

OCTOBER 2020

Washington, DC Stormwater Credit Trading: Overview

natureVest™

The Nature
Conservancy 



2013 Stormwater Rule

In 2013, the Washington, DC Department of Energy and Environment revised the stormwater rules to require:

- New development¹ to retain the stormwater caused by a 90th percentile storm event
- Major renovation² to retain the stormwater caused by an 80th percentile storm event
- 50% of the stormwater retention must be managed onsite
 - Approved best management practices include green roofs, cisterns, bioretention cells, vegetative ground cover, and more
 - The remainder can be provided by offsite Stormwater Retention Credits (SRCs) or by paying an in-lieu fee.

1 – New development = land disturbance > 5,000 SF

2 – Major renovation = project whose cost exceeds 50% of the pre-project assessed value and whose combined footprint(s) are > 5,000 SF

Benefits of Offsite Compliance Using SRCs

COST SAVINGS

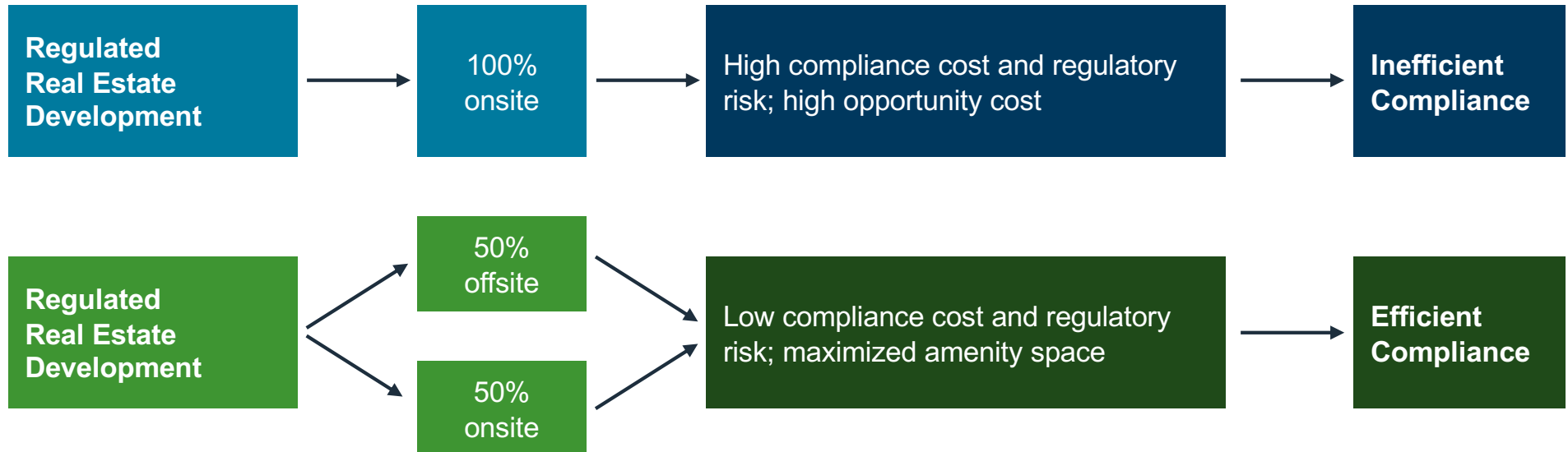
Purchasing SRCs from an offsite provider saves money.

DESIGN FLEXIBILITY

Offsite compliance allows developers to focus on design instead of stormwater management.

OPPORTUNITY COSTS

Offsite compliance frees space for revenue-generating features like parking spaces and rooftop amenities.



100% Retention Onsite in Practice

Less below
ground parking

More expensive
structure + systems



Less amenity space

50% Retention Onsite and 50% Offsite in Practice



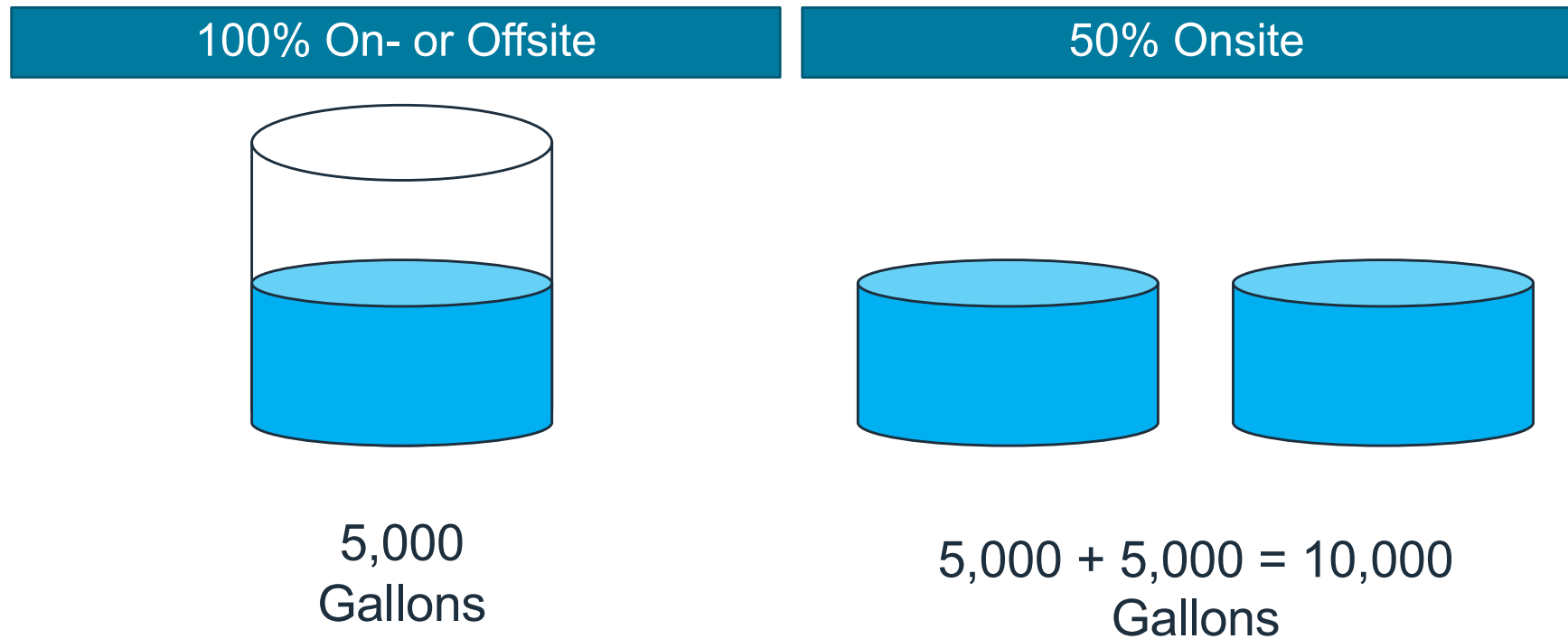
Increased revenues from more underground parking and rooftop amenity space



Cost effective offsite green infrastructure with environmental co-benefits

Why Trading is Environmentally Beneficial

The onsite requirement, in conjunction with trading, has potential to increase District-wide stormwater retention



- 1.2" retention standard reflects 90th percentile storm event
- Offsite retention allows more property to retain lesser storms
- For a 0.6" storm, above scenario would increase retention by 57%

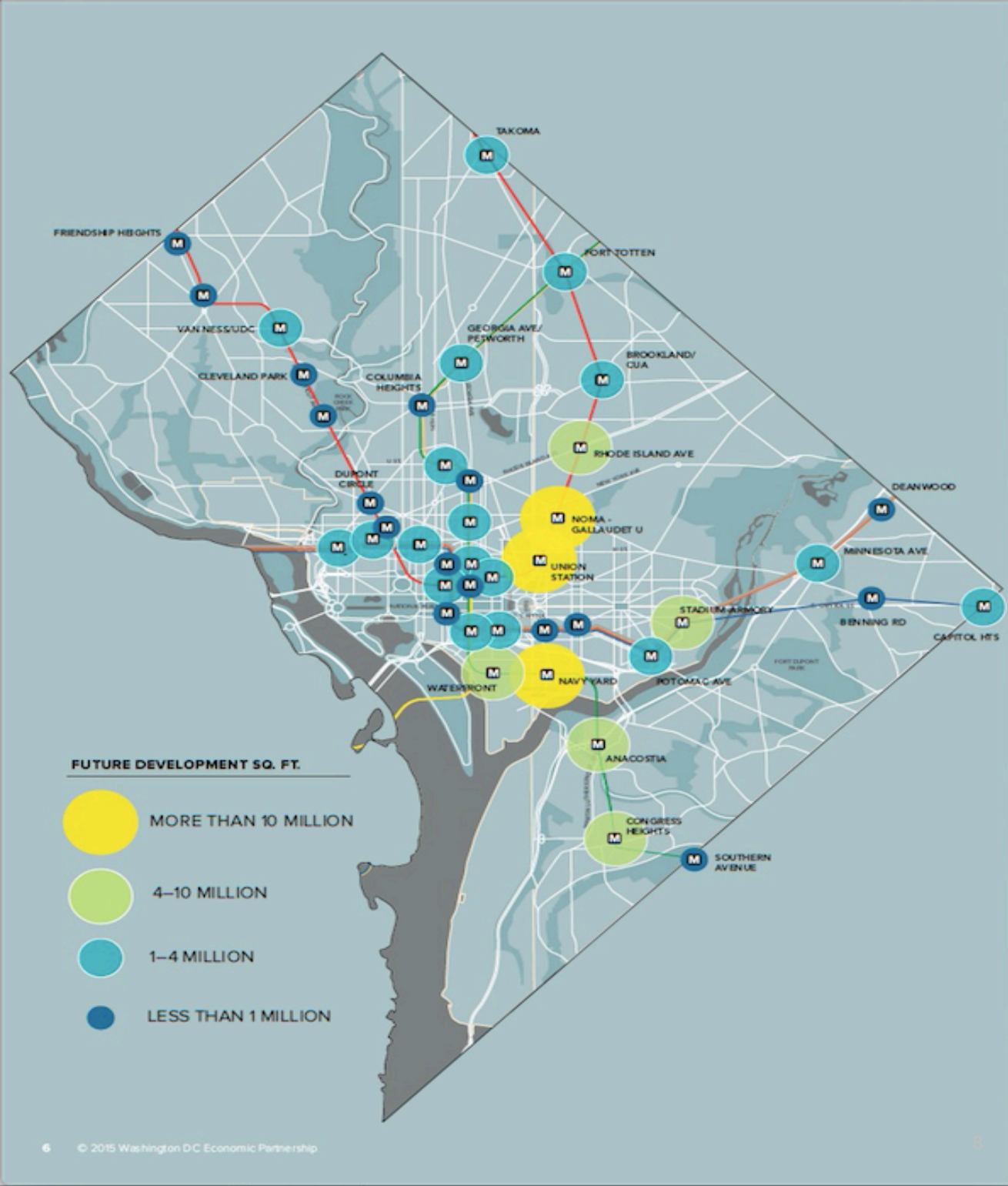
90-95%

Private Ownership of Land
Across most U.S.

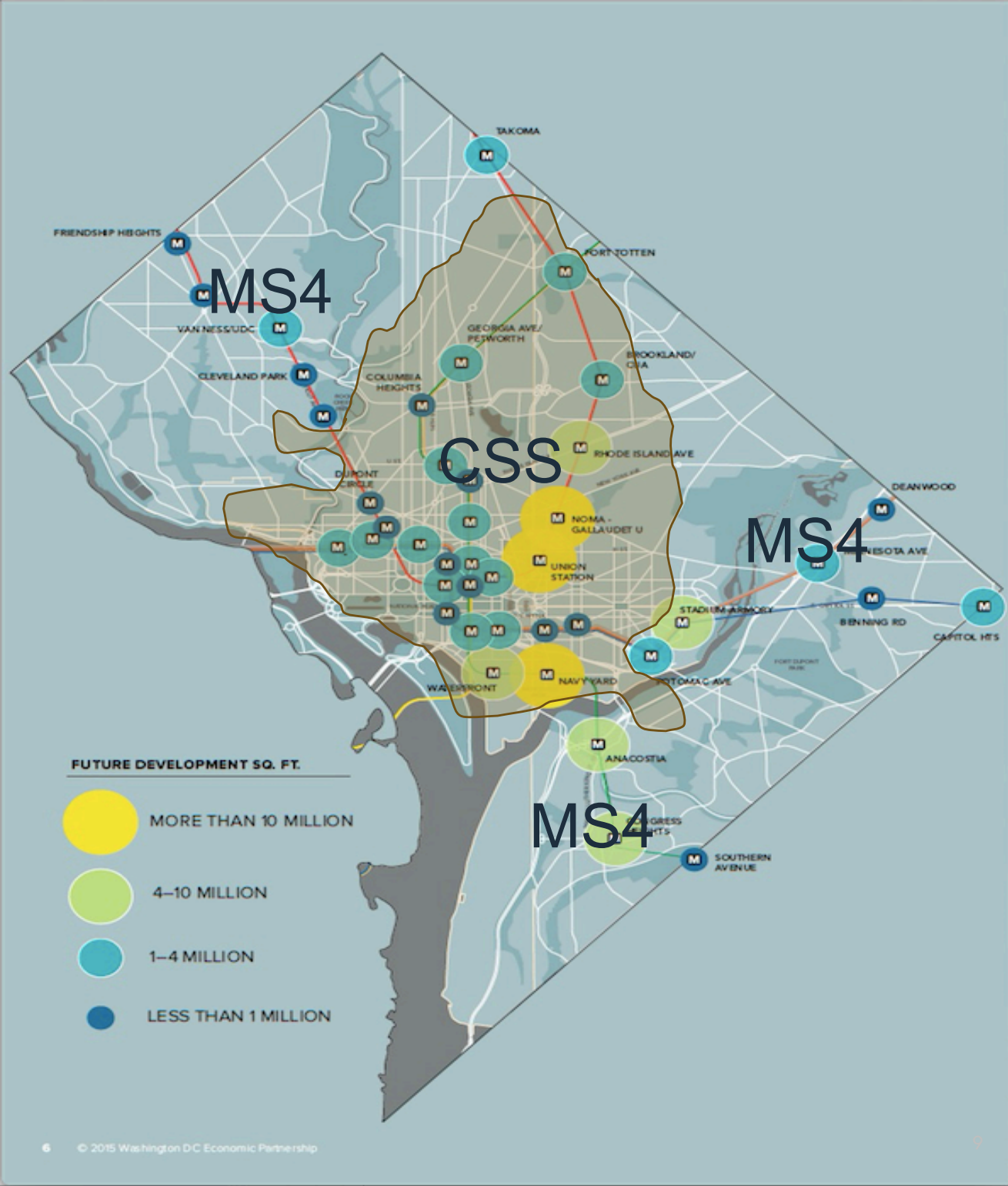
Urban/Suburban areas

*Climate Resilience Relies on Partnerships with Private
Landowners*

Development
Activities Finance
Social and
Environmental
Outcomes

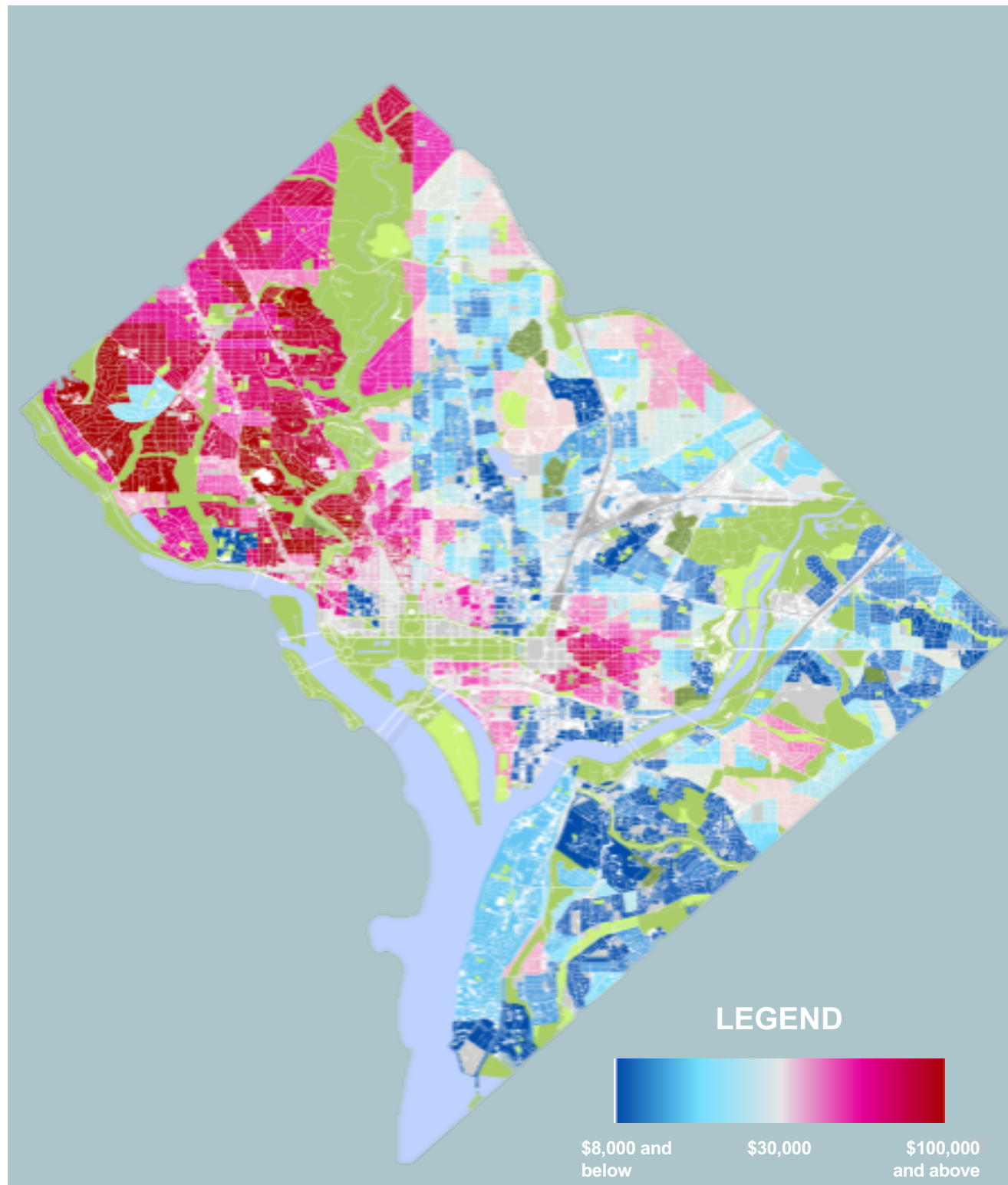


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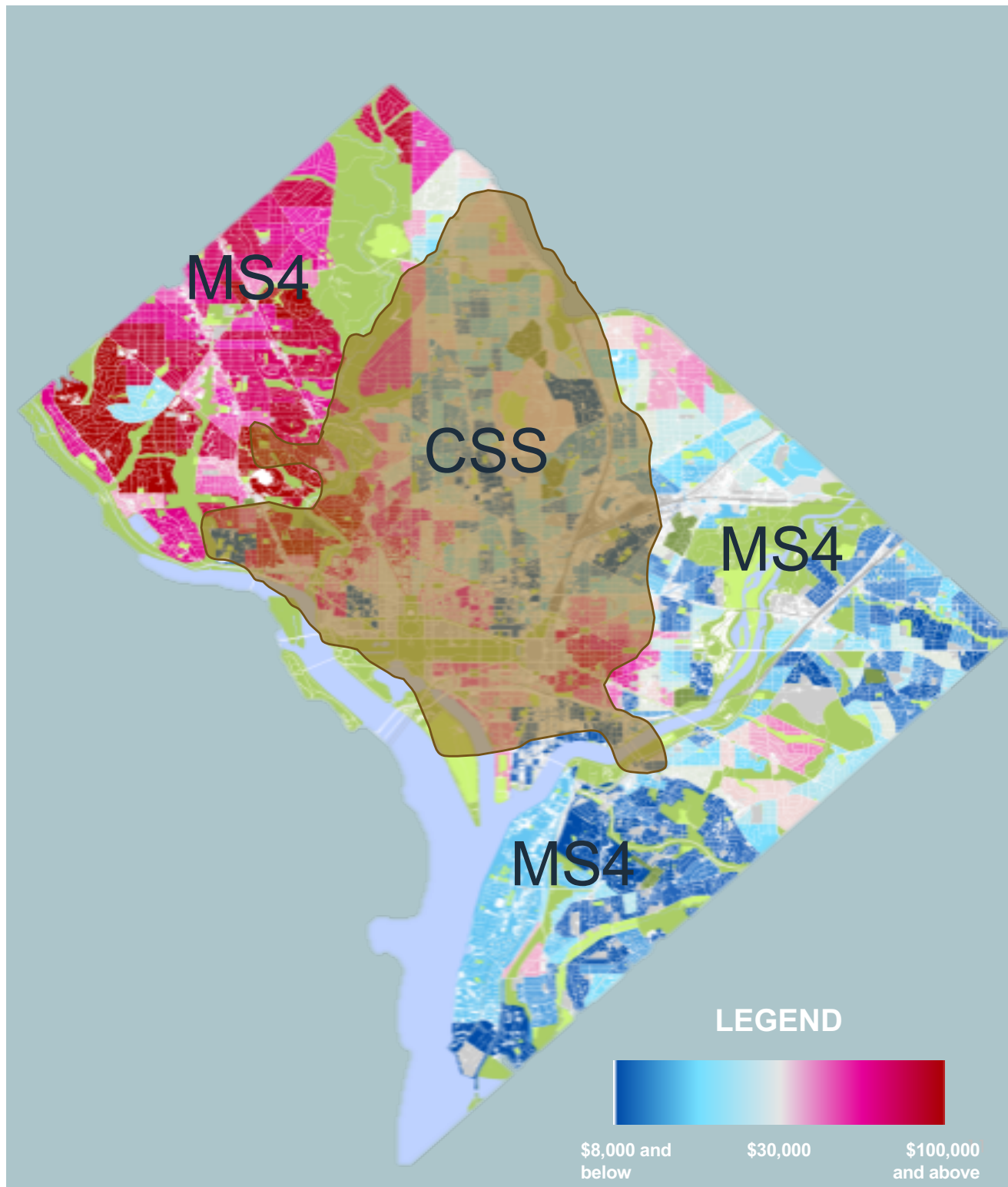
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*Map of Per-Capita Income
based on 2010 Census Data*



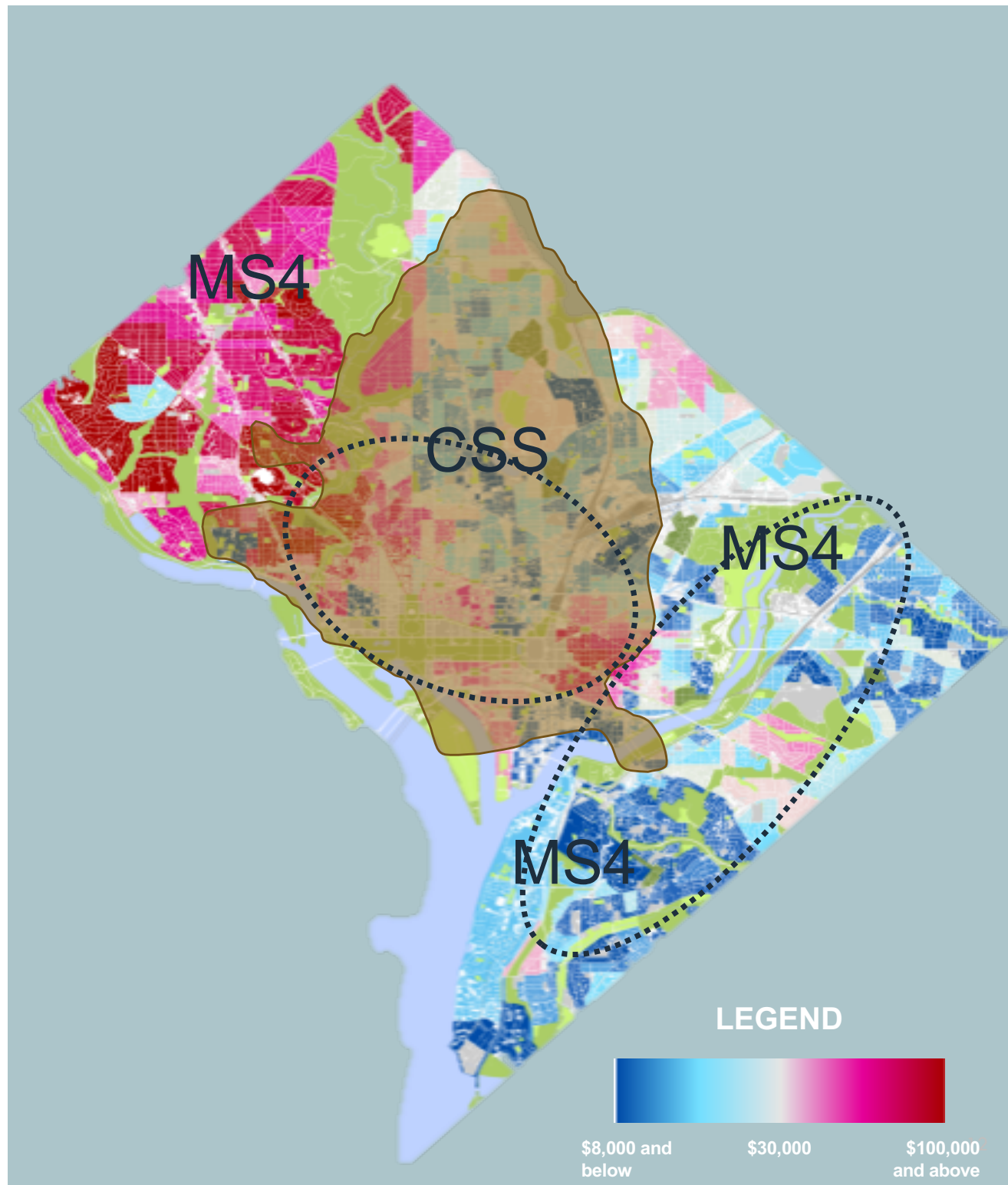
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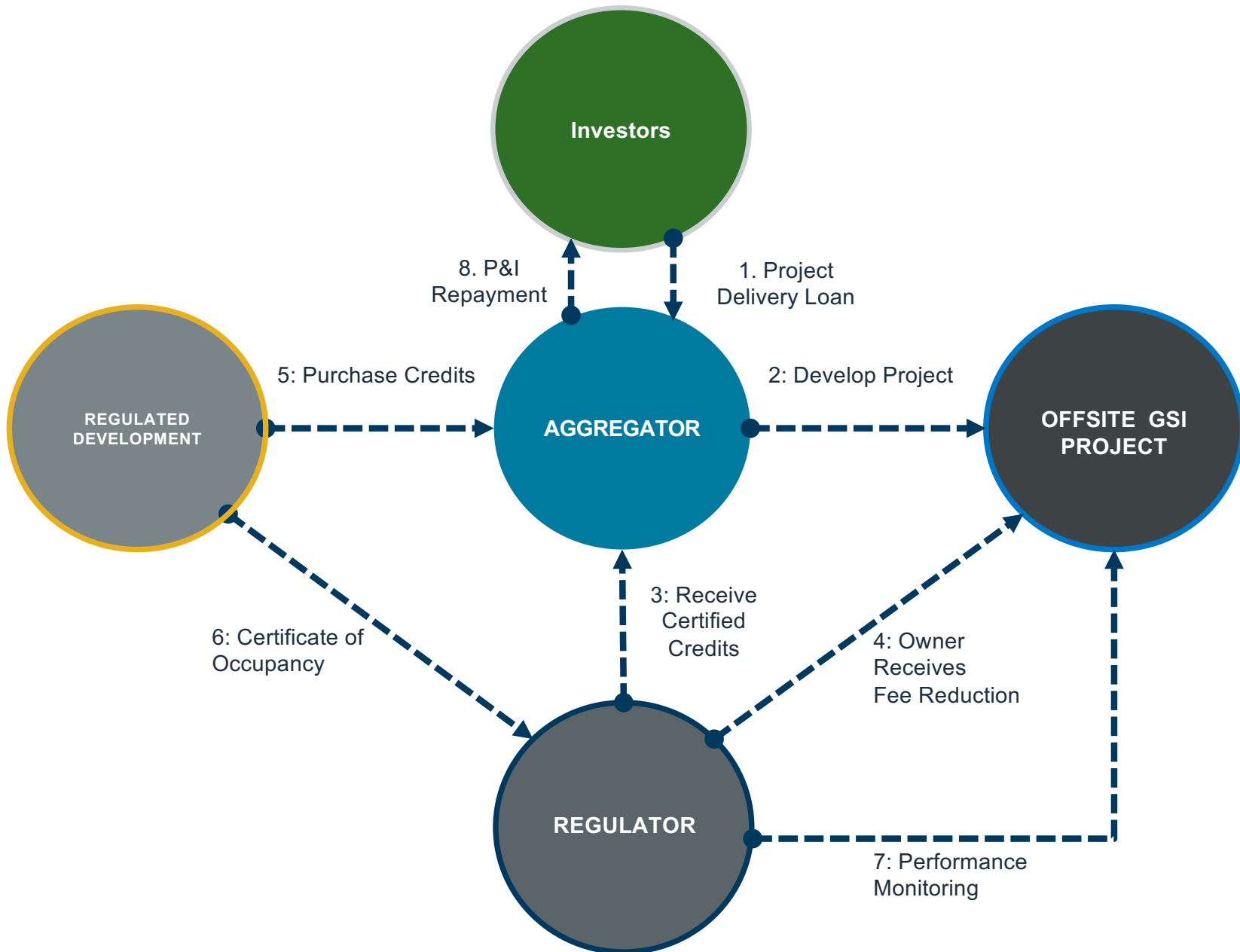


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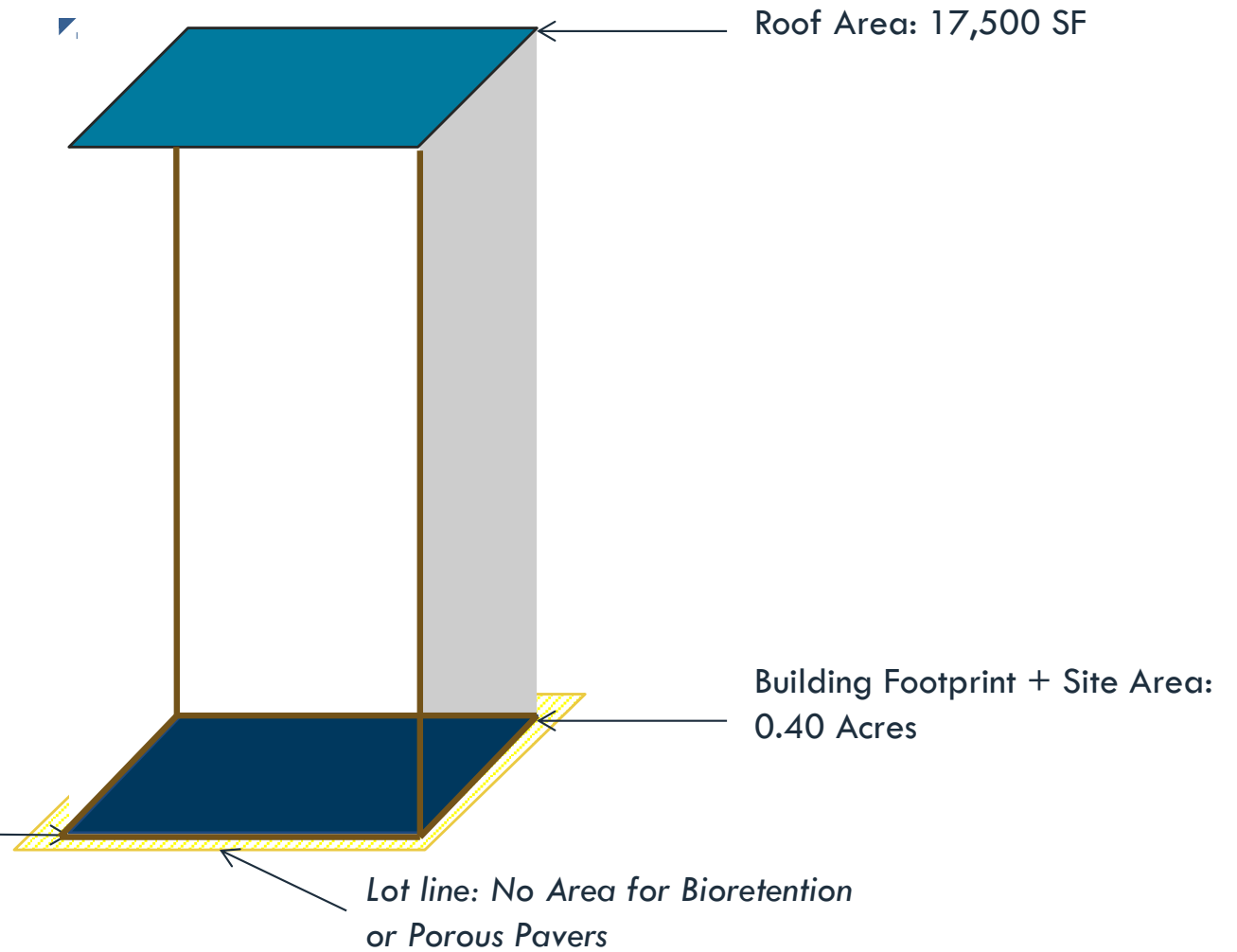
*Map of Per-Capita Income
based on 2010 Census Data*



What Credit Aggregators Do



HYPOTHETICAL 10 STORY
RESIDENTIAL BUILDING – NW DC
SEEKING 20 YEARS COMPLIANCE



| Cost Comparisons | CapEx + NPV O+M |
|------------------|-----------------|
| Onsite Only | \$1,418,246 |
| Onsite/Offsite | \$1,117,535 |
| Savings (\$) | \$300,711 |
| Savings (%) | 21% |

Indicative Savings from Offsite Compliance

Savings from offsite compliance are site-specific.

Key drivers for savings are:

- Volume of gallons managed
- Direct cost of onsite compliance, driven by site constraints
- Benefits of onsite/offsite stormwater management:
 - More space for parking
 - More available rooftop amenity space

At right is an abstracted example from District Stormwater developer conversations that illustrates the potential cost savings by using 50% offsite retention through the purchase of SRCs to comply with the new DOEE regulations.

Cost savings do not include forgone revenue from lost amenities or design restrictions that are likely to occur from 100% onsite compliance

Site Assumptions

| | |
|-----------------------------|-------------|
| Compliance Required (gal.) | 15,000 |
| | \$1,000,000 |
| 50% Onsite Cost (\$/gal.) | \$550,000* |
| Annual Maintenance (% Cost) | 5% |
| | 20 |
| | 50% |
| | \$2.25 |
| | 10% |
| | |
| | |

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