The Effects of Moratoria on Residential Development:
Evidence from Harford, Howard, and Montgomery Counties

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1. Introduction

During the last decade, the state of Maryland was one of the fastest growing states in the United States. In response, the state has implemented an aggressive "smart growth" initiative. One of the most popular smart growth policies, adopted by several counties in the state of Maryland, is an Adequate Public Facility Ordinance (APFOs). An APFO is a spatially delineated land use control that aims to prevent development from occurring in areas where certain public services are overcrowded. An example of an APFO is a standard on elementary school capacity which limits the amount of new development at the school district level. Despite their extensive use, very little is known about the effects of these policies.

The purpose of this report is to answer the following three questions:

1. What is the direct impact of an AFPO? That is, when a policy area is under moratoria, what is the resulting growth of new residential stock and how does that compare with policy areas that do not have moratoria?

2. What is the overall impact of the policy? In other words, does the policy reduce total new development in the county or does it simply re-direct growth from one policy area to another?

3. How much of the areas under moratorium overlap with Priority funding areas, in other words, are county land use policies in conflict with State smart growth priorities?

Over the years researchers have attempted to measure the impacts of land use controls. The key econometric difficulty in this literature results from the fact that the

growth controls emerge in a non-random fashion throughout the landscape. This means that not all the areas in a county have the same likelihood of being under moratoria. In the context of adequate public facility ordinances for elementary school, for example, this problem arises because faster growing school districts (and sometimes richer school districts) are more likely to become under moratoria than other school districts in the county. Our major concern is that the decision of adopting such growth controls is clearly endogenous and yet, to date, the entire empirical literature on growth controls has treated them as exogenous variables. As a consequence, previous studies find no impact (and sometimes the wrong impact) of growth controls on the rate of new development.

We overcome these problems using recent "*matching methods,*" as opposed to traditional regression analysis. Matching methods represent a non-parametric alternative to linear regressions. The logic of matching methods is rather simple: First, we match policy areas on the predicted probability of being under moratoria, which is a function of their observed characteristics. Second, once we have the distributions of estimated propensity scores of policy areas that are under moratoria and policy areas that are not, we compare the two densities and measure the extent of their differences. This difference represents the impact of moratoria on new residential development. Unlike traditional regression analysis, this method removes from the analysis policy areas that prior to the adoption of the moratoria are not "similar" in observed characteristics to those that adopt.

We illustrate the advantages of this technique using spatially disaggregated data on new residential development in Howard, Harford, and Montgomery Counties, Maryland and comparing the estimates from propensity score matching to estimates based on the standard linear regression specification in the literature. For these three

counties we estimate the impacts of adequate public facilities ordinances starting in 1995 and we measure their impact between 1995 and 2000, accounting for the fact that the policy may be "in" and "out" in some years.

We also provide a descriptive analysis of the overlap between adequate public facilities ordinances – the county growth management tool – with the priority funding areas – the state major policy to concentrate growth in certain areas of the counties.

We have reached several important empirical conclusions:

First, for the three counties we have studied, it is the case that there is a substantial <u>overlap</u> between the county's policy and the state priority funding area;

Second, we typically find that the policy has a small effect on new residential development in the year of its adoption. We suspect this is the case because the observed new residential development in that year was probably already approved.

Third, we find that after the first year, the policy starts to produce its effects and indeed we observe a drastic reduction in new units, reflecting the fact that the policy areas have frozen approvals for new development. Our results suggest that, on average, this effect is quite strong during approximately two years. After that, both treated and untreated school districts seem to have again the same levels of growth.

The rest of the report is organized as follows. Section 2 provides a brief description of matching methods. Section 3 discusses our dataset for Howard, Harford, and Montgomery counties. Section 4 presents a variety of maps that spatially illustrate the location of moratorium and their conflicts with priority funding areas. Section 5 presents results of the modes that study the effects of adequate public facility ordinances on residential development. Finally section 6 concludes.

2. A Framework for Analyzing the Effects of Adequate Public Facilities on Residential Development

The key problem with the measurement of the effects of adequate public facility ordinances on new residential development comes from the fact that not all policy areas have the same likelihood of being under moratoria. In fact, it is likely that faster and richer policy areas as well as policy areas that are close to reach capacity for one of the public facilities that is being regulated (e.g. roads, schools) are more likely to be under moratoria. As a consequence, traditional regression analysis will not capture the true effects of the policy on residential development.

We overcome this short-coming with "matching methods". In this section, we briefly explain the logic of these methods and outline the steps involved in the estimation of the model.

Let *Y1* be the potential outcome in the "treated" state, which is the number of residential units developed in the policy area that adopted moratorium and *Y0* the potential outcome that would have happened in these policy areas had they have not adopted moratoria. We call these potential outcomes because we observe only one of (Y_1, Y_0) for each place. Let $D = 1$ indicate a policy area that adopted the moratoria and $D = 0$ indicate a policy area that did not. Finally, let *X* be a vector of observed covariates affecting both the choice of adoption and outcomes. In the next section, we discuss each of these covariates. These include the rate of growth of the policy area, the level of crowd ness of the public facility, etc.

Our parameter of interest – the impact of treatment on the treated that is, the impact of moratoria on new residential development – is the mean effect of being in a policy area that has a moratoria rather than in a policy area that doesn't have it (but has the same characteristics, measured by X). In terms of our notation is, the parameter of interest is:

$$\Delta^{TT} = E\left(Y_1 - Y_0 \middle| D = 1\right). \tag{1}$$

The matching method consisting of finding a "surrogate" for *Y0*, since we do not observe *Y0*. We remind the reader that we do not observe Y0 because this policy area indeed adopted moratoria (that is, D=1). The steps to estimate the model are:

1) We estimate a probit model of the decision of the policy area to be under moratorium;

2) Given the observed characteristics of the policy areas, we predict the probability of adoption for all policy areas and construct a contra-factual for Y0 (since we do not observe Y0)

3) We select policy areas with similar probabilities of being under moratoria and group them into:

   (a) a *treatment* group – the policy areas that were in fact are under moratorium ;

   (b) a *control* group – the policy areas that were not under moratorium but had similar probabilities of being under moratoria; That is, the policy areas that had "similar" characteristics to the areas that are under moratoria

4) We calculate the difference of new residential development in the treatment and control groups. This difference measures the true impacts of moratorium on new residential development.

The advantage of matching methods relative to traditional regression analysis is that it removes from the analysis policy areas for which the probability of adoption of moratoria is very low. That is, the key insight from matching methods is to compare pairs of policy areas that are similar in the characteristics that predict the adoption of moratoria.

3. Dataset for Howard and Harford Counties

We have collected an extensive dataset to address the questions of this project. For the three counties we have studied, we have combined data from the Maryland Property View on residential development with GIS maps for the different policy areas and re-created the years in which each of these areas was in and out of moratoria. In order to apply the methods described in the previous section, we have re-created the landscape for Howard, Harford and Montgomery Counties in 1990 – that is, prior to the 1995 moratoria.

Through GIS calculations, we have computed several variables that we use to calculate the probability that a policy area has a moratorium in 1995 and sub-sequent years.

We have group the variables that capture the determinants of being under moratoria in the following categories: *(a) School quality capacity of the county; (b) quality of the existing housing stock; (c) characteristics of the households living in the different school districts; (d) urban development in each school district, (e) additional geographical variables (f) priority funding areas and (g) policy variable*. In an appendix available from the authors upon request, we discuss in detail the construction of each of these variables. Here, we briefly outline all these variables:

(a) School Quality and Capacity of the county:

1. percent of graduating college in the census blocks belonging to the school district;

2. school capacity per household in the school district;

3. nearest neighbor school capacity;

4. percent of children less than 7 years in the census tract;

5. Percent of remaining units available by school district;

6. acreage of school district;

   (b) Quality of the existing housing stock

7. Percent in the census blocks belonging to the school district with house values over 300K;

   (c) Characteristics of the households living in the school district

8. Percent in the census blocks belonging to the school district with income over 75K;

9. Percent of households in the census blocks of each school district;

10. percent population white in the census tract;

    (d) Urban development in each school district

11. supply of subdivided houses in school district;

12. previous years mean house price from MDP by census tract;

13. 1994 growth rate (% of potential supply of houses built);

14. 1995 growth rate (% of potential supply of houses built);

15. 1996 growth rate (% of potential supply of houses built);

    (e) Additional geographical variables

16. distance to DC;

17. percent poor residential land;

18. percent prime residential land;

19. percent sewer coverage;

   (f) Priority funding areas

20. Area of the county under a PFA;

   (g) Policy Variable of Interest

21. Area under moratoria between 1995 and 2000 – This variable deserves some comments. We have obtained this variable through extensive communication with the counties. In principle we would have liked to perform our analysis for several other counties. However, we note here that it was barely impossible to obtain maps that point out the location and time in and out of moratoria. Because of this serious limitation we concentrated our analysis in these three counties.

We use these variables to estimate a model of the probability of adoption of a moratoria, and based on this model calculate the effects of moratorium on new residential development.

4. Which Policy Areas have Adopted Moratorium?

In this section, we present a sequence of GIS maps to illustrate the location of the adoption of moratorium for Howard, Harford and Montgomery Counties from 1995 to 2000. We also discuss the potential conflict between the state's priority funding area and the county's policy. We concentrate our analysis in the elementary and secondary school districts, since those were the only school district maps available to us.

We start the analysis with Harford County.

Map 1, presents the different elementary school districts of the county. The yellow areas represent the state designated priority funding areas.

In the Maps 2 through 5, we overlap the county policy – that is we highlight the school districts that were under moratorium from 1995-2000.

Are priority funding areas and moratoria undoing each other?

To answer this question, we have calculated two measures:

1. The area under moratoria divided by the area of the county;

2. The area under moratoria divides by the priority funding area.

The results are striking. In 1995, 15% of the area under moratoria overlapped with the area that was designated by the state as priority funding area. Furthermore, when we compare this number with the area under moratoria county-wide, we concluded that, countywide the area under moratoria was only 8%. This leads us to conclude that in Harford County there is a lack of coordination between state's policy and county's policy. Indeed, we see that the incidence of the policy is substantially higher in the areas designated as priority funding areas.

When comparing 1995 with 1997, the following results stand out: First, the overall amount of land under moratorium felt to only 4% of the county area - a reduction of 50% relative to 1995. However, and surprisingly, the area under moratoria that overlaps with the priority funding area continues to be high (12%), suggesting, that the county is probably undoing the state strategy to concentrate growth in specific areas.

Maps 6 through 10 present the same information for Howard County. Compared to Harford, the results for Howard County are even more striking. As documented by Map 2, in 1995, 40% of the county falls under the priority funding area. In Howard, the area under moratoria represents 12% of the area under priority funding area in 1995 (Map 7). In Map 8, we see that the area under moratoria represents 25% of the area under priority funding.

Maps 11 through 17 for Montgomery county display similar information.

Together, these figures document a <u>key finding</u> of this report: At least for these three counties, it is the case that there is a lack of coordination between the State's priority funding policy and the County's moratoria policy. While the first aims at promoting growth in designated areas, the second attempts to slow down growth.

5. The Effects of Moratoria on Residential Development

In this section, we present the results for the two models we have estimated. These are the effects of moratoria between 1995 and 2000 on residential development of the three counties. To illustrate how the estimation strategy works, we also present maps that plot the predicted probability of adoption of moratoria so that one can visually compare the school districts that served as control groups. We start with the analysis for Howard County for which we present these maps. We should also mention that, to capture potential spatial heterogeneity of the policy areas, all the variables listed in section 2 were calculated at the census block group. This means that even inside a school district, we can have areas with slightly higher probability of adoption.

What are the impacts of moratoria on residential development in Howard County?

Predicted Probabilities of Adoption

Maps 18 and 19 plot the predicted probabilities of being under moratoria in Howard County during 1995 and 1997. Lets start by examining Map 18. The following points stand out: First, our model does a very good job at predicting – given the observed characteristics of the school districts – the districts that indeed have implemented moratoria. As we can see from the map, we have darker blue areas in the school districts that have adopted the policy (those school districts are marked in red. Second, the map also shows that there are some school districts in the county for which the probability of adoption was as high as the probability in the school districts that adopted. However, these districts did not adopt moratoria. These are the school districts we will be using as conterfactuals. Finally, the model put low weight on the light blue areas, since those areas have low probability of being under moratoria. Indeed, based on observed characteristics, these areas are substantially different from the other school districts.

What are the effects of moratoria on new residential development?

Table 1 displays the effects of moratoria on single family housing (detached and townhouses) for the 3 counties between 1995 and 2000. The table presents the total number of new single family housing units and the amount of units deflated by the policy. Comparing the 3 counties, the following results stand out:

First, in the year of the adoption (1995) the effects of being under moratoria are relatively small. We also note that the effects vary between a reduction of 28 new housing units in Howard County and a reduction of 67.2 new housing units in Montgomery county. This difference is primarily attributed to the extent of the policy.

That is, there were relatively more policy areas under moratoria in 1995 in Montgomery County.

Second, we note that the effects become substantially stronger in the year immediately after the adoption. For example, in Howard County the effect of moratoria is almost 3 times larger. Given the fact that between 1995 and 1996 the number of policy areas in Howard county has not increased, this result reflects exclusively the policy in the 1995 areas. We are finding larger impacts because most of the new development observed in 1995 was probably approved prior to the adoption of the policy. Indeed, we suspect that the true effect of the policy can only be measured one year after its adoption.

Third, with the exception of Harford County, we also note that the effects of moratoria operate by cycles. That is, the effect is stronger the year after the adoption but it rapidly disappears. For example, in Montgomery County in 1997 the effect is only 122.5 houses.

Forth, it is important to quantify these reductions relative to county potentials. Our results indicate that, the effects of moratoria over a 3 year period represent on average a decline of new housing stock of about 10%. For example, in Montgomery county between 1995 and 1997 this reduction was 375 new units. Since the number of new single family housing during this period was 4805, the effect of the policy was to reduce new single family housing by about 8%. Similar calculations, suggest that, for the same time period, the effects on Howard and Harford Counties were, respectively, 4% and 14%.

Table 2 presents the impacts of the policy on multi family housing in Montgomery County. Consistent with the single family housing results, it appears that the policy produced a decline in multi-family housing of about 10% over a three year period.

6. Conclusions

In this report, we have:

1. Documented the location and timing of moratoria in Howard, Harford and Montgomery Counties in 1995 and 1997;

2. Demonstrated that county moratoria overlap substantially with state priority funding areas. Our results suggest that this overlap is stronger in Howard County

3. Calculated the effects of moratoria on new residential development in Howard Harford and Montgomery Counties between 1995-2000. The report suggests that the impacts of the policy are not trivial. In fact the policy can stop growth as much as 10% of the projected growth for a 3 year period in each of the counties;

Together our results also highlight some of the potential problems of moratoria. Moratoria are essentially command and control regulations that do not reflect market forces. As a consequence there are at least two perverse consequences of moratoria: First, it set too strict, moratoria will translate in an excessive reduction of the new housing stock and a potential increase of housing prices; Second, because moratoria does not increase the price of providing basic public services, the growth that does not take place in the county that adopts moratoria will happen somewhere else. Therefore, a serious perverse effect of moratoria is the displacement of growth, which in turn can exacerbate the externalities associated with sprawl.

Although not in the scope of this study, future analysis should compare the efficiency effects of moratoria against other potential policy options, namely policies that are market-based, such as development taxes or impact fees.

Table 1 – Effects of Moratoria on Single Family Housing

A. Howard County Results

Year	Total New Single Family Housing	Reduction in Single Family Housing
1995	1281	28
1996	1159	78
1997	1007	49
1998	1356	116
1999	1446	154
2000	1637	203

B. Harford County Results

Year	Total New Single Family Housing	Reduction in Single Family Housing
1995	855	42
1996	977	150
1997	938	220
1998	952	230
1999	1008	240
2000	1110	112

C. Montgomery County Results

Year	Total New Single Family Housing	Reduction in Single Family Housing
1995	1783	67.2
1996	1503	186
1997	1519	122.5
1998	1505	138
1999	1863	196
2000	2143	157

Table 1 – Effects of Moratoria on Multi Family Housing

Montgomery County Results

Year	Total New Multi Family Housing	Reduction in Multi Family Housing
1995	1518	100
1996	2735	250
1997	1415	275.5
1998	1395	270
1999	2798	267
2000	1279	278

Map 1
Harford County
Elementary School Districts

Legend

Certified Priority Funding Areas

N

						Miles
0	1.5	3	6	9	12	

Map 2
Harford County
1995 Elementary School Districts Under Moratoria
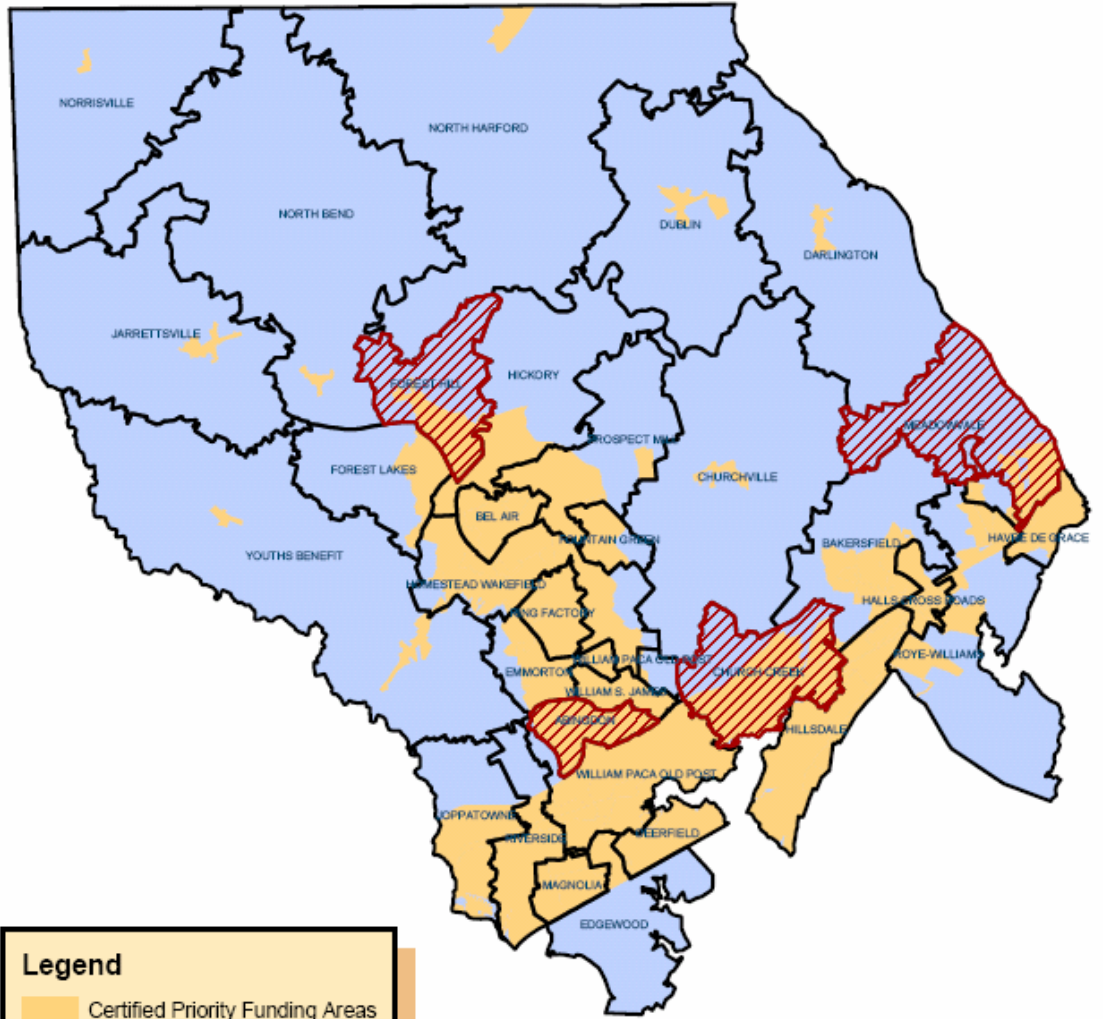
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Certified Priority Funding Areas
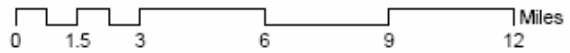
Map 3
Harford County
1996 Elementary School Districts Under Moratoria
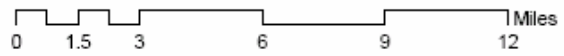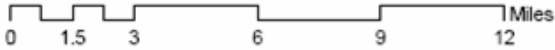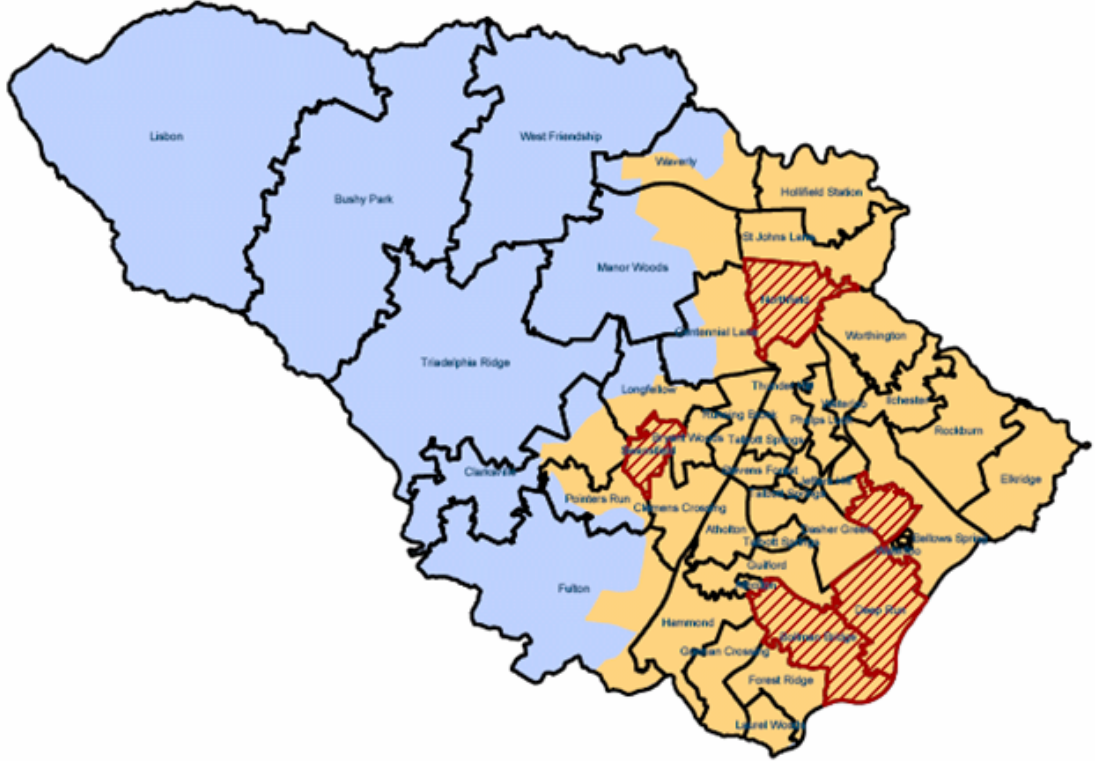

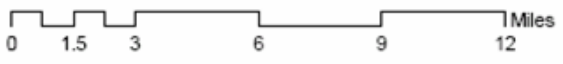
Legend

Certified Priority Funding Areas

NORRISVILLE

NORTH HARFORD

NORTH BEND

DUBLIN

DARLINGTON

JARRETTSVILLE

FOREST HILL

HICKORY

PROSPECT MILL

MEADOWVALE

FOREST LAKES

CHURCHVILLE

BEL AIR

MOUNTAIN GREEN

BAKERSFIELD

HAVRE DE GRACE

YOUTHS BENEFIT

HOMESTEAD WAKEFIELD

RING FACTORY

HALLS CROSS ROADS

WILLIAM PACA GREENE ST

ROYE-WILLIAMS

EMMORTON

JARRETTS CREEK

WILLIAM S. JAMES

HILLSDALE

ABINGDON

WILLIAM PACA OLD POST

JOPPATOWNE

RIVERSIDE

DEERFIELD

MAGNOLIA

EDGEWOOD

Miles

0   1.5   3   6   9   12

N

Map 4

Harford County

1997 Elementary School Districts Under Moratoria
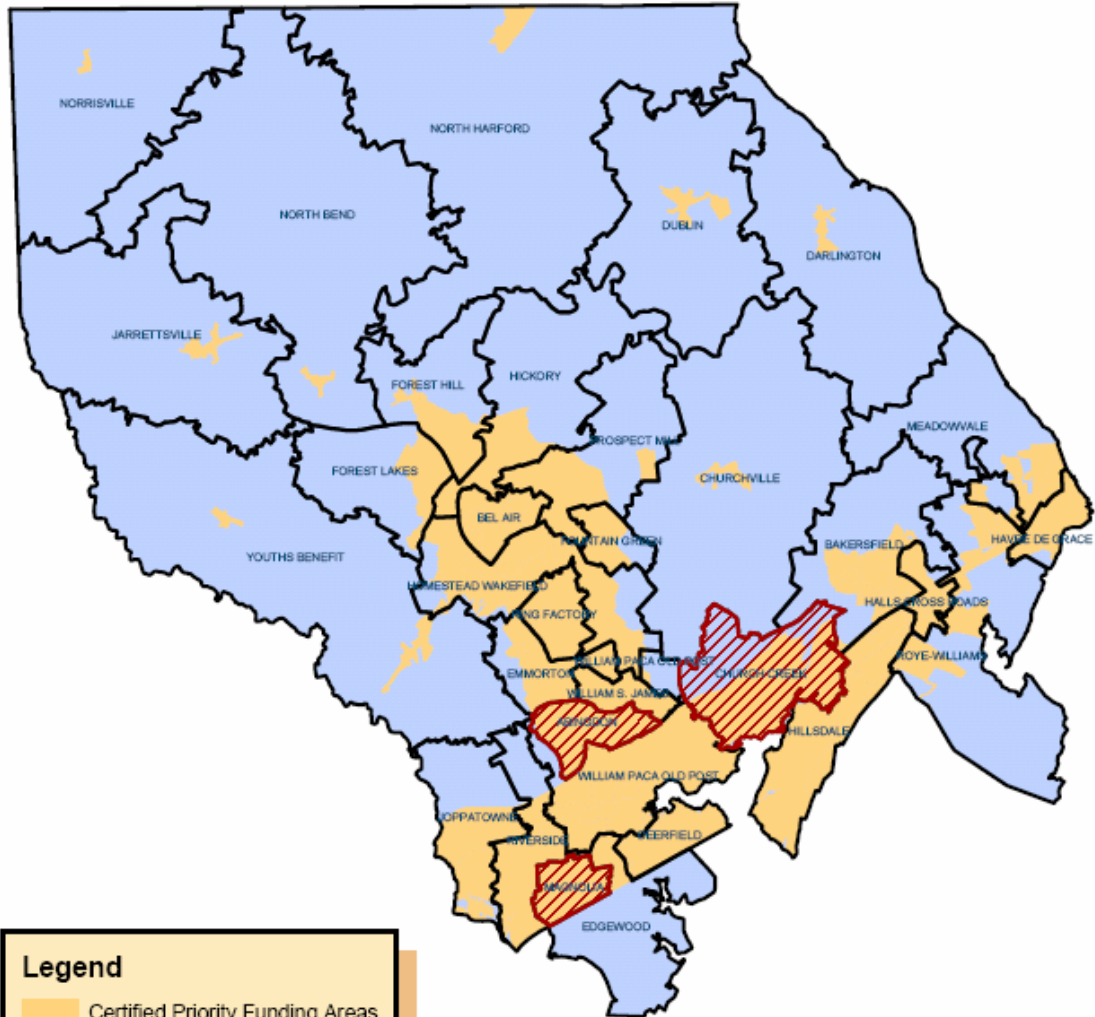
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Certified Priority Funding Areas
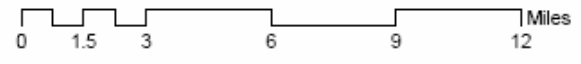
Miles
0   1.5   3   6   9   12

Map 5

Harford County
1998 Elementary School Districts Under Moratoria
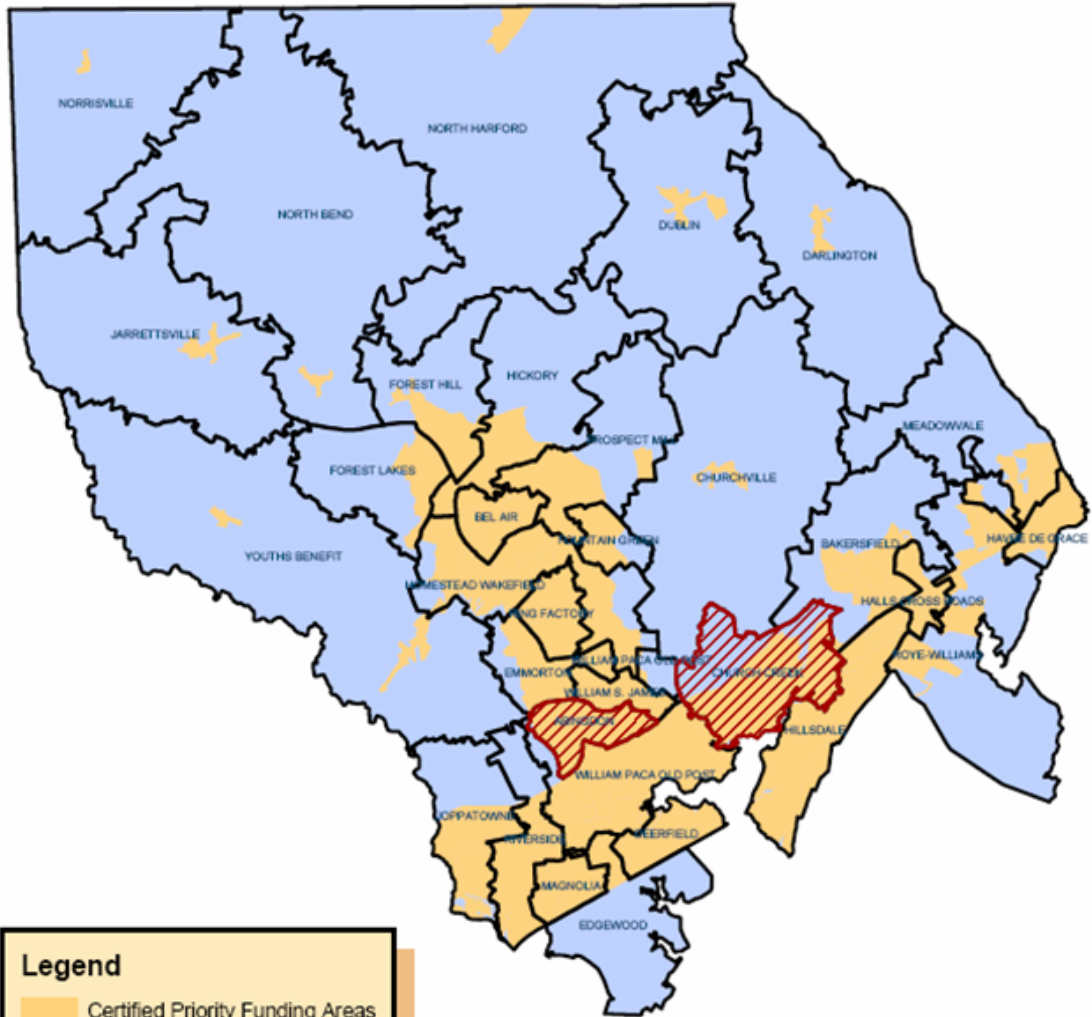
Legend

Certified Priority Funding Areas

Miles
0   1.5   3   6   9   12

Map 6
Howard County
Elementary School Districts

Lisbon

West Friendship

Waverly

Hollifield Station

Bushy Park

St Johns Lane

Manor Woods

Northfield

Centennial Lane

Worthington

Triadelphia Ridge

Longfellow

Thunder Hill

Ilchester

Running Brook

Phelps Luck

Rockburn

Bryant Woods Talbott Springs

Swansfield

Elkridge

Stevens Forest

Clarksville

Pointers Run

Clemens Crossing

Atholton

Dasher Green

Bellows Spring

Talbott Springs

Ilchester

Guilford

Fulton

Deep Run

Hammond

Bollman Bridge

Gorman Crossing

Forest Ridge

Laurel Woods

Legend

Certified Priority Funding Areas

N

						Miles
0	1.5	3		6		9	12

Map 7
Howard County
1995 Elementary School Districts Under Moratoria

Legend

Certified Priority Funding Areas

Miles
0   1.5   3   6   9   12

Map 8
Howard County
1997 Elementary School Districts Under Moratoria

Legend

Certified Priority Funding Areas

Miles
0   1.5   3   6   9   12

Map 9
Howard County
1998 Elementary School Districts Under Moratoria

Legend

Certified Priority Funding Areas

Map 10
Howard County
1999 Elementary School Districts Under Moratoria

Legend

Certified Priority Funding Areas

N

```
         Miles
0   1.5   3      6      9
              12
```
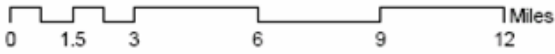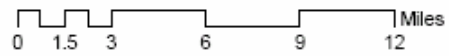
Map 11
Montgomery County
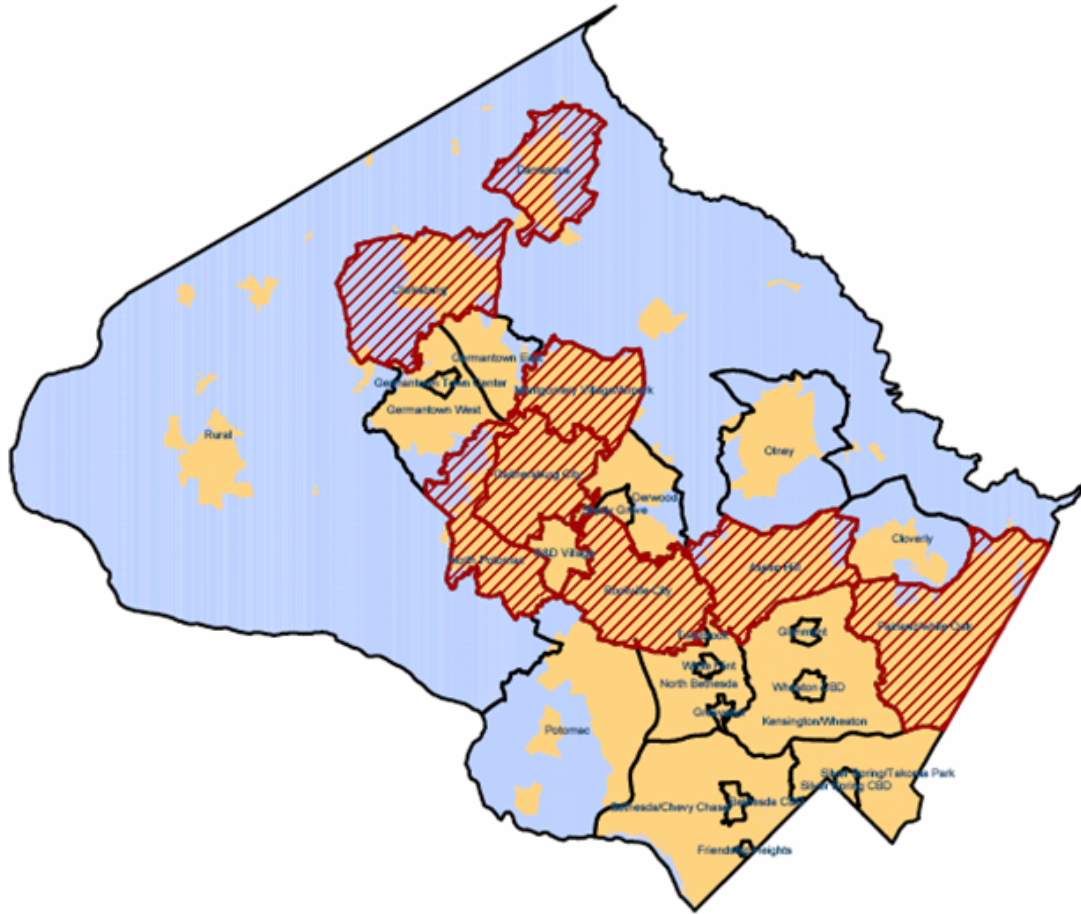### Policy Areas

Legend

Certified Priority Funding Areas

Map 12

Montgomery County

1995 Policy Areas Under Moratoria
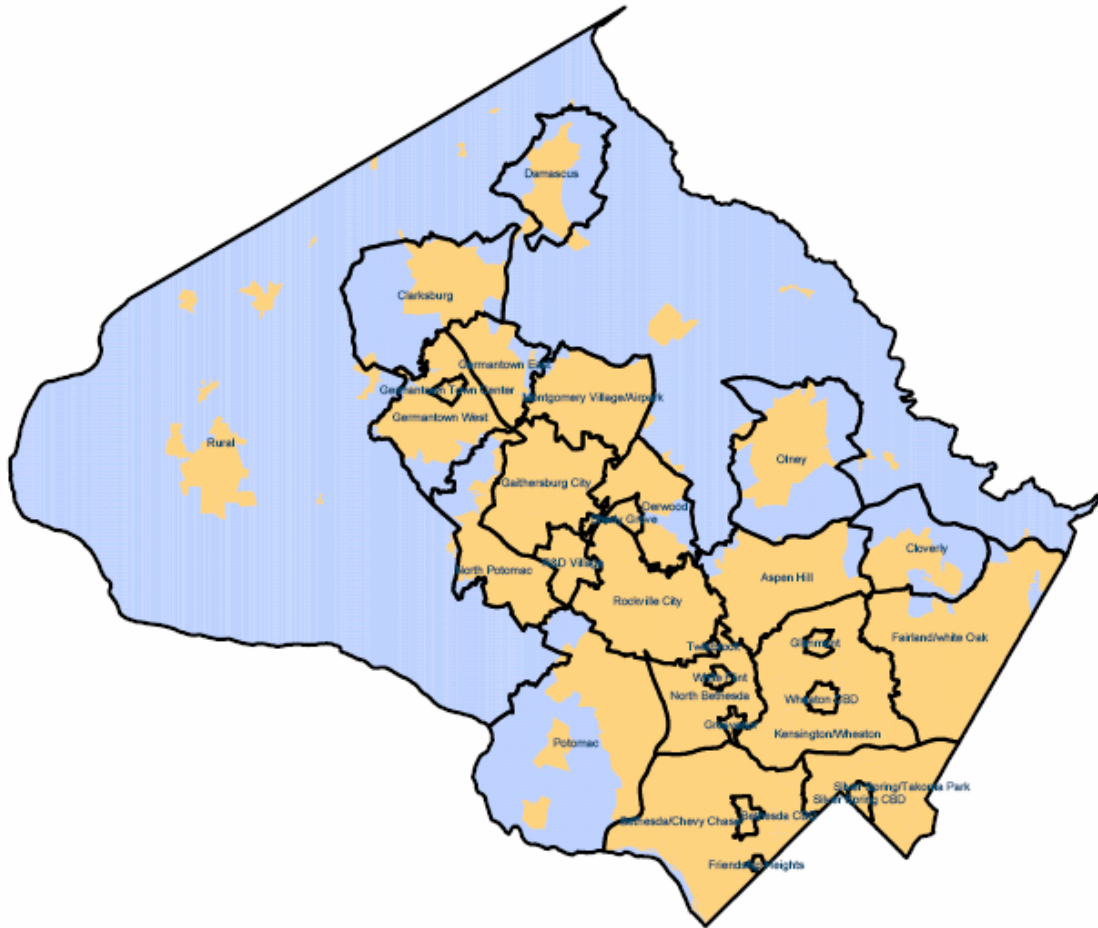
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Certified Priority Funding Areas
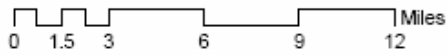
Map 13
Montgomery County
1996 Policy Areas Under Moratoria
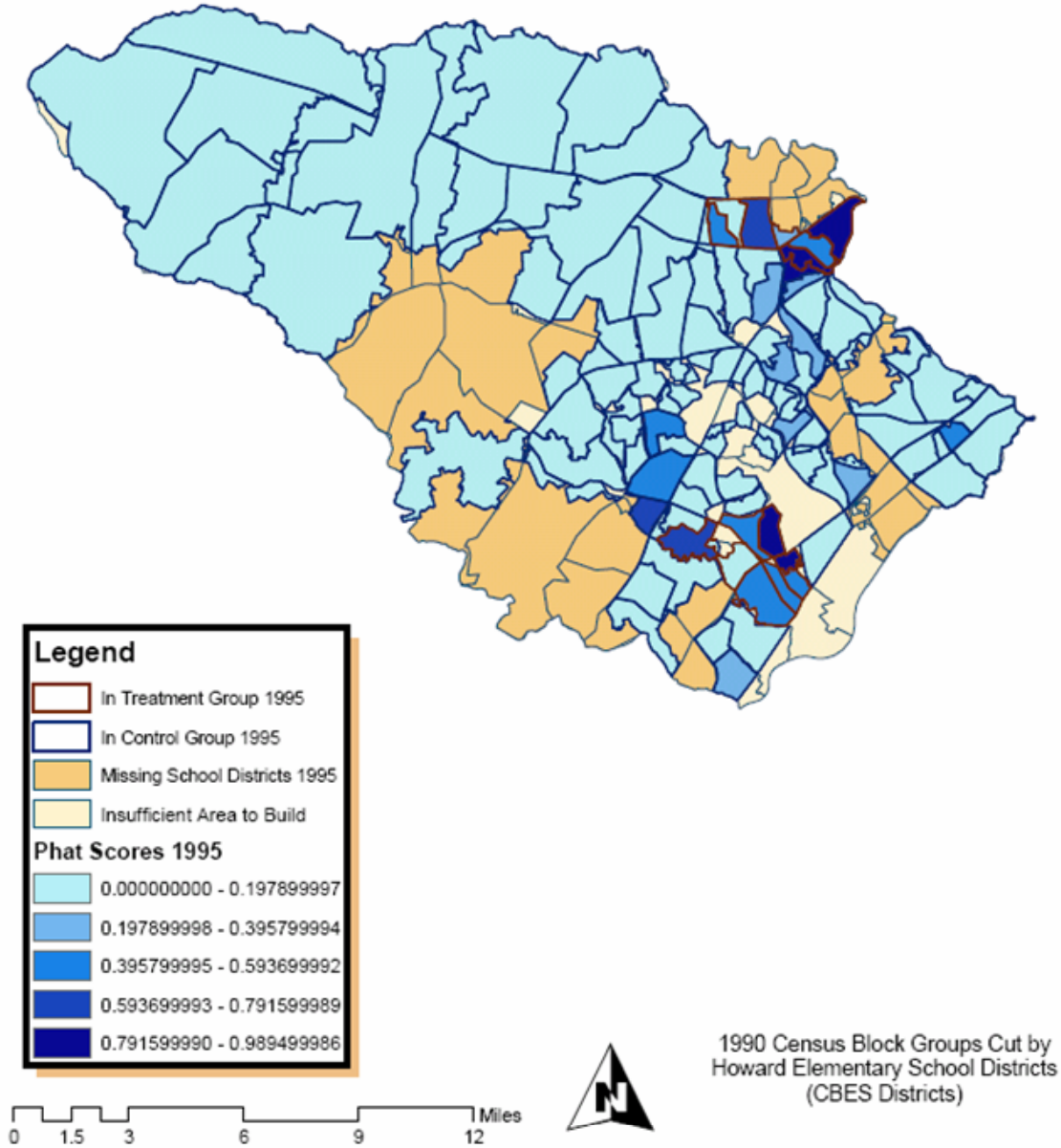

Legend

Certified Priority Funding Areas

Miles
0   1.5   3   6   9   12

Map 14
Montgomery County
1997 Policy Areas Under Moratoria
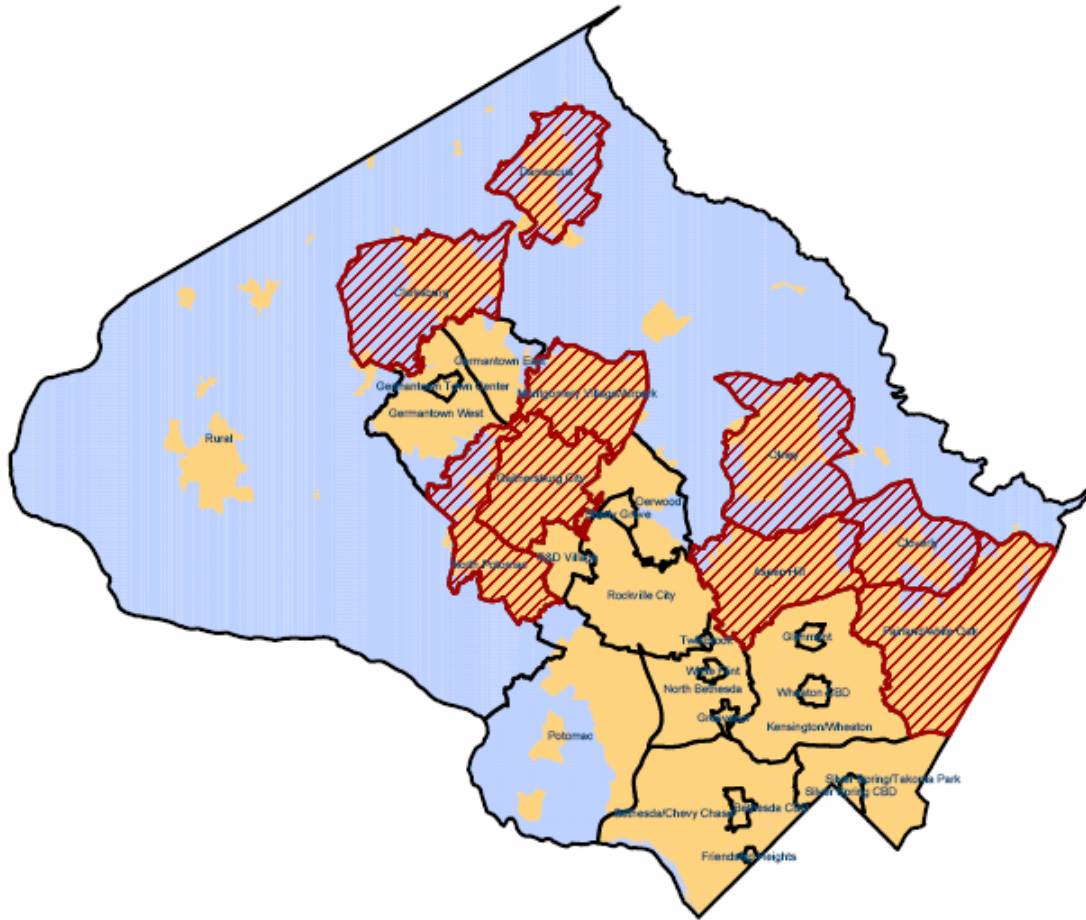
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Certified Priority Funding Areas

Map 15

Montgomery County
1998 Policy Areas Under Moratoria
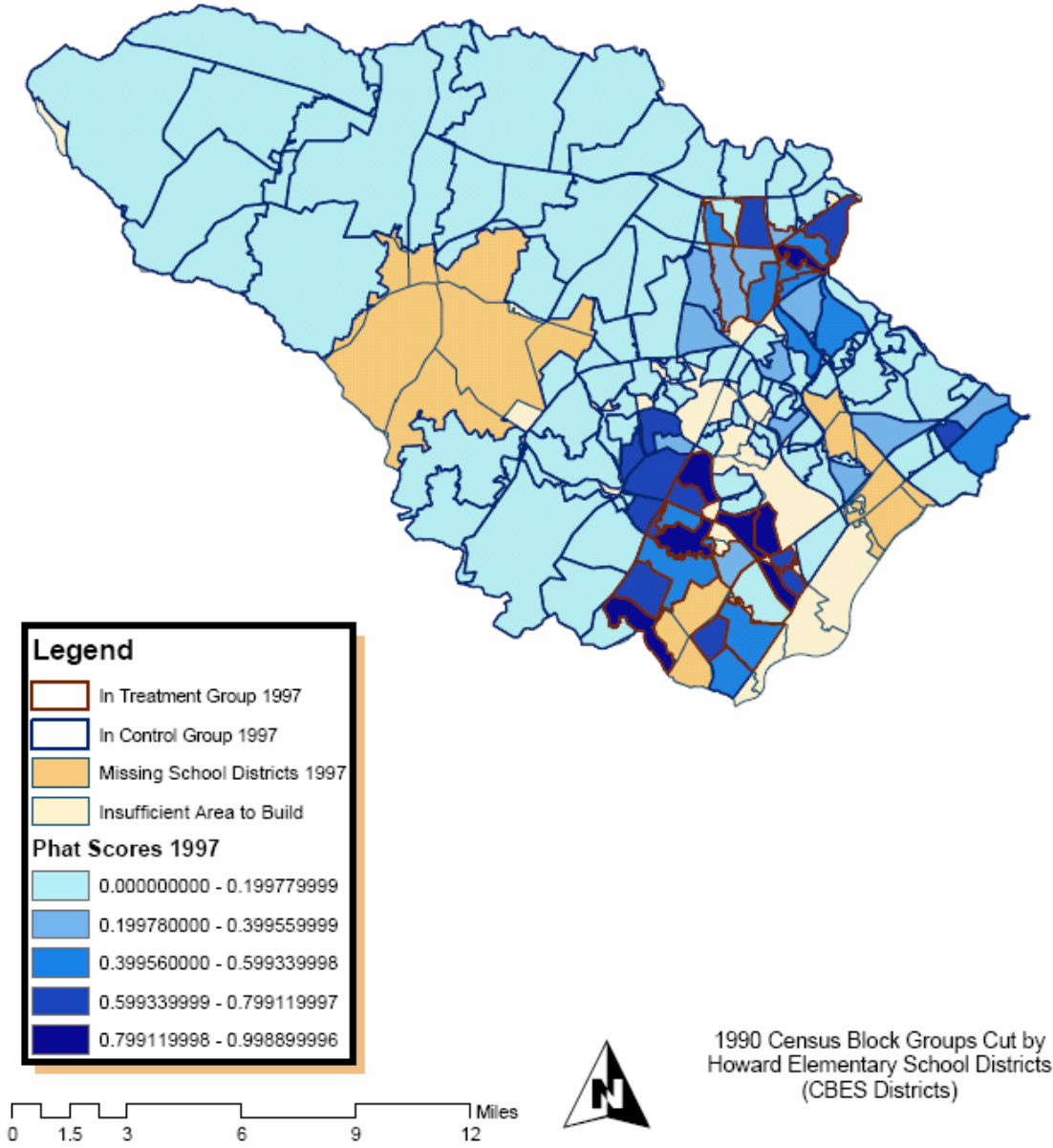

Legend

Certified Priority Funding Areas

N

| | | | | | Miles |
| 0 | 1.5 | 3 | 6 | 9 | 12 |

Map 16

Montgomery County
1999 Policy Areas Under Moratoria

Legend

Certified Priority Funding Areas

Miles
0   1.5   3   6   9   12

Map 17

Montgomery County
2000 Policy Areas Under Moratoria

Legend

Certified Priority Funding Areas

N

Miles
0   1.5   3   6   9   12
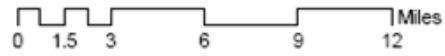
Map 18
Howard County
Phat Scores for CBES Districts in 1995

Legend

☐ In Treatment Group 1995
☐ In Control Group 1995
☐ Missing School Districts 1995
☐ Insufficient Area to Build

Phat Scores 1995

☐ 0.000000000 - 0.197899997
☐ 0.197899998 - 0.395799994
☐ 0.395799995 - 0.593699992
☐ 0.593699993 - 0.791599989
☐ 0.791599990 - 0.989499986

Miles
0   1.5   3   6   9
                                12

N

1990 Census Block Groups Cut by
Howard Elementary School Districts
(CBES Districts)

Map 19
Howard County
Phat Scores for CBES Districts in 1997

Legend

- In Treatment Group 1997
- In Control Group 1997
- Missing School Districts 1997
- Insufficient Area to Build

Phat Scores 1997

- 0.000000000 - 0.199779999
- 0.199780000 - 0.399559999
- 0.399560000 - 0.599339998
- 0.599339999 - 0.799119997
- 0.799119998 - 0.998899996

Miles
0   1.5   3   6   9   12

N

1990 Census Block Groups Cut by
Howard Elementary School Districts
(CBES Districts)

Appendix 1: Additional Maps
Harford County
1991 Elementary School Districts Under Moratoria

Legend

Certified Priority Funding Areas

NORRISVILLE

NORTH HARFORD

NORTH BEND

DUBLIN

DARLINGTON

JARRETTSVILLE

FOREST HILL

HICKORY

MEADOWVALE

FOREST LAKES

PROSPECT MILL

CHURCHVILLE

BEL AIR

FOUNTAIN GREEN

BAKERSFIELD

HAVRE DE GRACE

YOUTHS BENEFIT

HOMESTEAD-WAKEFIELD

RING FACTORY

HALLS CROSS ROADS

EMMORTON

WILLIAM PACA GREENBAUM

CHURCH CREEK

ROYE-WILLIAMS

WILLIAM S. JAMES

ABINGDON

HILLSDALE

WILLIAM PACA OLD POST

JOPPATOWNE

RIVERSIDE

DEERFIELD

MAGNOLIA

EDGEWOOD

Miles

0   1.5   3   6   9   12

Harford County
1993 Elementary School Districts Under Moratoria

Legend

Certified Priority Funding Areas
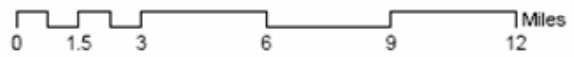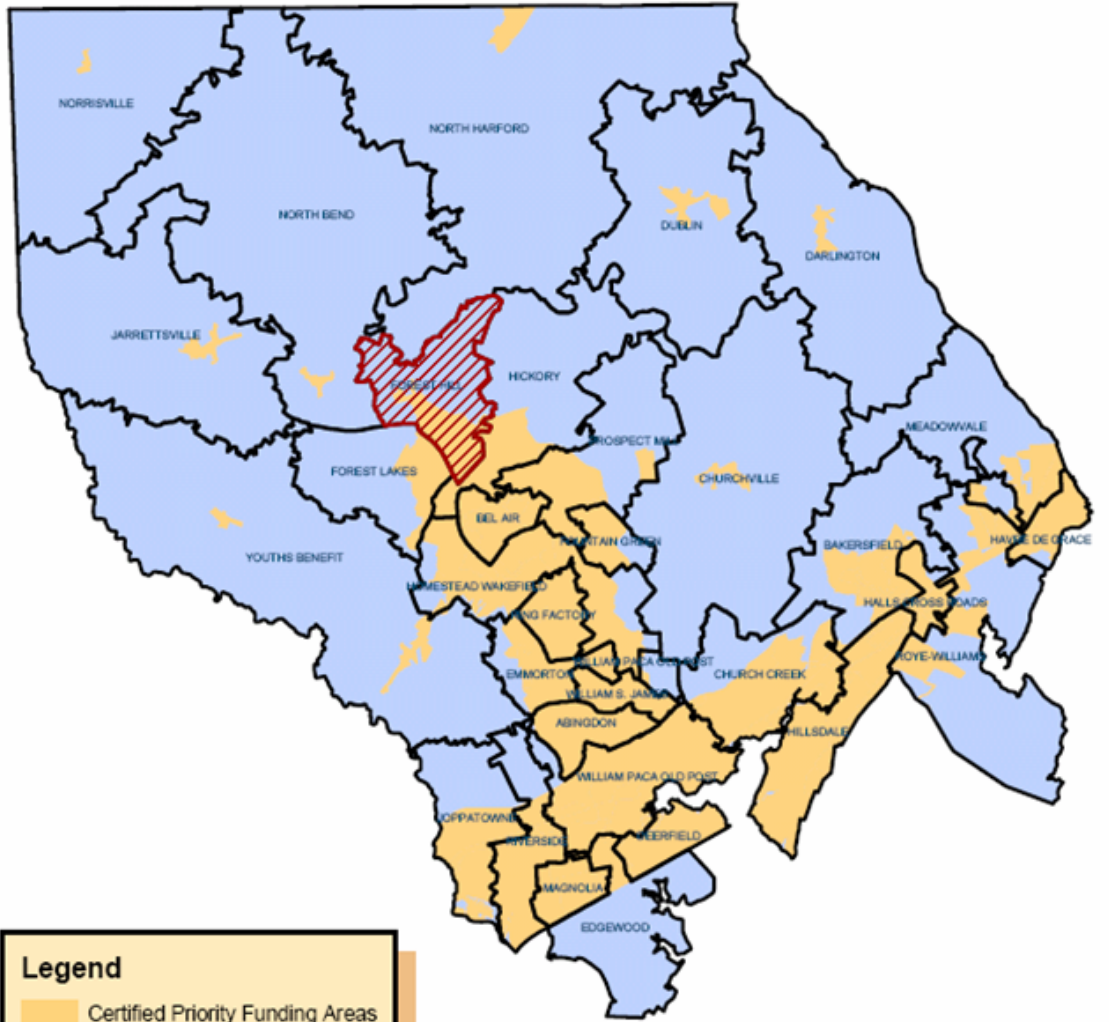
Harford County
1994 Elementary School Districts Under Moratoria
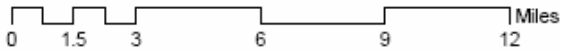

Legend

Certified Priority Funding Areas

Miles
0   1.5   3   6   9   12
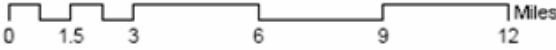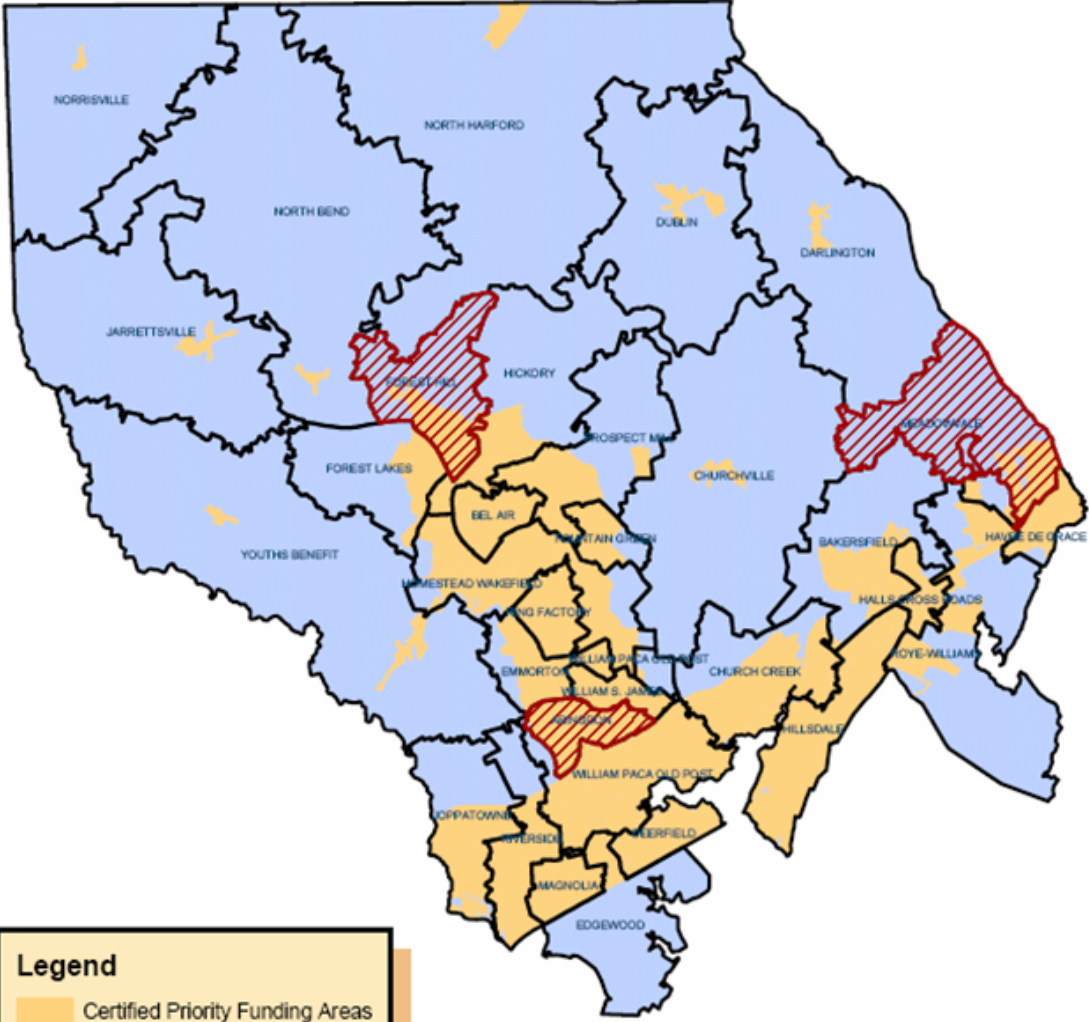
Harford County
Middle School Districts

North Harford

Havre de Grace

Southampton

Fallston

Bel Air

Aberdeen

Magnolia

Edgewood

Legend

Certified Priority Funding Areas

N

					Miles
0	1.5	3	6	9	12
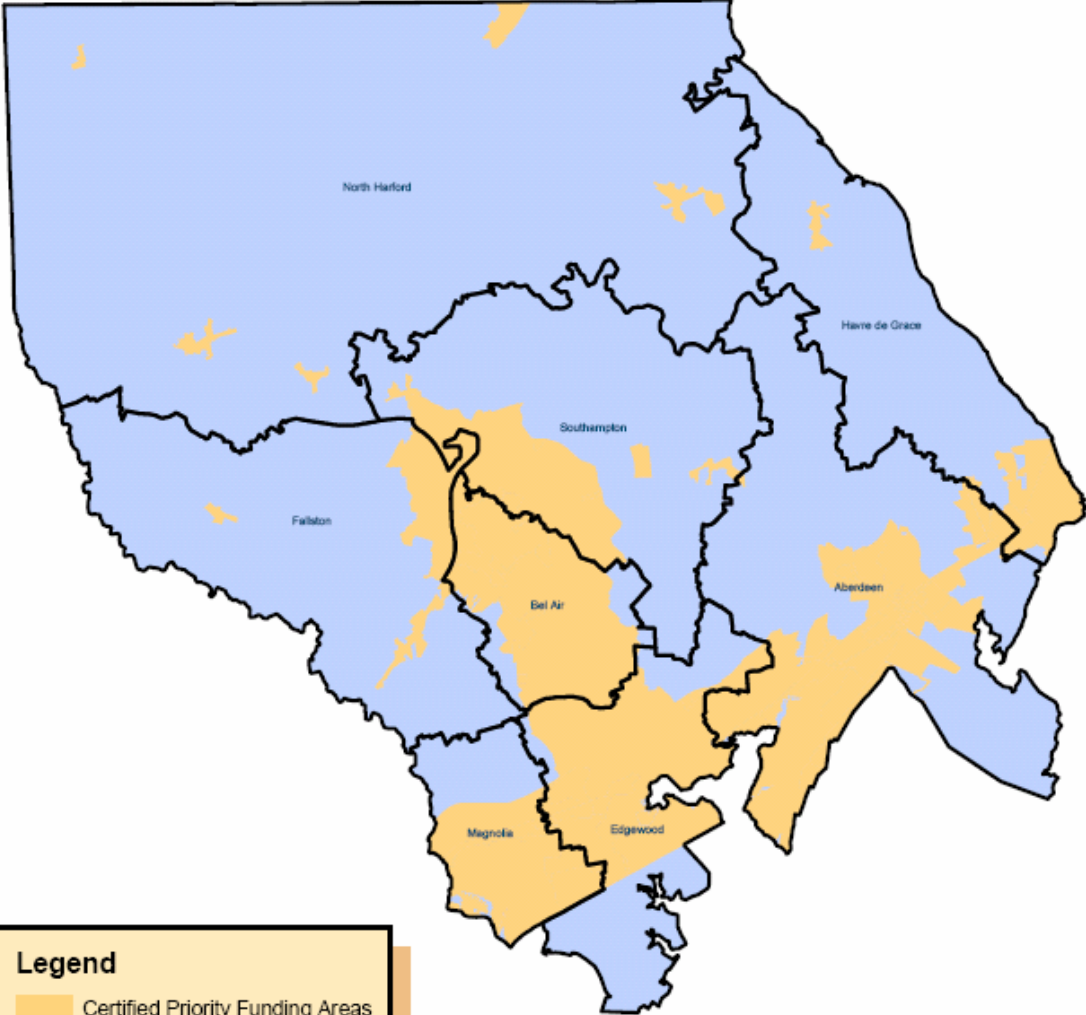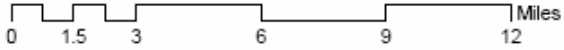
Harford County
1991 Middle School Districts Under Moratoria

Legend

Certified Priority Funding Areas

Miles
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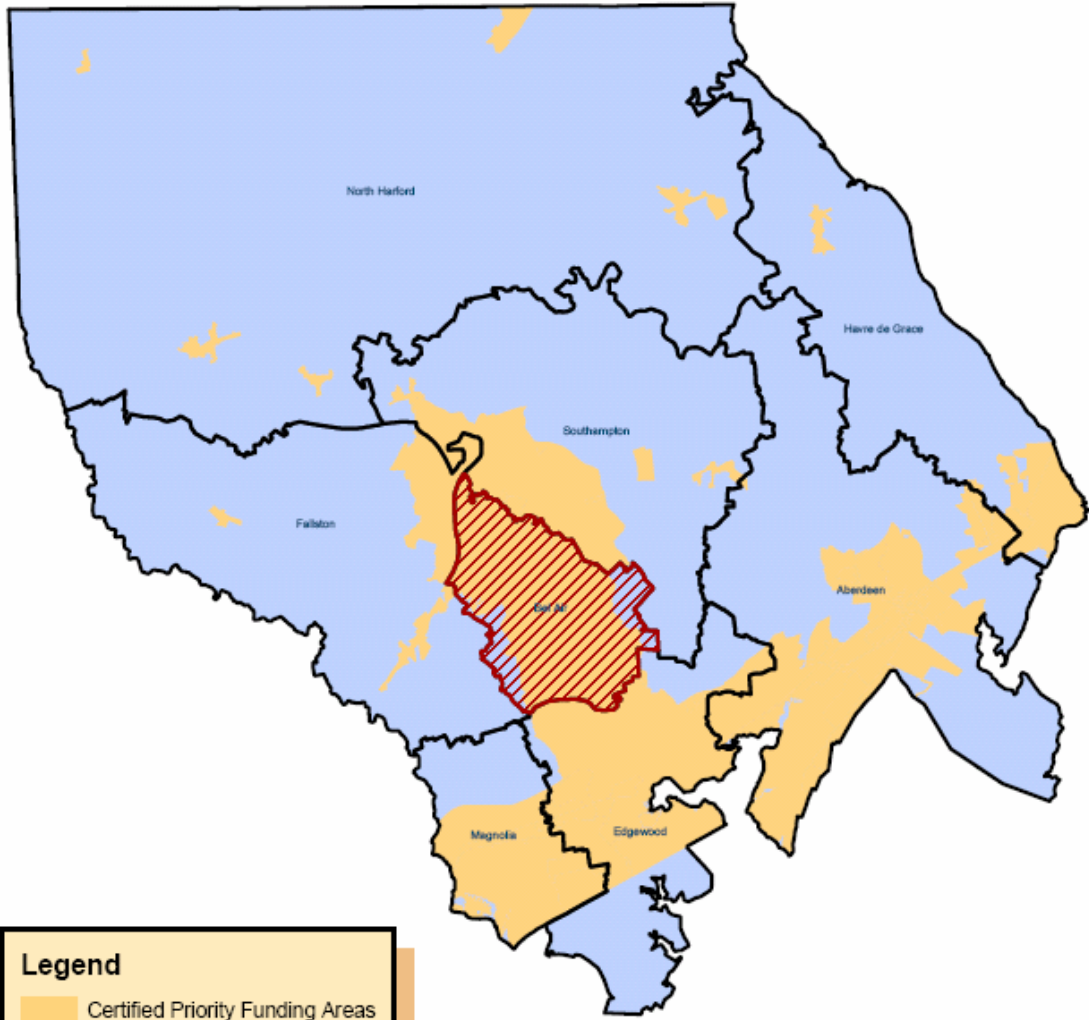
Harford County

1994 Middle School Districts Under Moratoria

Legend

Certified Priority Funding Areas

North Harford

Havre de Grace

Southampton

Aberdeen

Fallston

Bel Air

Magnolia

Edgewood

Miles

0   1.5   3   6   9   12
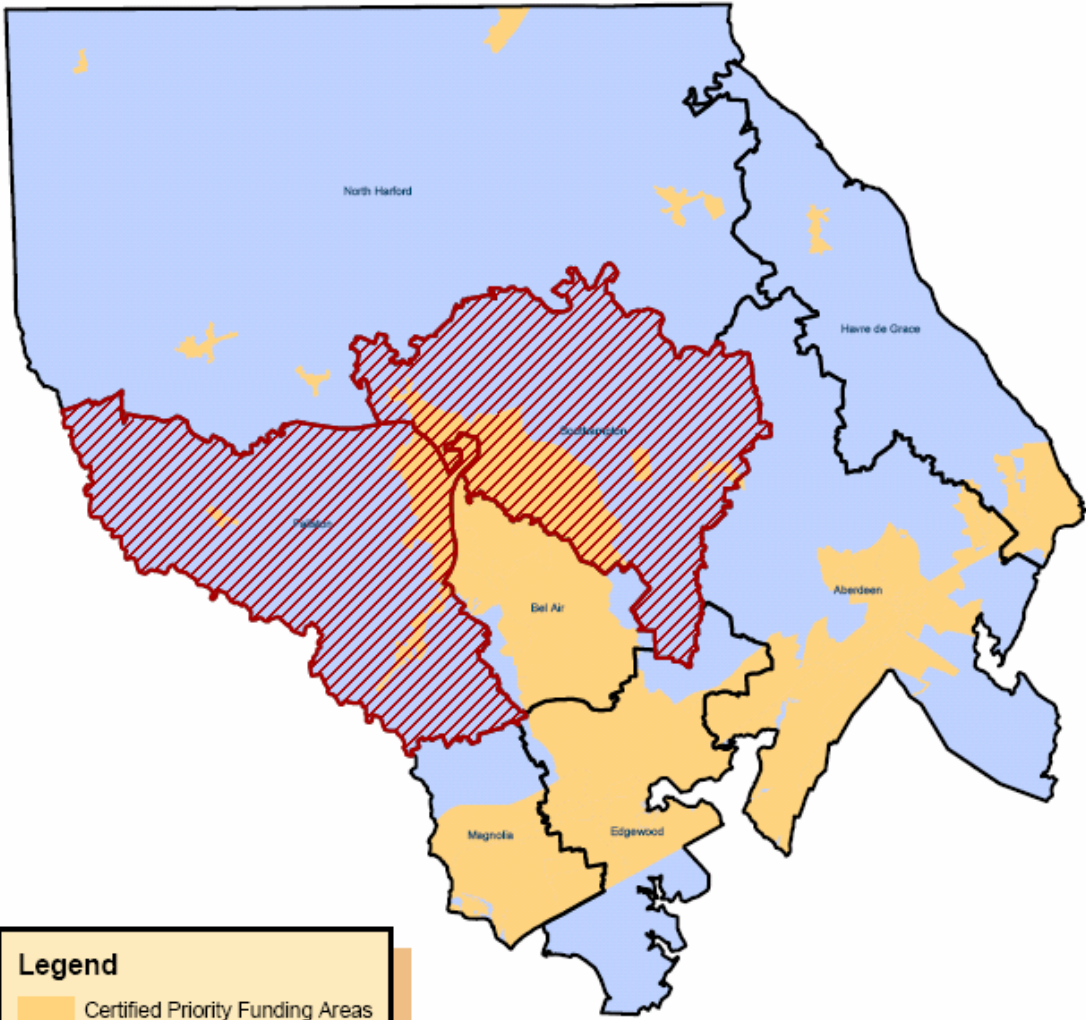
Harford County
1995 Middle School Districts Under Moratoria

North Harford

Havre de Grace

Southampton

Bel Air

Aberdeen

Magnolia

Edgewood

Legend

Certified Priority Funding Areas

N
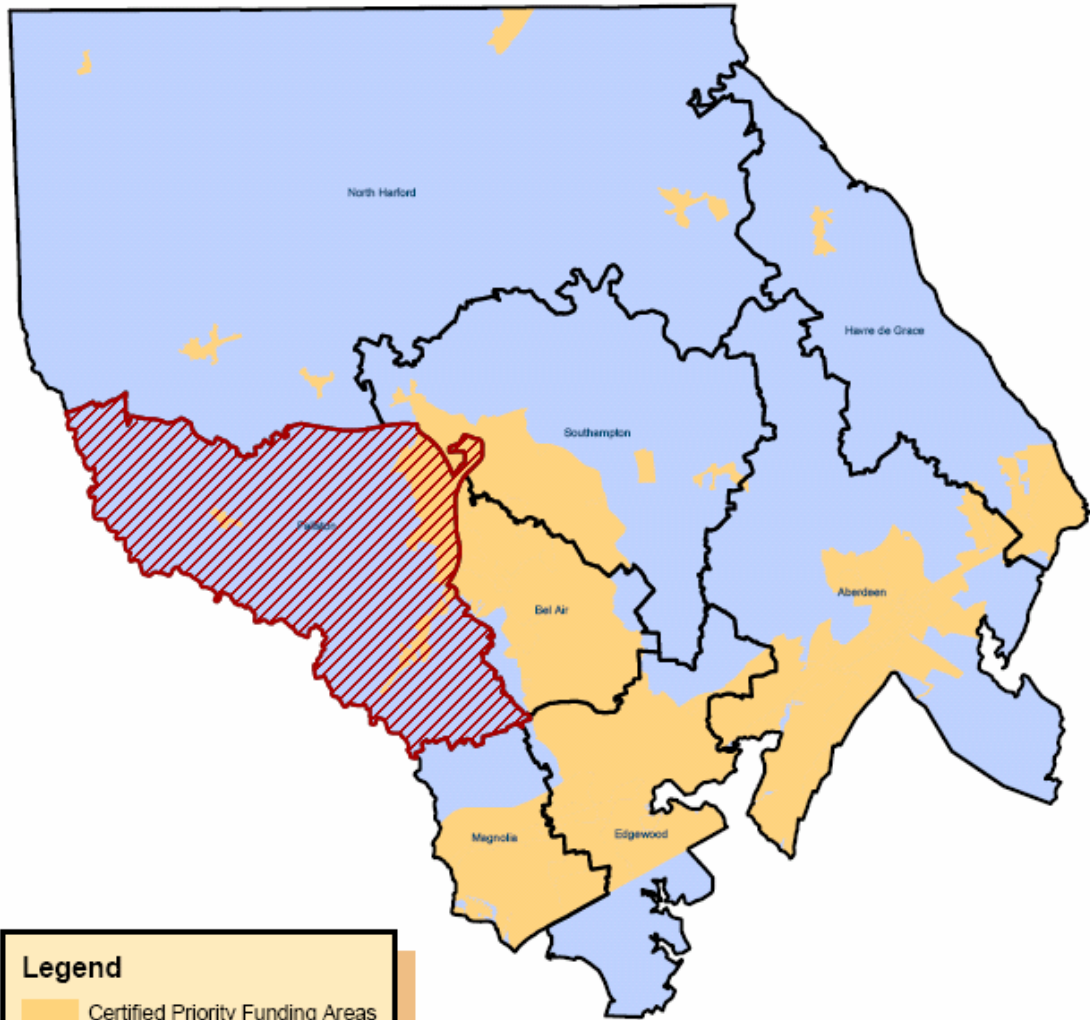
					Miles
0	1.5	3	6	9	12

Harford County
1996 Middle School Districts Under Moratoria
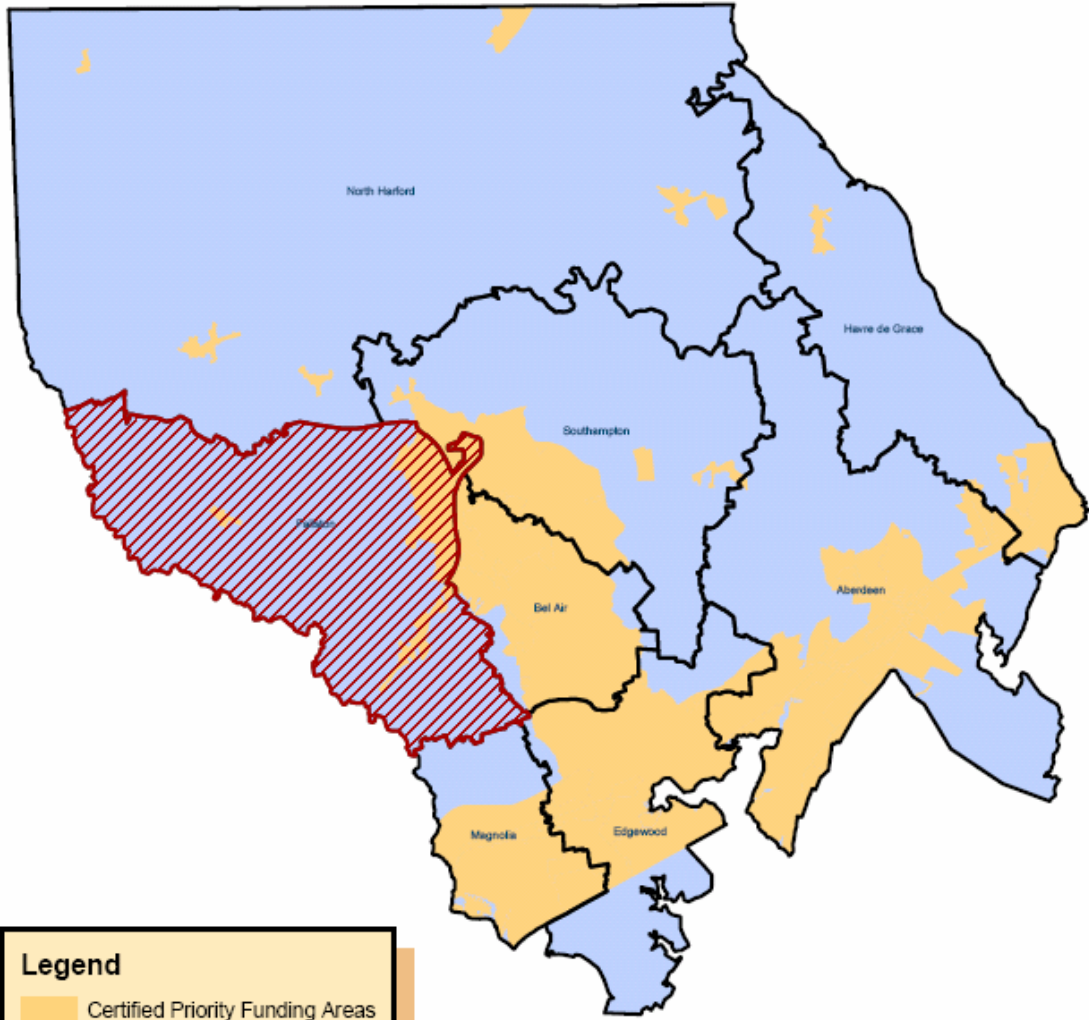
Legend

Certified Priority Funding Areas
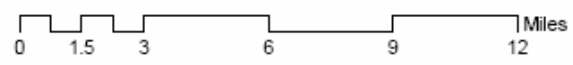
Miles
0   1.5   3   6   9   12

Harford County
1997 Middle School Districts Under Moratoria

Legend

Certified Priority Funding Areas
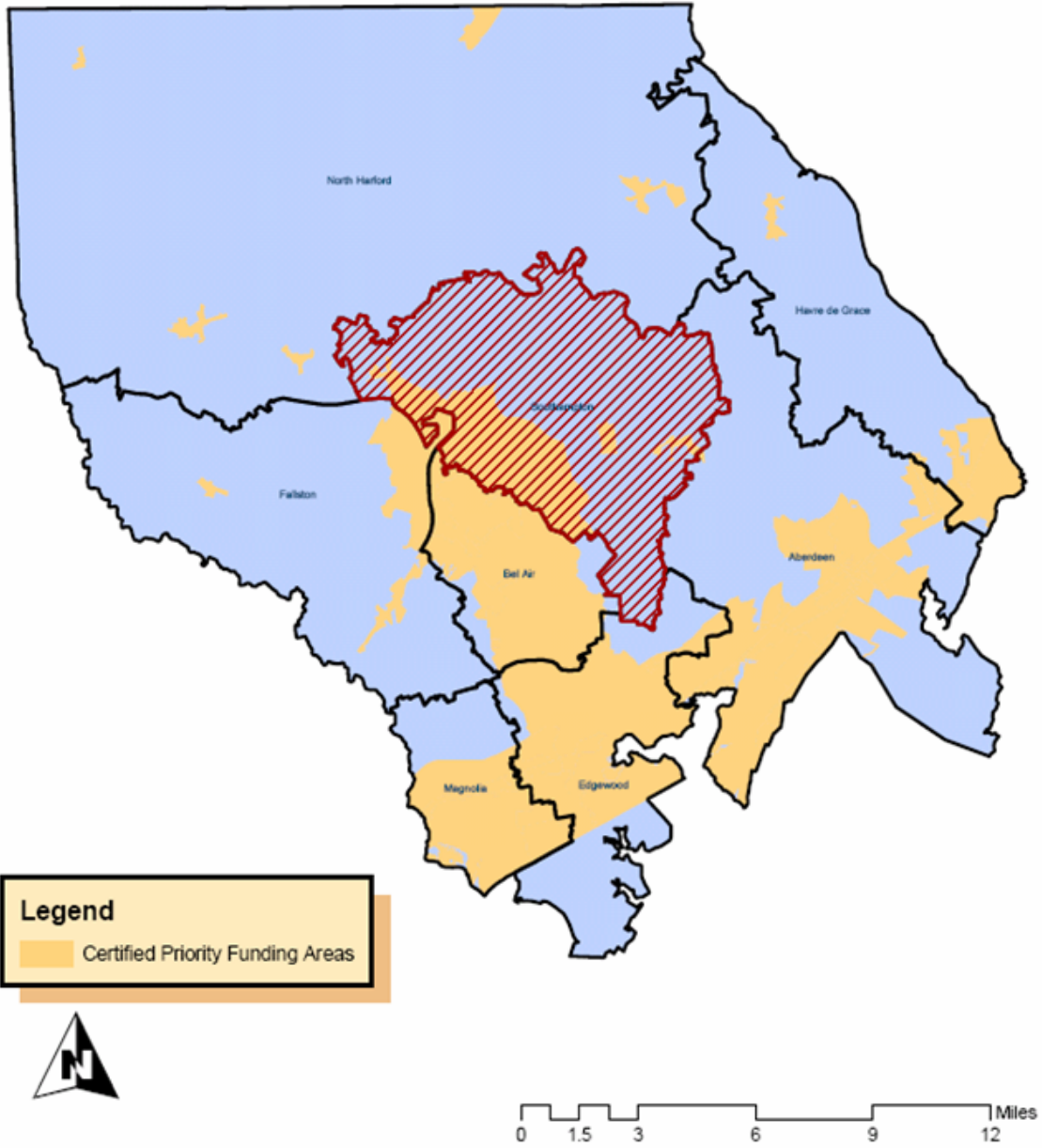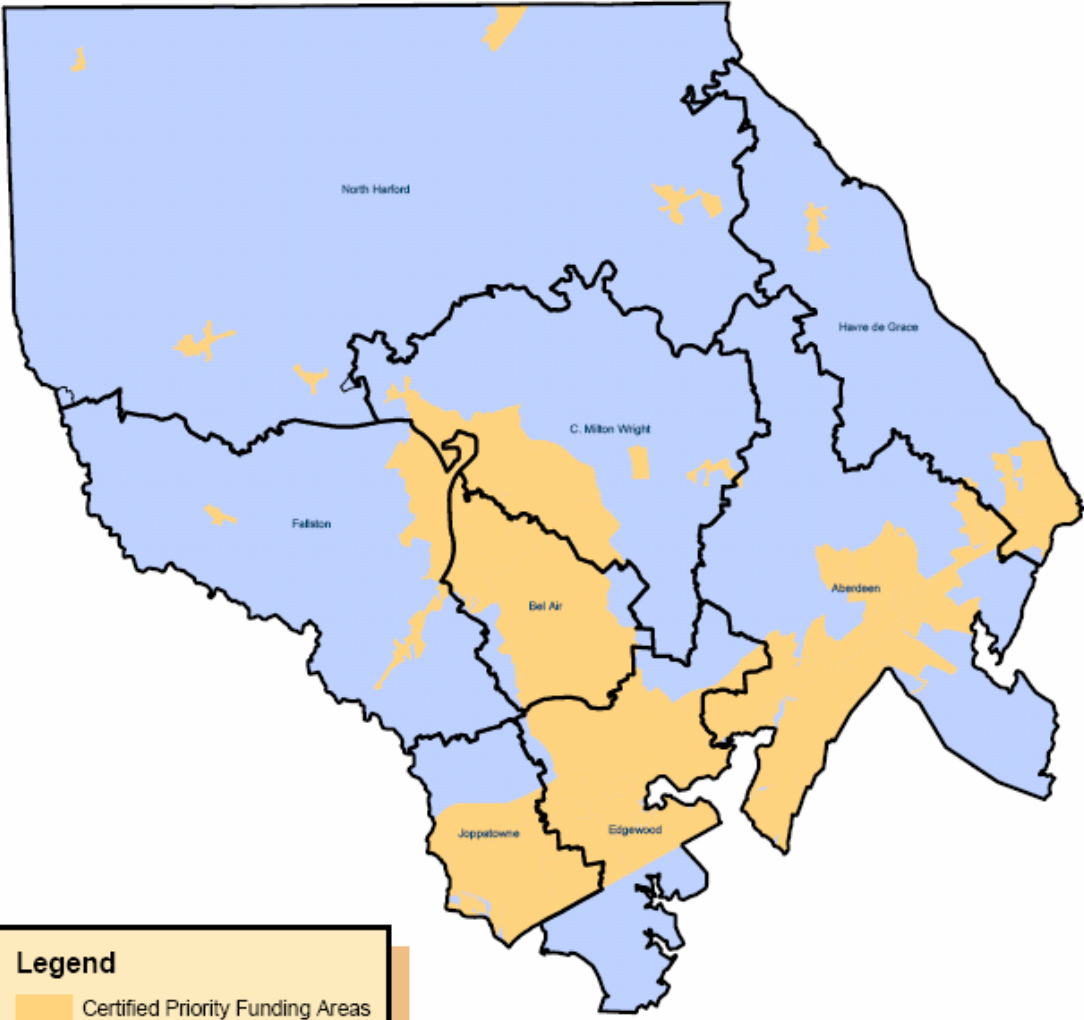
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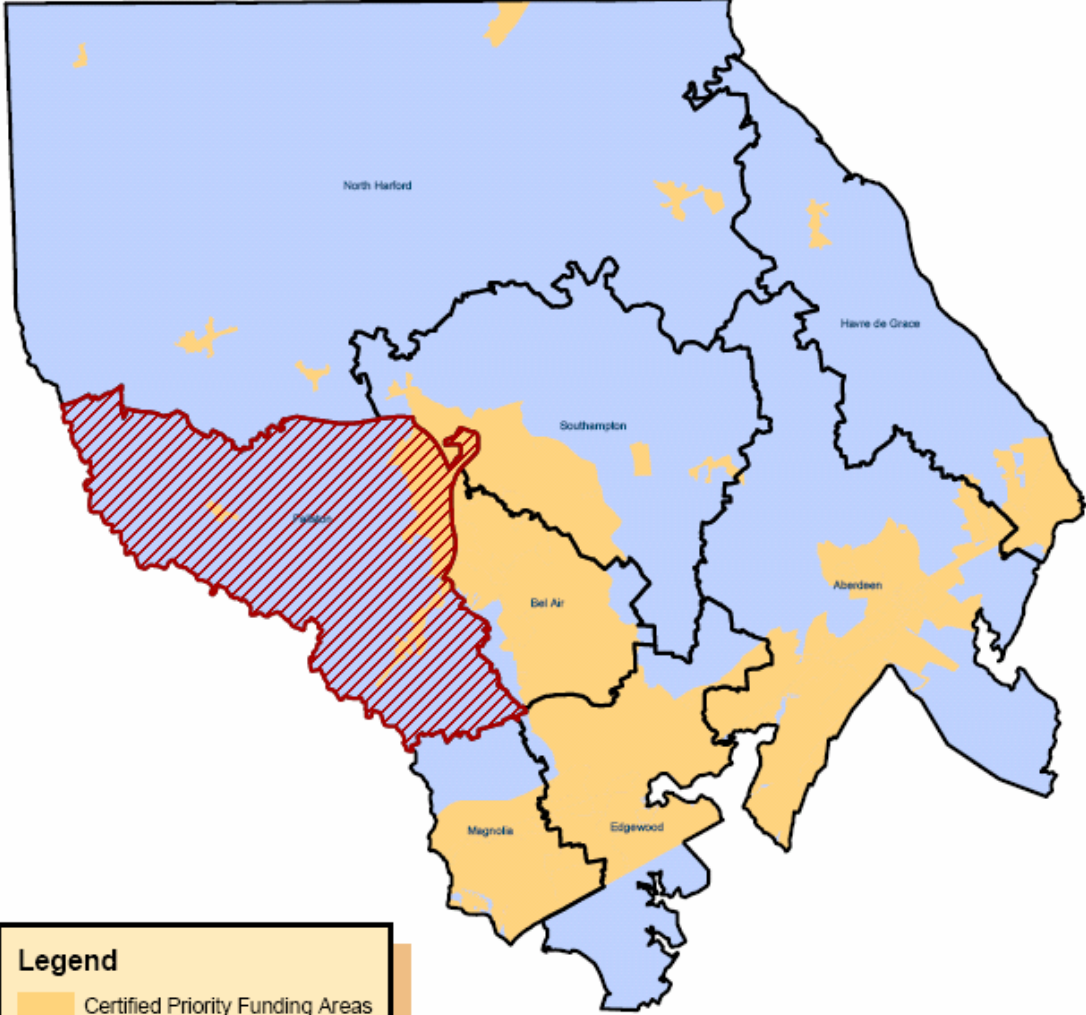
Miles
0   1.5   3   6   9   12

Harford County
1999 Middle School Districts Under Moratoria

North Harford

Havre de Grace

Southampton

Fallston

Bel Air

Aberdeen

Magnolia

Edgewood

Legend

Certified Priority Funding Areas

N

						Miles
0	1.5	3	6	9	12	
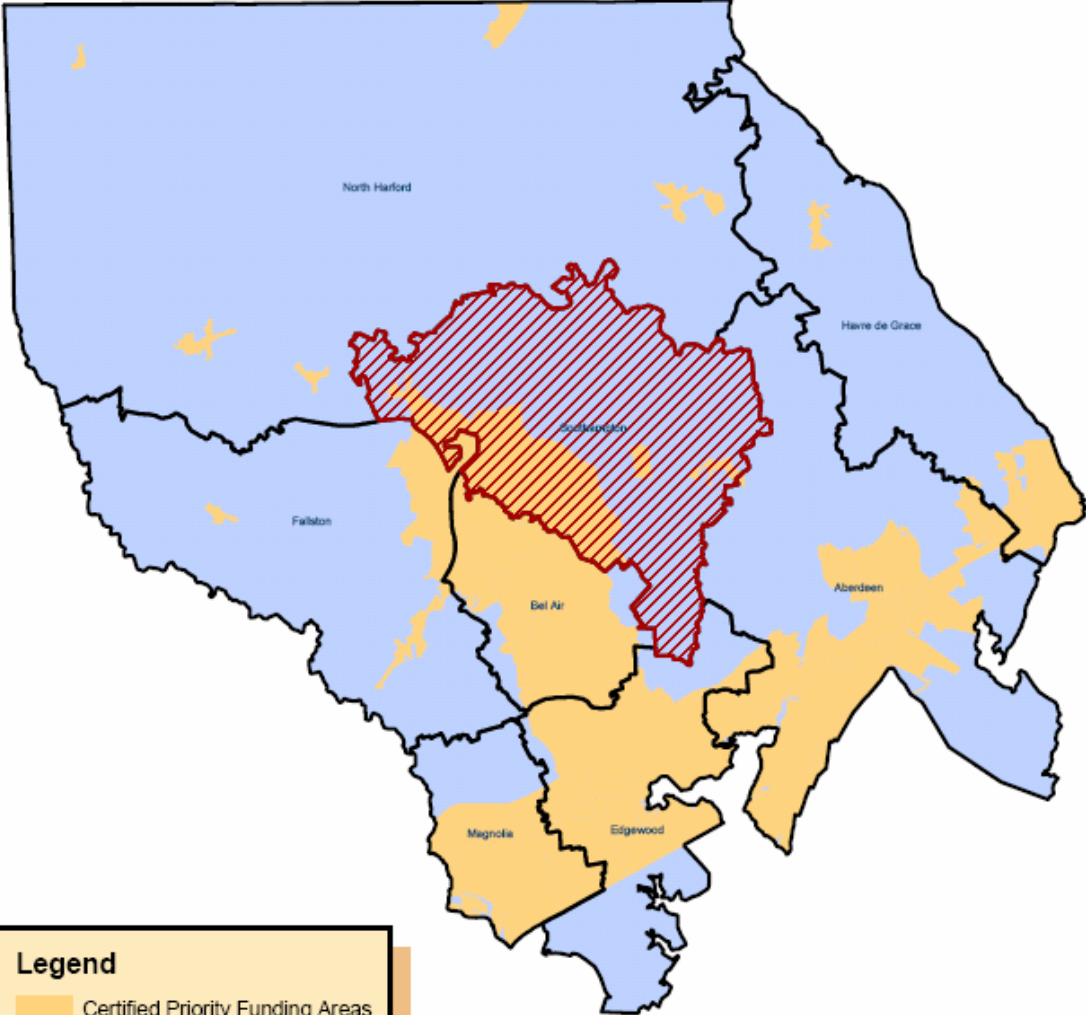
Harford County
2000 Middle School Districts Under Moratoria
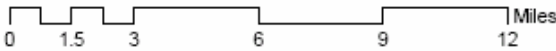

Legend

Certified Priority Funding Areas

Harford County
High School Districts

North Harford

Havre de Grace

C. Milton Wright

Fallston

Bel Air

Aberdeen

Joppatowne

Edgewood

Legend

Certified Priority Funding Areas

N

					Miles
0	1.5	3	6	9	12
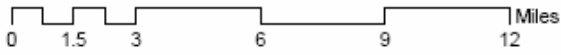
Harford County
1994 High School Districts Under Moratoria

North Harford

Havre de Grace

Fallston

Bel Air

Aberdeen

Joppatowne

Edgewood

Legend

Certified Priority Funding Areas

N

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0	1.5	3	6	9	12
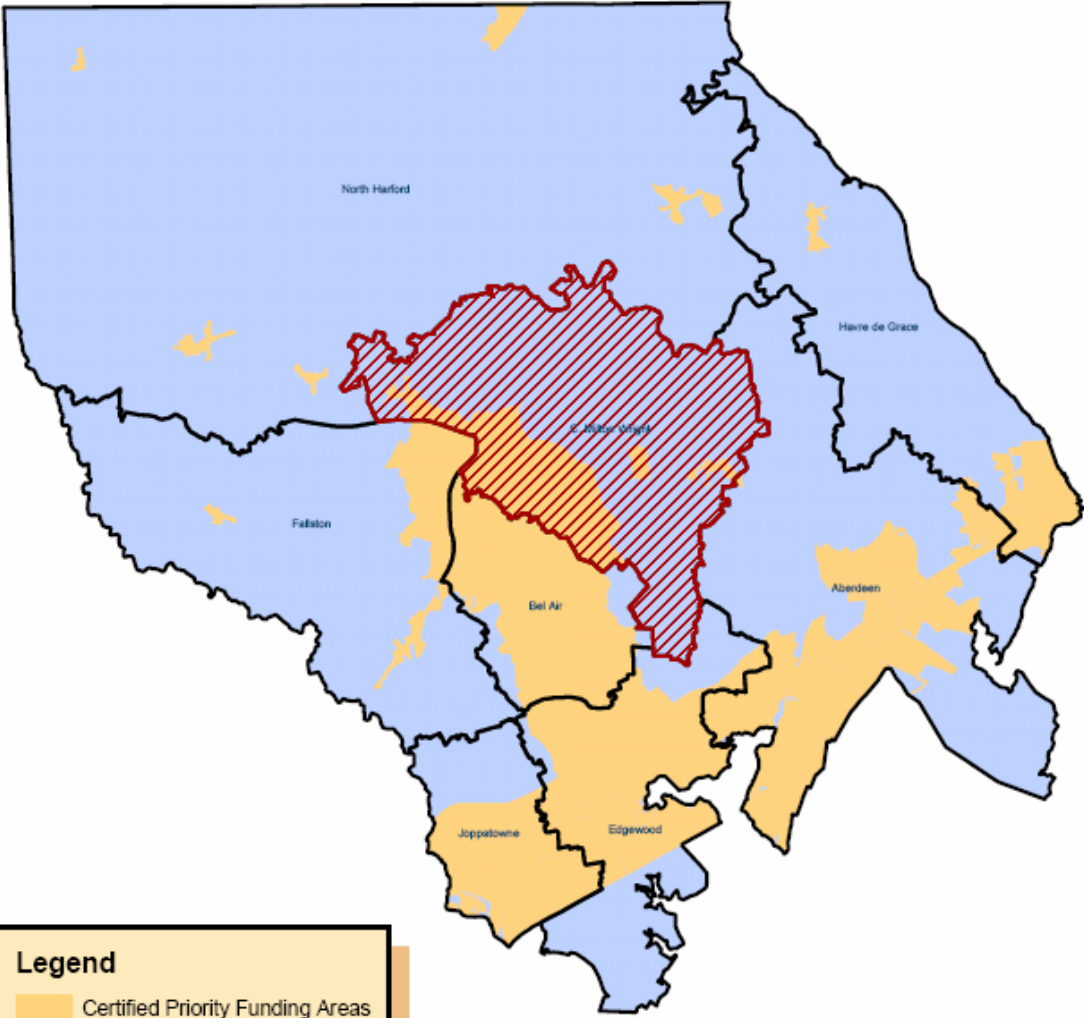
Harford County
1997 High School Districts Under Moratoria

North Harford

Havre de Grace

Fallston

Bel Air

Aberdeen

Joppatowne

Edgewood

Legend

Certified Priority Funding Areas

N

| | | | | | | Miles |
0   1.5   3   6   9   12
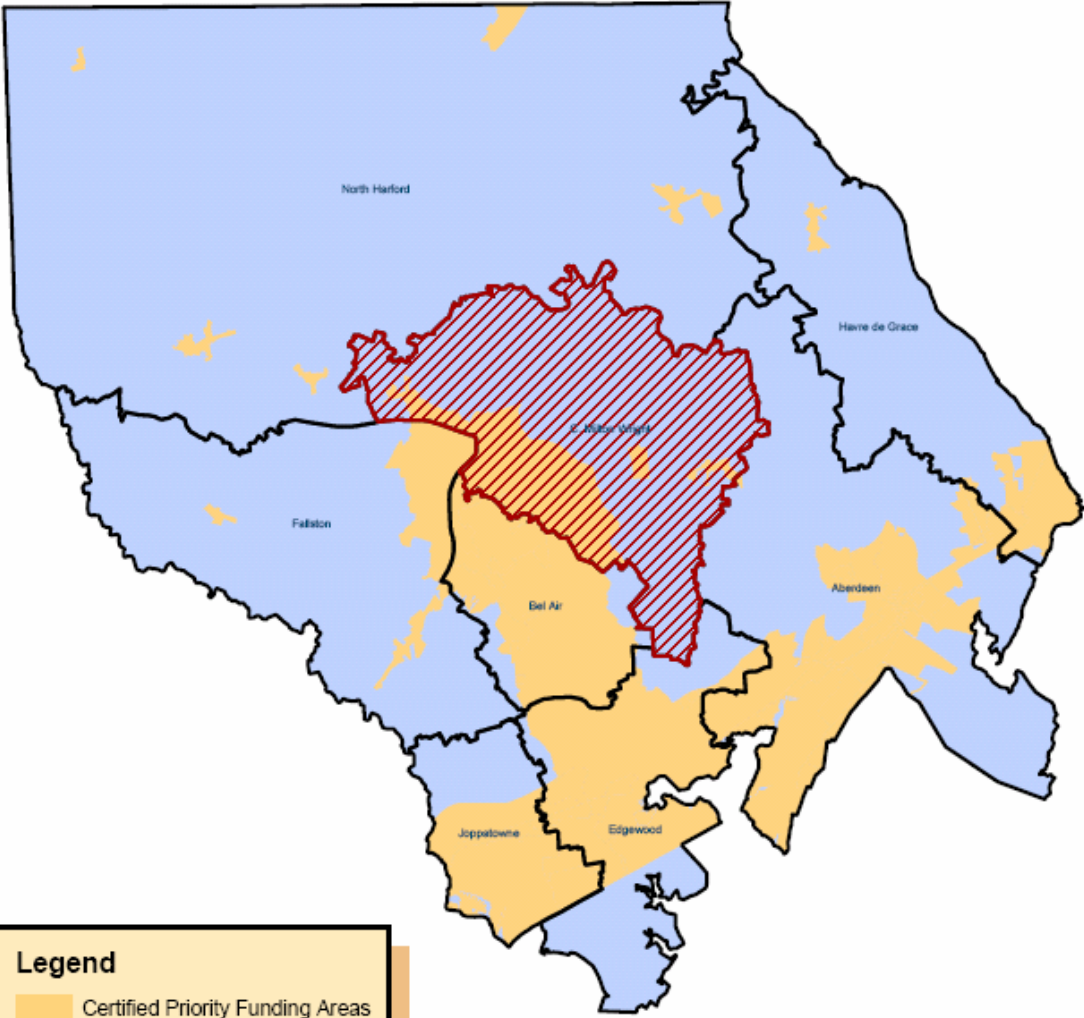
Harford County
2000 High School Districts Under Moratoria

North Harford

Havre de Grace

Fallston

Bel Air

Aberdeen

Joppatowne

Edgewood

Legend

Certified Priority Funding Areas

N

					Miles
0	1.5	3	6	9	12

Montgomery County
1990 Policy Areas Under Moratoria

Legend

Certified Priority Funding Areas

N

					Miles
0	1.5	3	6	9	12

Montgomery County

1991 Policy Areas Under Moratoria

Legend

Certified Priority Funding Areas

N

Miles
0   1.5   3   6   9   12

Montgomery County
1992 Policy Areas Under Moratoria

Legend

Certified Priority Funding Areas

N

Miles
0 1.5 3   6   9   12

Montgomery County

1993 Policy Areas Under Moratoria

Legend

Certified Priority Funding Areas

N
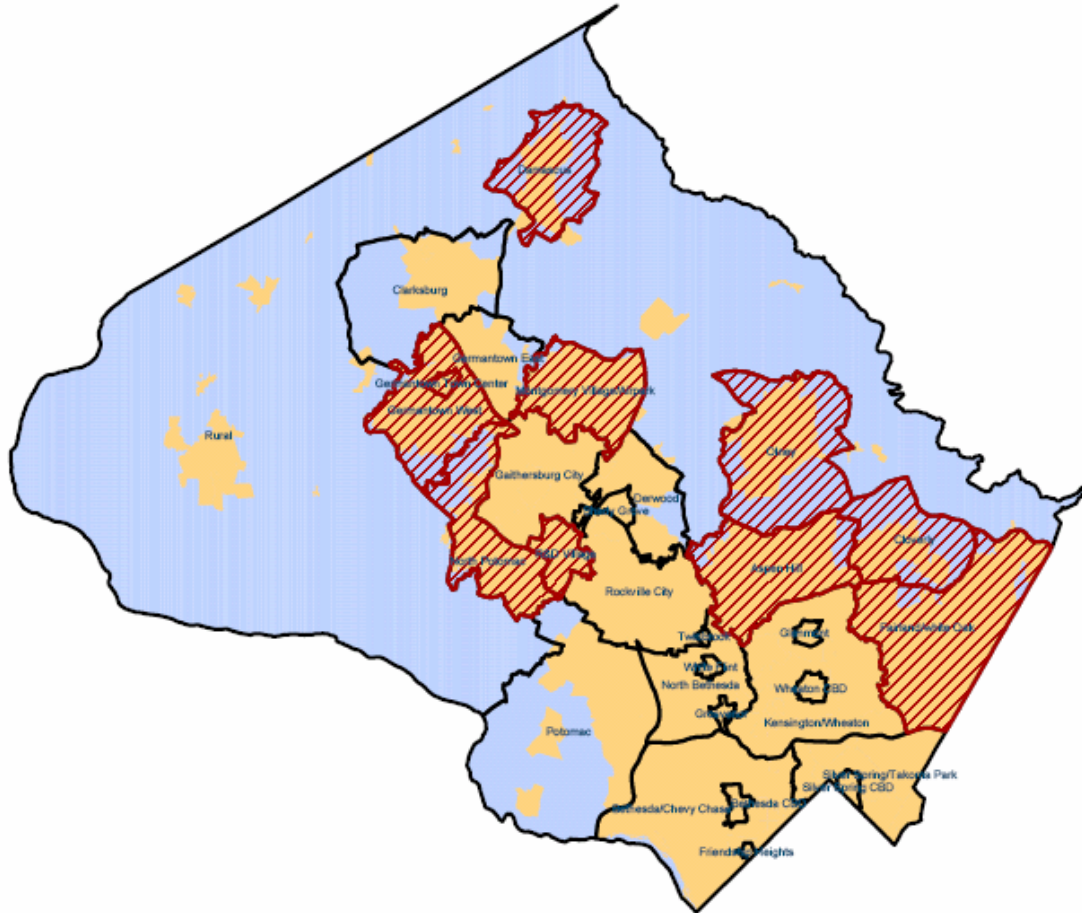
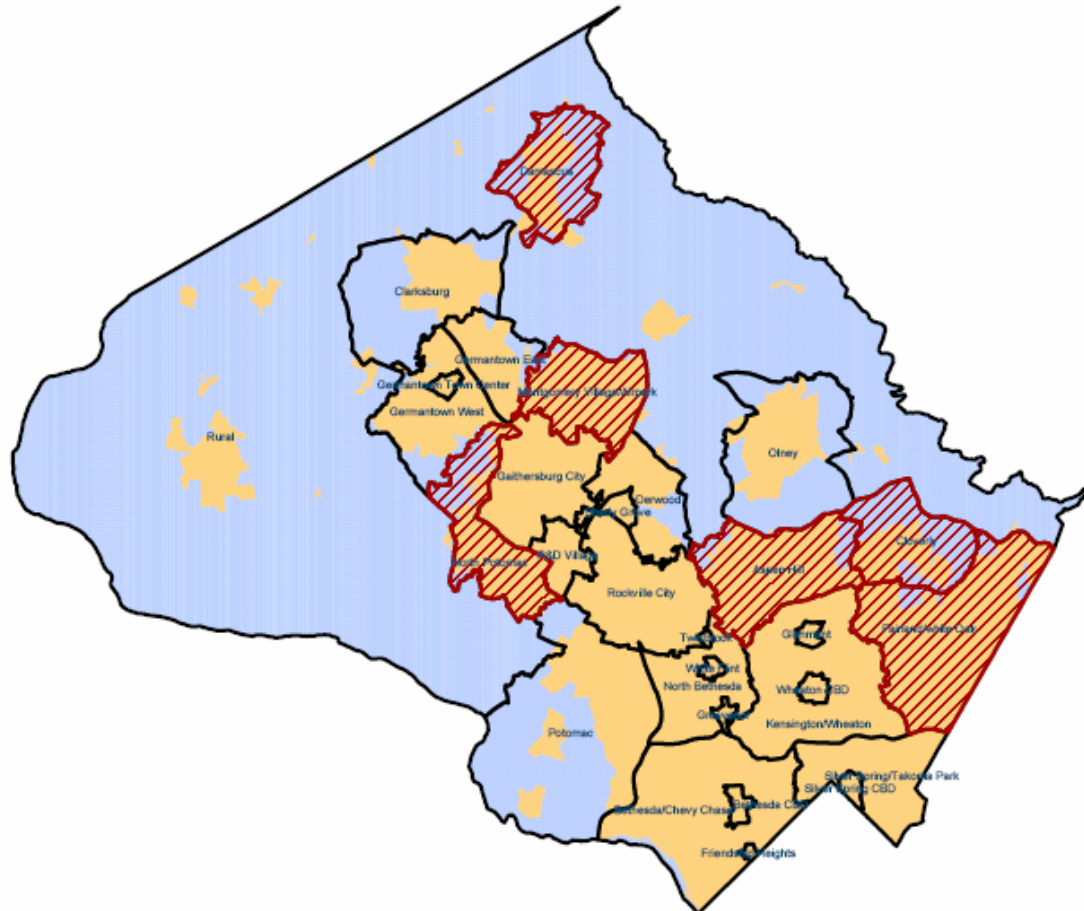0   1.5   3   6   9   12   Miles
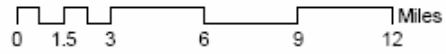
Montgomery County

1994 Policy Areas Under Moratoria

Legend

Certified Priority Funding Areas