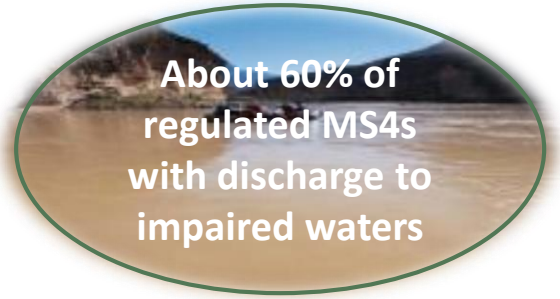
# CLEAN WATER ACT'S STORMWATER PROGRAM

# Stormwater is a leading cause of water quality impairment and its impact is growing

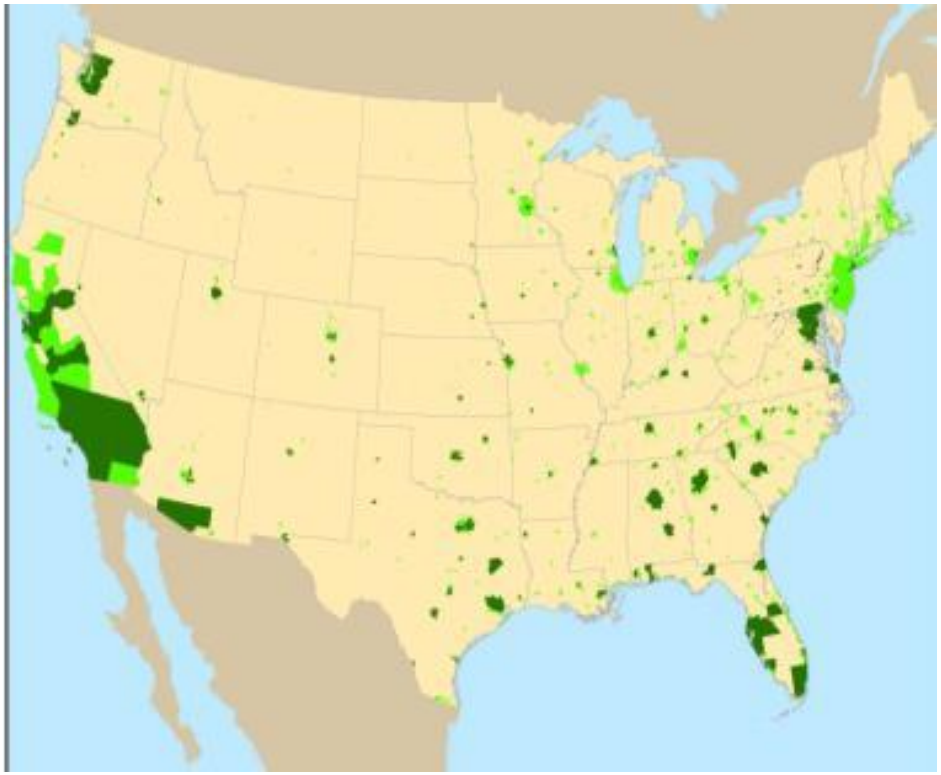


- Urban stormwater is a leading source of impairment
- Stormwater discharges cause:
  - Beach closures and swimming illnesses
  - Flooding, scouring, and sewer overflows
- Fast growing water quality concern
  - Approximately 800,000 acres being developed every year, growing to over 1M acres by 2039
- Development increases the amount of impervious cover in the landscape
- Small increase in impervious cover leads to big impacts in receiving waters
- Development upstream can cause downstream impacts in communities




# Existing Program





Current coverage

- Primarily in urbanized area
- Accounts for much of the population
- Only about 2% of the land area

- Many communities have waterbodies that are already polluted by stormwater discharges from impervious areas
- Communities are working hard to address stormwater and are looking for cost-effective solutions moving forward
- Communities are prioritizing investments through integrated planning

# New Directions




Using green infrastructure is a sustainable way to control stormwater.

- Incorporate green infrastructure into sites as they are being developed and redeveloped
  - Provides most cost-effective opportunity to control stormwater at its source
  - Prevents water quality degradation in healthy waters
  - Helps restore impaired waters
- If we don't take this new direction:
  - Quality of our waters will worsen
  - The cost to restore waters will grow
- The cost of inaction is high and will be borne by local governments

# Potential Focus of a Proposed Stormwater Rule



- Establish performance standards for discharges from newly developed and redeveloped sites
  - Considering retention-based standard that varies according to an area's climate
  - Considering relaxed standard for redevelopment
  - Considering many flexibilities
- The standard could be directly applied to newly developed and redeveloped sites inside and outside the MS4s
- There are cost-effective ways to meet the standard
  - Retain vegetation and reduce impervious cover
  - Integrate green infrastructure into landscape or other common areas
- Fits with integrated planning and financial capability frameworks

# Flexibilities



- Could accommodate site constraints (including water rights laws)
  - Managed through treatment
  - Off-site mitigation
  - Payment-in-lieu
  - Banking or trading programs
- Allow watershed plans that control pollutants/flows
- Would credit alternative programs that are better suited to their needs, but that are as protective as the national standard
- Allow phased implementation
- Allow sites to do their own analyses based on site-specific information
- Allow alternative green infrastructure plan in-lieu-of a new and/or redevelopment standard

# MS4 Expansion



- May expand MS4 program to growing communities
  - Watersheds surrounding existing regulated MS4s
  - Urbanized clusters
- To encourage sound stormwater programs as growth occurs
- Population limit 10,000

<u>Minimum Control Measures</u>

- Illicit Discharge Detection & Elimination
- Post-Construction
- Construction
- Pollution Prevention/ Good Housekeeping
- Public Education/ Outreach
- Public Involvement/ Participation

# Recent Outreach



- NACWA meeting with organizations
- Stormwater Roundtables
- Mayors Innovation Project
- Calls with States
- Local Government Advisory Council
- National League of Cities
- National Association of Counties
- American Public Works Association

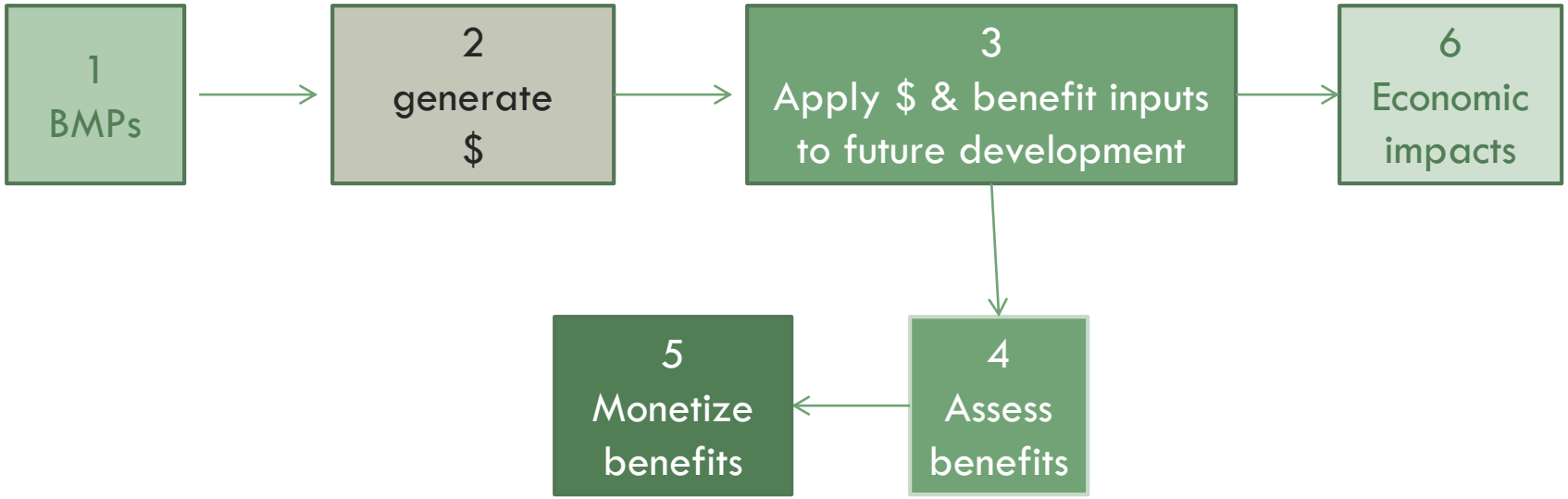
# Regulatory Analysis



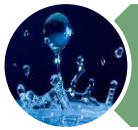
- Objective of the Analysis
  - Provide a reasonable basis for comparing the status quo to different approaches considered for the regulation
  - To assess the potential impacts and benefits of different approaches considered for the regulation

# Regulatory Analysis





# Monetized Benefits of the Performance Standard*

| Water-Based Benefits | Estimates | | |
|---|---|---|---|
| | 95th New/90th Red | 90th New/85th Red | 85h New/80th Red |
|  Improved recreational, aesthetic and non-use values | $ | $ | $ |
|  Lower drinking water treatment costs | $ | $ | $ |
|  Lower dredging costs for navigational channels | $ | $ | $ |
|  Reduced siltation of water storage reservoirs | $ | $ | $ |
|   Reduced downstream flooding damage | $ | $ | $ |
|  Groundwater recharge | $ | $ | $ |
|  Small stream erosion and water quality impacts | $ | $ | $ |

*Scenario run for performance standard applied to sites ≥ 1 acre in size everywhere

# Benefits of the Performance Standard (Cont'd)

| Vegetation-Based Benefits | Estimates | | |
|---|---|---|---|
| | 95th New/90th Red | 90th New/85th Red | 85h New/80th Red |
|  Improved air quality and reduced human health impacts | $ | $ | $ |
|   Higher off-site property values associated with green infrastructure | $ | $ | $ |
|   Carbon uptake by plants | $ | $ | $ |
|  Reduced energy use by buildings and associated air quality and carbon footprint benefits | $ | $ | $ |

# Economic Impacts

- Jobs
- Housing
- Small entities including small governments
- States and Local Governments
- Cost effectiveness

# Analytical Challenges



- Predicting development 20 to 30 years into the future
- Identifying and quantifying reasons why "green infrastructure" isn't being applied more widely already—on a straight cost to cost basis green is cheaper than grey
- Analyzing the impacts of current practices and the benefits of retention practices on small streams – that arguably incur the greatest impacts from the status quo

# Questions?