire	1,316,470	106.9	1,856,223	6,769,144	2.2	14,892,117
New Jersey	8,791,894	129	12,396,571	54,552,823	1.4	76,373,952
New Mexico	2,059,179	75.8	2,903,442	7,507,725	1.3	9,760,043
New York	19,378,102	133.7	27,323,124	124,619,993	2.5	311,549,982
North Carolina	9,535,483	86.7	13,445,031	39,765,539	1.2	47,718,646
North Dakota	672,591	122.2	948,353	3,953,369	2	7,906,738
Ohio	11,536,504	92.3	16,266,471	51,217,809	1	51,217,809
Oklahoma	3,751,351	85.3	5,289,405	15,391,531	3	46,174,592
Oregon	3,831,074	95.2	5,401,814	17,542,948	1	17,542,948
Pennsylvania	12,702,379	98.1	17,910,354	59,937,573	1.1	65,931,330
Rhode Island	1,052,567	102.3	1,484,119	5,179,293	0.7	3,625,505
South Carolina	4,625,364	73.2	6,521,763	16,285,537	0.3	4,885,661
South Dakota	814,180	97.9	1,147,994	3,833,965	2.2	8,434,724
Tennessee	6,346,105	82.5	8,948,008	25,182,931	1.6	40,292,690
Texas	25,145,561	106.7	35,455,241	129,053,808	1.7	219,391,474
Utah	2,763,885	83.4	3,897,078	11,087,435	0.7	7,761,205
Vermont	625,741	87.1	882,295	2,621,548	1.6	4,194,477
Virginia	8,001,024	114.6	11,281,444	44,103,725	1.2	52,924,469
Washington	6,724,540	105.6	9,481,601	34,156,359	1.2	40,987,631
West Virginia	1,852,994	73.4	2,612,722	6,542,069	1.6	10,467,311
Wisconsin	5,686,986	95.1	8,018,650	26,014,037	0.9	23,412,633
Wyoming	563,626	128.9	794,713	3,494,532	0.2	698,906

FEMA believes that the deductible concept has the potential to result in a better outcome for the nation than increasing the per capita indicator as it promotes State investment in risk reduction that will ultimately reduce the financial impact of future disasters.

Compared with the alternative option of linking the Public Assistance per capita indicator to PCPI, the deductible model could deliver financial advantages to the States. These financial advantages could be even greater in the preliminary years over which the full deductible amount is phased in. Table 14 indicates the differences that FEMA expects might occur with each option.

TABLE 14—ESTIMATED COSTS OF THE NOTIONAL DEDUCTIBLE PROGRAM VERSUS ADJUSTING THE PER CAPITA INDICATOR FOR PCPI

All amounts in $M	Full starting deductible	Full estimated credits (current activities only)	Final deductible	National PCPI-Adjusted total (with TTR adjustment)	Annualized PCPI-Adjusted per capita indicator
Average State	$22.20	$9.74	$12.46	$29.37	$43.00
Median State	12.26	4.43	7.61	17.35	23.81
Minimum State	6.23	1.17	1.58	2.59	0.69[75]
Maximum State	141.53	120.55	64.46	186.40	308.95

FEMA recognizes that increasing the Public Assistance per capita indictor will likely lower the amount the Federal government spends on disasters. It is also simple to communicate and uses processes that everyone is already familiar with. However, FEMA currently believes the decrease in spending that the Federal government may see with the GAO's suggested indicators would not result because future incidents are any less devastating, but rather because the responsibility for that damage would be transferred to State and local jurisdictions. It is true that there is likely a level at which a high enough per capita indicator would transfer enough risk to the States that they would be forced to internalize sufficient disaster costs that may incentivize them to increase mitigation. We do not

[75] Although the application of the annualization calculation suggests a per capita indicator below $1 million due to low major disaster frequency in some States, 44 CFR 206.48(a)(1) would still set the minimum per capita indicator at $1 million. *See* supra FN23.

believe that level of per capita indicator is viable at this time. Moreover, we believe that a deductible concept, which creates incentives for States both through a transfer of risk and through rewards provided by a credit system, will be more effective in driving risk reduction and will lower all disaster spending over time. FEMA will undertake more analysis over the course of this rulemaking and will make the ultimate decision based on the outcomes of this analysis, and not on the beliefs expressed in this section. Any direction commenters could provide to support that analysis would be appreciated.

B. Alternative Deductible Approaches

In developing this potential deductible concept, FEMA is considering many variations, including simpler ways to calculate the deductible amount, additional fiscal capacity indicators, alternative methodologies to determine relative risk among the States, altering the threshold, and additional possible activities that could be incentivized through the credit structure.

1. Calculation Alternatives

There are many different methods by which FEMA could determine a State's deductible amount, and FEMA has considered the advantages and disadvantages of many options as it developed the potential deductible program. One of the simplest approaches would be to tie each State's Public Assistance deductible amount to its current per capita Public Assistance indicator in some way. Many commenters to the ANPRM remarked that they appreciated the simplicity, understandability, stability, and predictability of the current per capita indicator.

While FEMA appreciates these values, the deductible concept, to be successful, must incentivize greater State resilience to future disasters. It is important, therefore, that the deductible amounts truly represent the States' individual characteristics that are relevant in the disaster context. Overall, FEMA believes that assessing fiscal capacity and relative risk is a better strategy for calculating deductibles than utilizing the current per capita indicator that lacks relevance to either of those gauges.

2. Fiscal Capacity Index

FEMA considered two additional financial indicators before selecting the four contained in the fiscal capacity index included in this model. Those additional indicators included Total Actual Revenue (TAR),[76] which FEMA defined as the amount of revenue a particular State actually raises in a typical year, and State Gross Domestic Product (GDP),[77] which FEMA defined as the total value of the goods and services produced within the State in a particular year. Upon closer inspection, however, FEMA found that both of these indicators were closely correlated to TTR by factors of 0.981 and 0.998 respectively.

FEMA believes that TTR, with its broad consideration of potential State revenue resources, was the best of these three indicators. FEMA also appreciated that TTR, as a measure of potential, does not suffer from complications of political choice in TAR or GDP that result from differences between States in State tax obligations and the services for which tax dollars are allocated. Since all three measures were so highly correlated, FEMA selected to include TTR as the preferred metric from this group. The other three fiscal capacity indicators used in the model were less correlated with one another and, consequently, represent a unique measure of State fiscal capacity that FEMA believes should be considered to inform that portion of the deductible calculation.

3. Risk Index

The model methodology for establishing the risk index utilizes AAL values produced from Hazus to evaluate each State's relative risk level. One feature of the AAL approach is that AAL reflects the total amount of the loss caused by the hazard. This includes losses by individuals, businesses, economic drivers, and insured losses. However, because of limitations in the types of assistance that FEMA provides through the Public Assistance program, there is inherent variability between Hazus-based AAL estimates of overall disaster losses and any impact that reducing these broader disaster losses would have on Public Assistance costs.

FEMA is willing to accept this attribute, however, because the intent of the deductible program is to reduce risk and build resilience to disasters overall. FEMA considers the non-Public Assistance cost reductions that would occur as a result of a deductible program to be ancillary benefits of the program. This is no less true if the indirect Public Assistance reduction benefits are just a fraction of the overall deductible improvements through reduced AALs. FEMA seeks comment on this approach.

One shortcoming of the AAL methodology, at least at present, is that Hazus does not currently produce loss estimates of any kind for severe storms or tornadoes. Overall, these types of incidents account for the most frequently declared major disasters and count for approximately 20 percent of Public Assistance obligations between 2005 and 2014. However, looking below the surface of the classification, FEMA has found that a significant amount of the damage that occurs in a major disaster declared for severe storms is actually caused by flooding. Consequently, just a small percentage of major disasters are actually issued for damage from storms that do not include some flooding. These would include damage resulting from wind (tornado, derecho, microburst, etc.), hail, or winter storms.

Nevertheless, it is likely that the AAL-based approach to calculating the risk index will somewhat undervalue the risk to locals that are particularly prone to these types of incidents, such as the Midwest for tornadoes and the Northeast for snow and ice storms. FEMA plans to continue seeking ways to improve the Hazus model and expand the modeling capabilities through AAL estimates, but it also acknowledges this particular limitation of the current approach. FEMA is soliciting comment on ways to potentially overcome these limitations in the Hazus model.

FEMA also considered a completely different approach to assessing a State's relative risk that looks specifically at the likelihood that a State will require Public Assistance and the amount of assistance that will likely be needed. FEMA engaged CREATE to assist in the statistical and economic aspects of designing the deductible concept. CREATE produced an alternative approach for modeling risk using historical Public Assistance obligations to estimate States' risk. Essentially, CREATE has developed a methodology for modeling the likely amounts of Public Assistance that every State will require by leveraging historical Public Assistance levels to forecast potential future need.

Specifically, the CREATE model utilizes Public Assistance data from 1999 to 2015 (the broadest range for which reliable data is available). CREATE's model assumes that both the magnitude and frequency of disasters are random variables while

[76] The United States Census Bureau produces an annual State Government Finances report that details the amount and sources of actual revenue captured by each State. Additional information can be found at: *https://www.census.gov/govs/state/.*

[77] The Bureau of Economic Analysis produces annual estimates of each State's Gross Domestic Product. These estimates are available at: *http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri= 1&acrdn=2#reqid=70&step=1&isuri=1.*

simultaneously taking a State's characteristics into account, such as the amount of infrastructure. CREATE then developed statistical models, adjusting the modeling parameters so that the outputs best matched the frequency and magnitude of historical Public Assistance outlays. CREATE was then able to use those models to look forward and determine the likely frequency and amounts of Public Assistance that each State would require in the future, converting those amounts to an index of relative risk.

CREATE's approach advanced FEMA's ability to forecast Public Assistance requirements. However, FEMA is considering using the Hazus-based AAL methodology for establishing each State's score on the risk index instead for a number of reasons.

First, FEMA was concerned with the small quantity of data that it was able to offer to CREATE and upon which CREATE relied to build its model. FEMA could only provide reliable data for 17 years' worth of Public Assistance. FEMA was concerned that this dataset was of insufficient length to form the basis for establishing long-term forecast trends for the Public Assistance program. Some types of disasters, in some areas occur on 100-year, 500-year, 1,000-year, or even longer cycles. It is likely that FEMA's 17-year dataset is insufficient to capture these types of events. This is particularly true of rare but devastating hazards, such as major earthquakes. Conversely, States that have happened to experience a major disaster in the past 17 years may have their relative risk overstated by this dataset compared to what may be expected from a longer-term trend.

Likewise, it is also likely that the Public Assistance dataset will include incidents that are unlikely to occur again in the near future and that may be skewing the data. The costs associated with Hurricane Katrina is an example of this possibility. While the chances of the Gulf Coast being struck by a moderate to major hurricane in the coming years are reasonable, the likelihood that it will cause the level of destruction as Hurricane Katrina is much lower. This is because a significant portion of the costs from Katrina stemmed from the flooding that resulted from failure of the water management and levee systems in New Orleans, Louisiana. Following extensive improvements to those systems over the past decade, a hurricane of similar intensity to Katrina might not cause the same level of damage to public facilities and infrastructure today.

FEMA was also concerned that because the CREATE approach is novel, it might not engender the same level of public confidence as the AAL-based methodology. AAL estimates are used by many organizations within the risk management and insurance industries and are generally accepted and defensible approaches to modeling future hazard costs. Additionally, FEMA expects that many within the emergency management community will be familiar with Hazus and the capabilities of that platform. Hazus data is openly available and FEMA values the transparency and reproducibility that use of the existing Hazus platform offers to the deductible methodology.

Finally, FEMA believes that utilizing Hazus-based AALs will offer benefits to other programs as well by creating a significant use of the Hazus platform. FEMA will enjoy an efficiency by leveraging an existing platform instead of designing and constructing a new one. Additionally, because the deductible program has the potential to become a major consumer of Hazus outputs, it increases the value of the Hazus platform to FEMA and to the nation. This likely would lead to future updates and improvements to Hazus capabilities that would benefit not only the deductible program, but also all other users of Hazus products. However, FEMA certainly welcomes comment on the use of Hazus data, and AALs generally, and their application to formulating a risk-informed deductible calculation.

In deciding between the Hazus-based AAL approach and the CREATE historical Public Assistance approach, FEMA decided that the former was the better option to incorporate as the risk index into the broader potential deductible formula. FEMA believes that the advantages of using the Hazus-based AAL approach described above outweigh the disadvantages of slightly lessening the risk assessment portion of the deductible methodology's strict nexus to the Public Assistance program. In other words, FEMA believes that taking a more expansive view of risk through use of Hazus-based AALs, which include costs not typically associated with the Public Assistance program, is acceptable given the intent of the deductible concept is to reduce risk nationally.

4. Additional Credits

FEMA carefully considered the credits included in the model described in this SANPRM. FEMA attempted to offer a menu of credits that cover a range of activities and that would support a diversified approach to risk reduction and improved preparedness. FEMA intended each model credit to independently contribute to those outcomes, but also to work within the broader system to create a cohesive structure of achievable progress for all States.

When developing the model credit offerings, FEMA considered other credits as well. These credits were not ultimately selected for the model for a variety of reasons. In some cases, the credit was too complicated or could create an unreasonable burden upon the State or FEMA to administer. In other cases, the ability of the credit to actually reduce risk or improve resilience was dubious. Ultimately, FEMA believes it included in the model the best mix of credits available from what it considered.

One credit in particular that FEMA considered at length would have been tied to FEMA's Community Rating System (CRS). Many of the comments that FEMA received from stakeholders when it published the ANPRM suggested that FEMA should offer deductible credit for CRS participation. CRS is a program administered by FEMA's National Flood Insurance Program (NFIP). The NFIP provides federally-backed flood insurance within communities that enact and enforce floodplain regulations. FEMA recognizes that CRS is an important program that incentivizes important floodplain management activities, many of which mirror or support activities that FEMA is looking to incentivize through deductible credits, and that inclusion as a separate credit could further incentivize those activities. At this point, however, as discussed below, FEMA does not believe that inclusion of CRS as a credit is appropriate at this time.

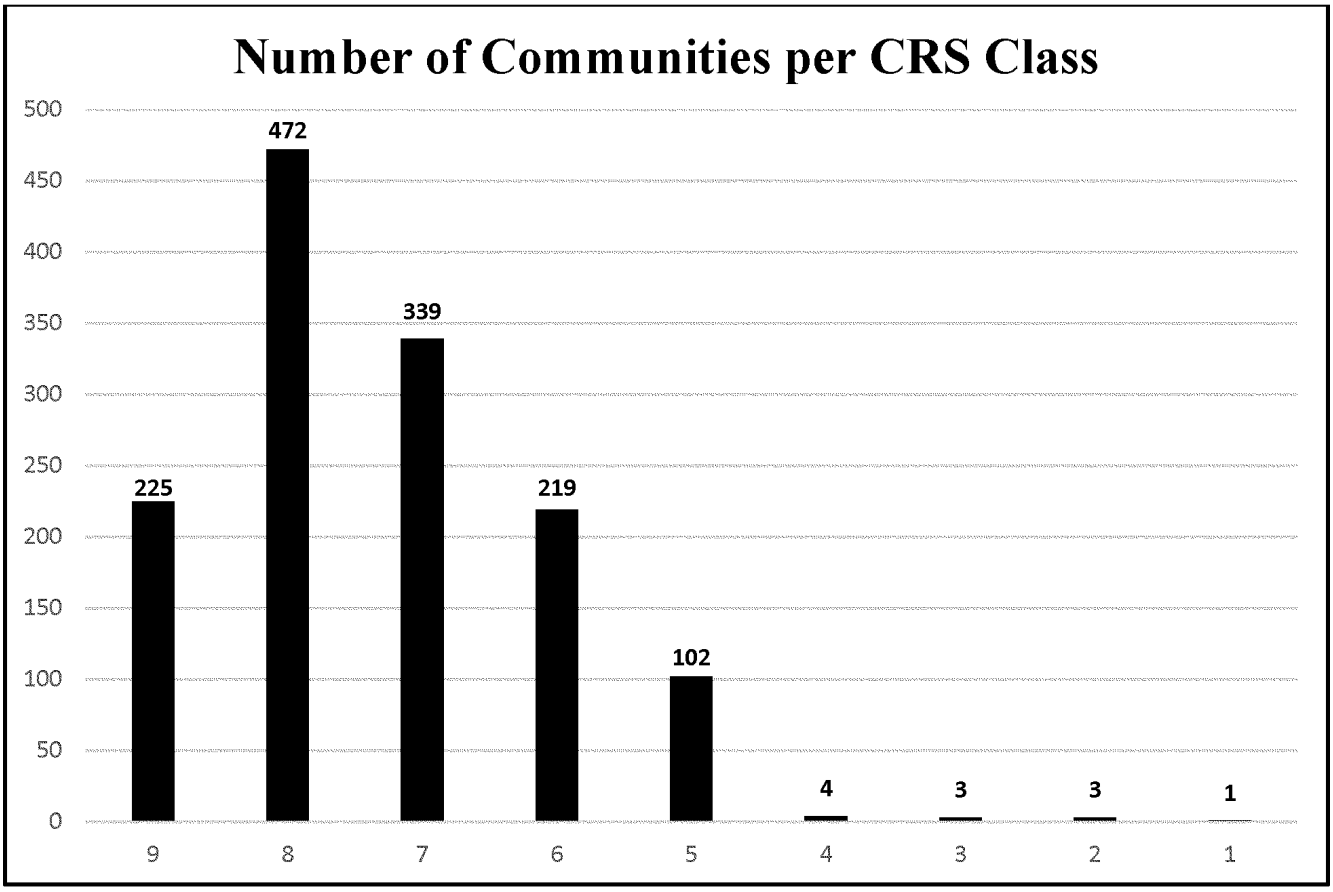
A structure must be located within an NFIP community to be eligible for federally-backed NFIP coverage. NFIP communities may also elect to participate in the CRS program to receive a percentile reduction to the premiums for every NFIP policy within the community. As of October 2015, 1,368 of the 21,600 NFIP communities have chosen to participate in the CRS program. This provides discounted flood insurance premiums to nearly 3.8 million policyholders.

The CRS classifies each participating community on a scale from 10 to 1 based on multiple scoring criteria relating to floodplain management, investments, and enforcement. Each CRS class receives a corresponding percentile reduction to the premiums of all of the NFIP flood insurance policies covering property within those communities. The lower the community's CRS class, the larger the

percentile premium reduction will be. For example, a CRS class 7 community would receive a 15 percent premium reduction on all policies covering property within the community's Special Flood Hazard Area, whereas a CRS class 1 community would receive a 45 percent reduction.

As of October 2015, more than 50 percent of CRS communities were assigned to either class 8 or 9. Less than 1 percent of CRS communities have reached beyond class 5. Figure 4 depicts the number of communities in each CRS class (as of October 2015).

Figure 4: Number of Communities per CRS Class



FEMA examined multiple ways by which it could potentially include such a credit in the deductible model. The major problem with creating a deductible credit in this instance is that the CRS program is administered exclusively at the community level, and FEMA has never produced statewide CRS scores. FEMA would need to be able to translate participating community classes into statewide scores for purposes of the deductible. In considering the credit, FEMA developed a basic framework for how this process might work.

FEMA has considered calculating statewide CRS scores by utilizing population-weighted averages of the participating communities' CRS classes compared to the statewide population. FEMA would multiply the population of each CRS community by its assigned CRS class. FEMA would then add all of those values together and divide by the population of the State. The resulting number would then be subtracted from 9, the lowest class for which credit would be offered, to derive the statewide CRS score.

Consider for example the State of Iowa. As of October 2015, Iowa had seven CRS communities. Those communities are as follows:

TABLE 15—EXAMPLE STATEWIDE CRS CREDIT SCORE—IOWA

CRS community	Population	CRS class	Pop. × CRS class
City of Cedar Falls	39,260	5	196,300
City of Cedar Rapids	126,326	6	757,956
City of Coralville	18,907	7	132,349
City of Davenport	99,685	8	797,480
City of Des Moines	203,433	7	1,424,031
City of Iowa City	67,862	7	475,034
Linn County[78]	84,900	8	679,200

TABLE 15—EXAMPLE STATEWIDE CRS CREDIT SCORE—IOWA—Continued

CRS community	Population	CRS class	Pop. × CRS class
Sum	.....	.....	4,462,350
State of Iowa	3,046,355	7.5	.....

FEMA has also considered multiplying the population of each community by the community's CRS class. For example, the City of Cedar Falls would contribute 196,300 to the calculation (population of 39,260 multiplied by CRS Class 5). FEMA would then add up all of those values from each CRS community. In this case, that would equal 4,462,350. This total would then be divided by the population of the entire State (4,462,350/3,046,355 = 1.5). The result is then subtracted from 9 to yield the statewide CRS score for purposes of the deductible. In this case, Iowa's CRS score would be 7.5 (9.00 − 1.5 = 7.5). This value could then be recognized with some level of credit based upon a standardized conversion schedule. At this time, FEMA has not developed a potential deductible credit schedule for the CRS.

Ultimately, FEMA decided not to include a model CRS deductible credit in this SANPRM for three reasons. First, FEMA believes that the flood insurance premium reductions should sufficiently incentivize NFIP communities to participate or better their standing within the CRS program. Second, FEMA would need to develop a new methodology for creating statewide CRS classes. This would be a novel undertaking for FEMA and the agency seeks comment from its State partners and the public regarding this endeavor. Furthermore, creating such a methodology is complicated because CRS communities are not necessarily the same as census-based communities, meaning that population numbers will need to be validated on a community-by-community basis for the calculation. Finally, even if FEMA does create a methodology for statewide CRS scores, FEMA is concerned that doing so would be confusing to stakeholders because FEMA would not be offering any NFIP insurance premium discounts for those scores. In other words, if a statewide score is better than a particular NFIP community's CRS class, there may be an expectation that FEMA would use the statewide score in place of the community's CRS Class. In fact, FEMA would not be willing to use the statewide score in lieu of the community score for purposes of granting NFIP premium discounts and FEMA believes that the creation of statewide CRS scores solely for the purposes of the deductible program would be confusing, and ultimately disappointing, to some CRS communities and NFIP policyholders.

VII. Legal Authority

FEMA administers the Public Assistance program pursuant to the President's statutory authority conferred in Section 406 of the Stafford Act to ''make contributions—(A) to a State or local government for the repair, restoration, reconstruction, or replacement of a public facility damaged or destroyed by a major disaster and for associated expenses incurred by the government.'' [79] These contributions are limited to ''. . . not less than 75 percent of the eligible costs of repair, restoration, reconstruction, or replacement carried out under this section''—known as the Federal share.[80] The President has delegated this authority to the Administrator of FEMA to authorize the Public Assistance program, *inter alia*.[81]

''Eligible'' is a term of qualification indicating that not all resultant costs are automatically reimbursable. Because the Stafford Act does not define ''eligible costs'' within the text of the law itself, it is within FEMA's discretion to define the term for purposes of its programs authorized pursuant to that provision. FEMA has, through regulation and policy, leveraged its discretion to determine which disaster costs are ''eligible.'' For purposes of the deductible program, FEMA is considering revising its regulations and policies to reflect a determination that disaster costs that cumulatively fall below the amount of the State's annual deductible, as adjusted by its earned credits, are not ''eligible costs'' as defined by the Stafford Act.

VIII. Conclusion

The concept for a deductible program responds to calls for FEMA to address the increasing frequency of disaster declarations, particularly smaller events that should be within the capacity of State and local governments, and to decrease Federal disaster costs. While increasing the per capita indicator is one way to accomplish this, solely through the transfer of costs from the Federal government to State and local jurisdictions, FEMA believes that doing so would miss a valuable opportunity to increase the nation's overall disaster resilience, thereby reducing costs for all stakeholders.

While FEMA seeks comment on all aspects of the deductible concept, in particular FEMA seeks detailed comment and supporting data on the methodology for calculating each State's deductible amount, including how FEMA should consider each State's individual risk and fiscal capacity; and on whether FEMA's estimates of projected credits for each State are accurate. Detailed stakeholder comment and supporting data are crucial to FEMA's development of a fair and transparent means to calculate deductible amounts and creation of an effective and efficient deductible program.

Dated: January 6, 2017.

W. Craig Fugate,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2017–00467 Filed 1–11–17; 8:45 am]

BILLING CODE 9111–23–P

[78] The population of Linn County included in this example excludes the population of the City of Cedar Rapids because it is accounted for separately as an independent CRS community.

[79] 42 U.S.C. 5172(a)(1)(A).

[80] 42 U.S.C. 5172(b)(1).

[81] Executive Order 12148, 44 FR 43239 (July 24, 1979).