

Gray to Green

Leveraging Consent Order requirements to build communities and address future regulations



THE CITY OF
COLUMBUS
MICHAEL B. COLEMAN, MAYOR

DEPARTMENT OF
PUBLIC UTILITIES

Consent Order Requirements

Columbus entered consent orders very early.

Over the next 30 years Columbus ratepayers are required to spend almost \$2.5 Billion on gray infrastructure to address Consent Order requirements.

Most of the investment is on tunnels and underground infrastructure.

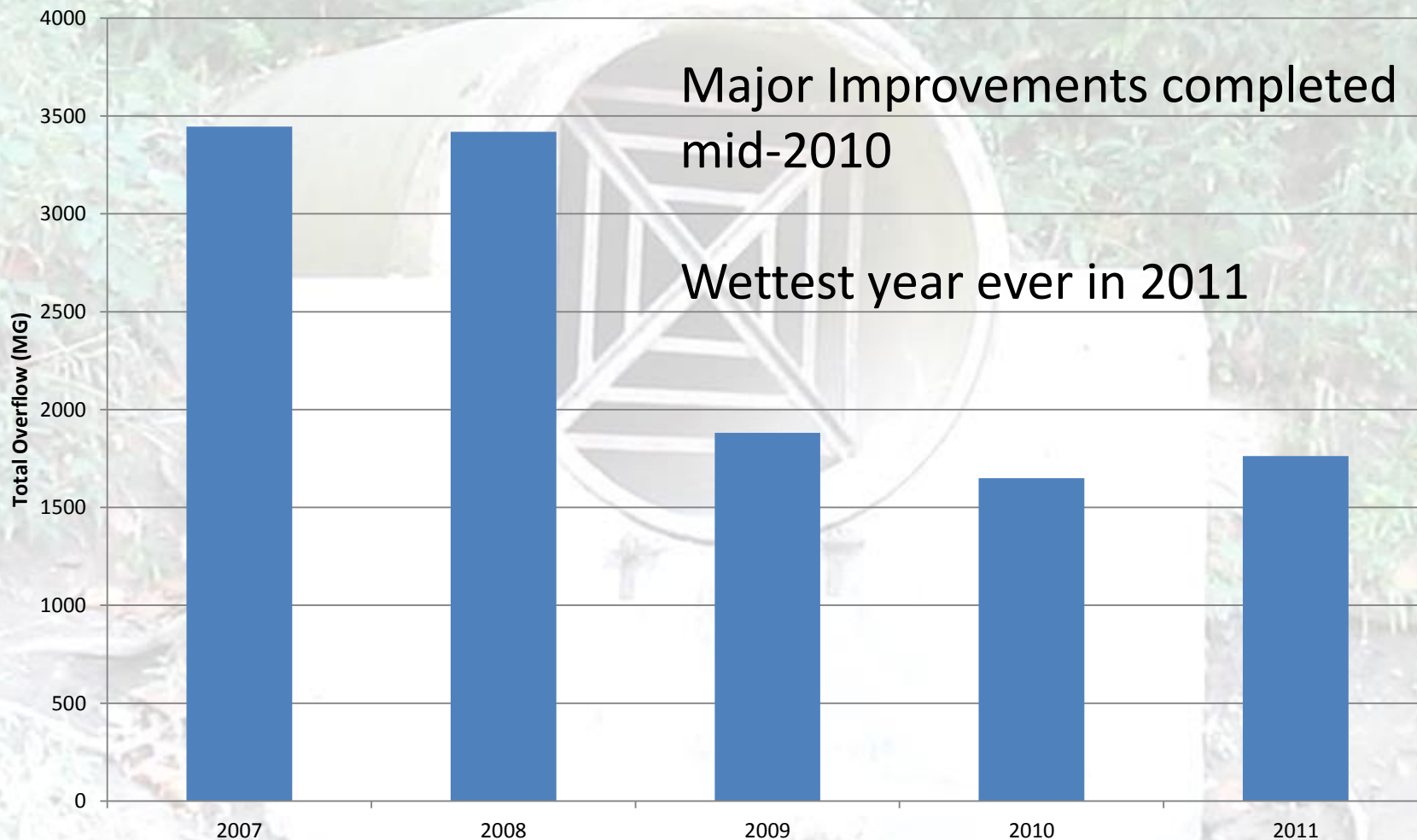


Combined Sewer Overflows (CSO)

- CSO work mostly completed (at least paid for)
- \$1 Billion spent, 1 Billion gallons captured annually



Total Overflow WWTP Bypass and Overflow from the Largest SSO and CSO



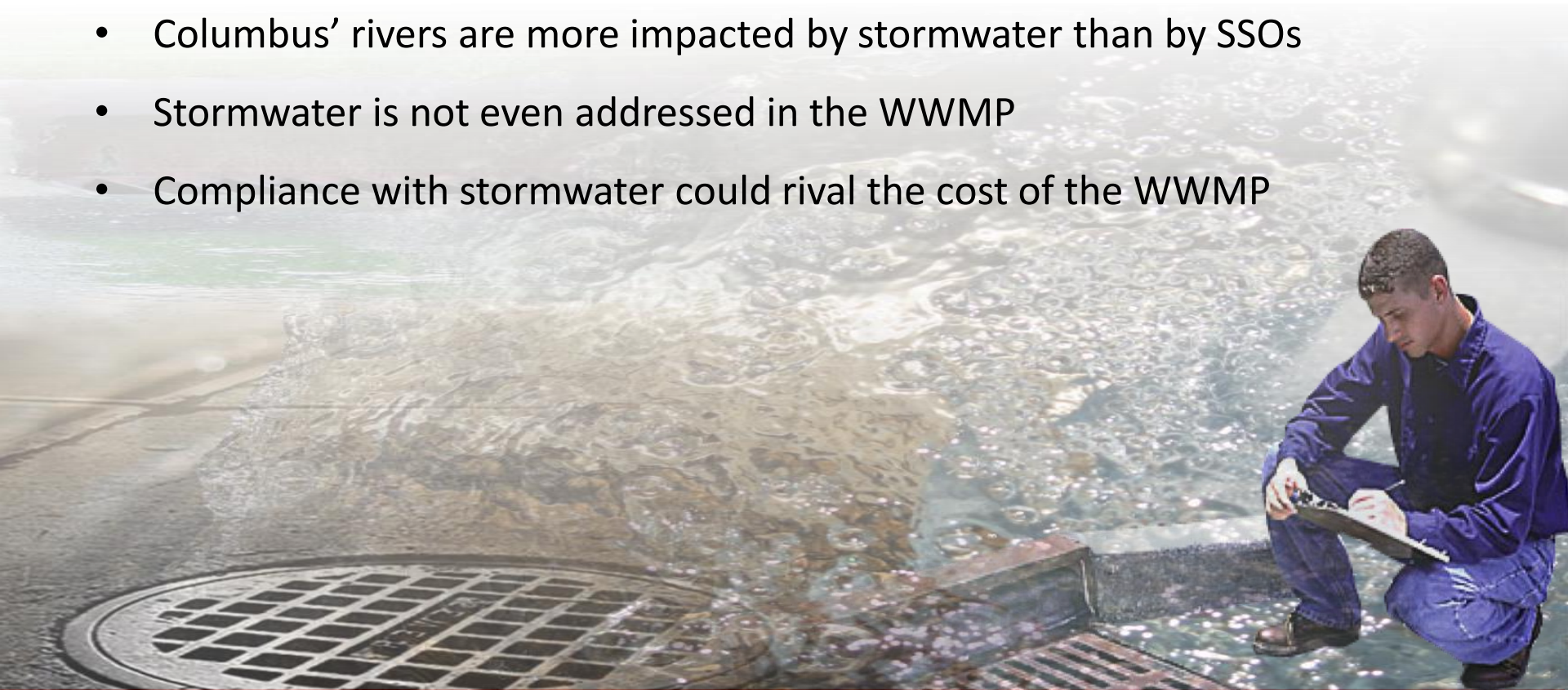
Sanitary Sewer Overflows (SSO)

- We have virtually taken care of the CSO problem
- Our SSO problems are three times smaller, but three times more expensive



Stormwater Regulations

- Challenging stormwater regulations are coming, possibly very soon
- Columbus' rivers are more impacted by stormwater than by SSOs
- Stormwater is not even addressed in the WWMP
- Compliance with stormwater could rival the cost of the WWMP



Is there a better way?

- Spend money above ground instead of on little-used deep tunnels
- Create opportunity to engage community and rebuild neighborhoods
- Have to spend billions, why not transform the City at the same time?
- Go Gray to Green....using the Integrated Planning process



Integrated Plan Approach – A Fresh Perspective

- Endorsed by USEPA, Ohio EPA, and US Conference of Mayors
- Goal is to look at all Clean Water Act obligations and address the most serious water quality issues first
- Identify efficiencies that can lead to sustainable, comprehensive solutions:

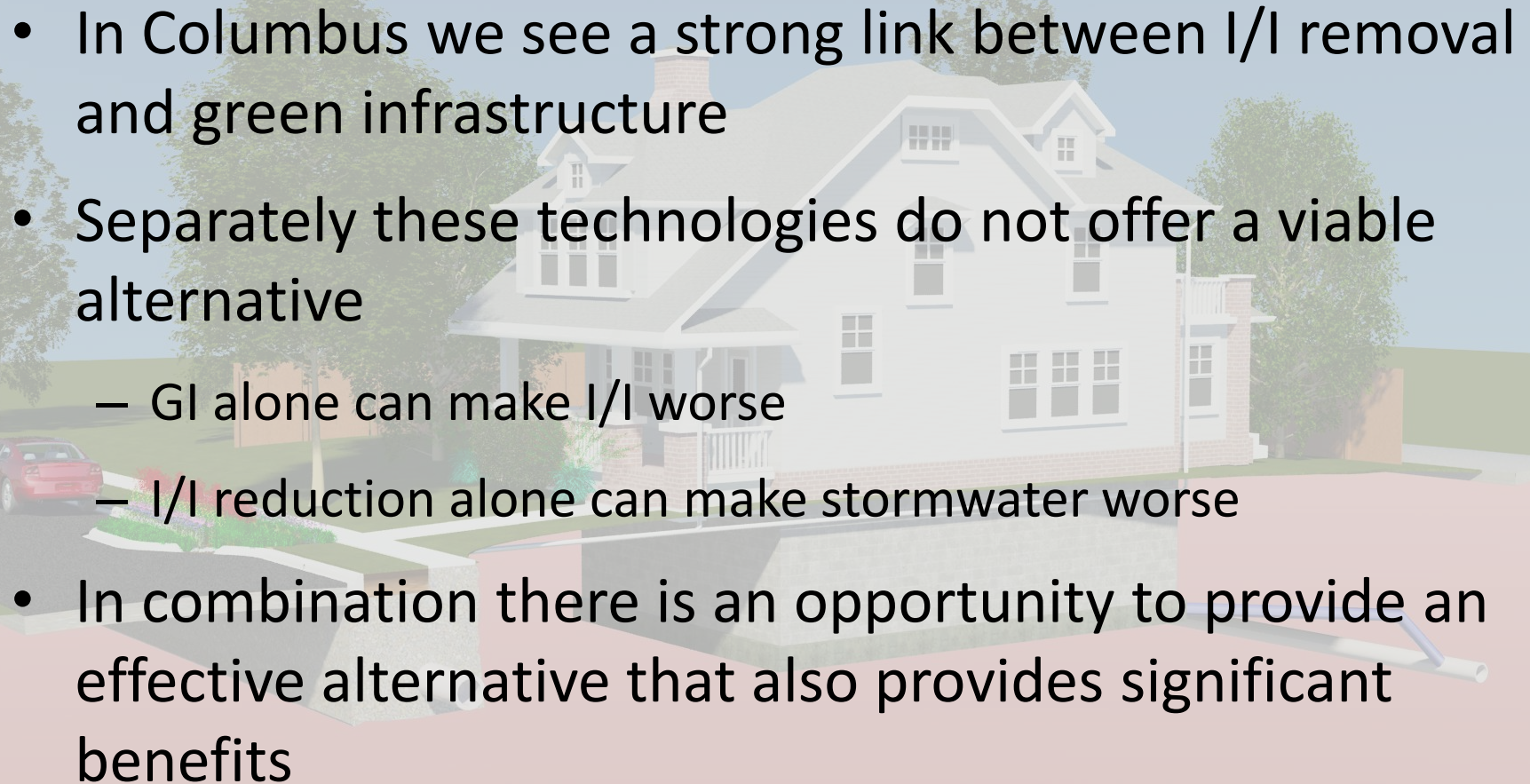
Green Infrastructure



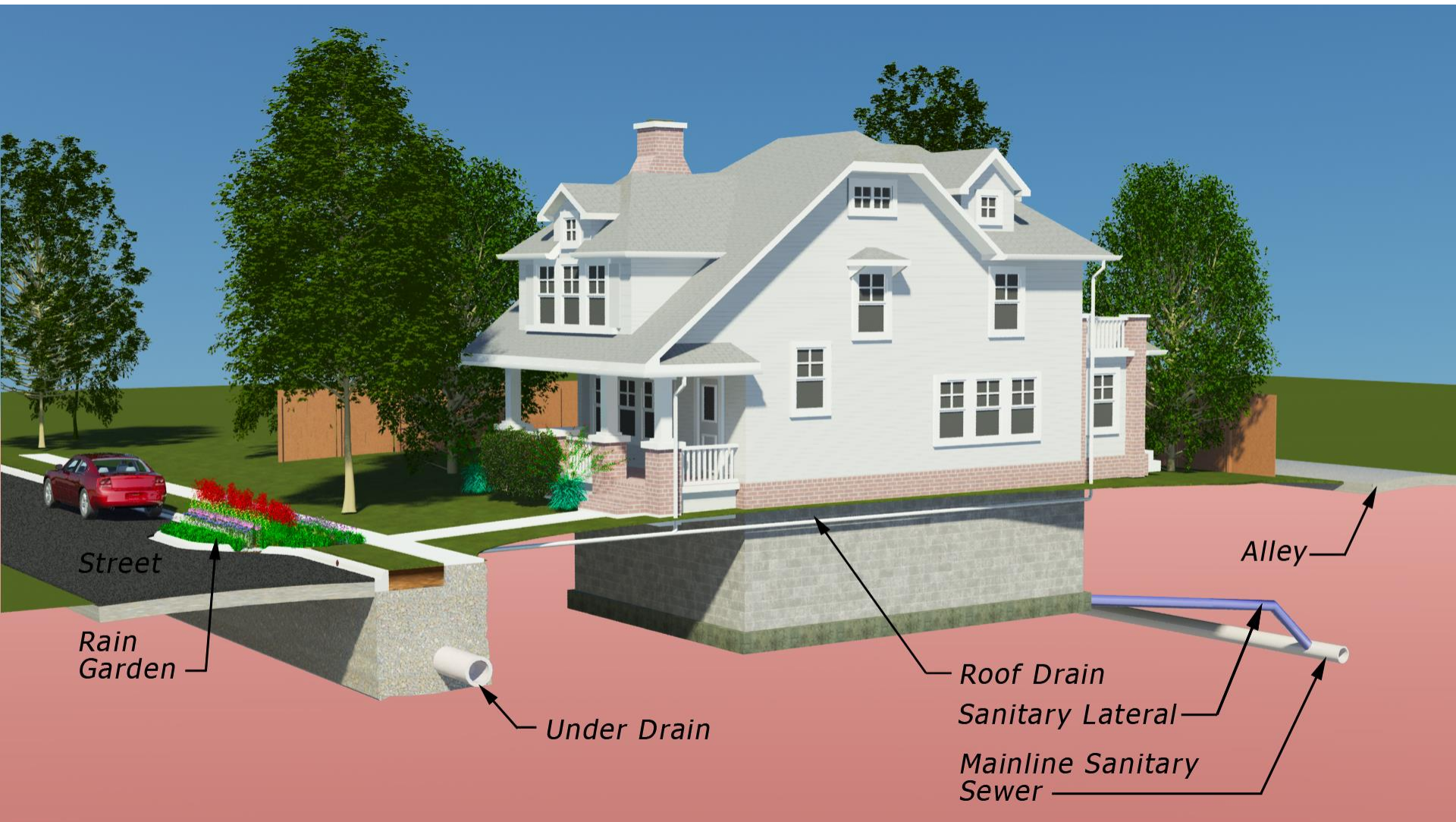
Gray to Green

- Tunnels and treatment plants are gray solutions
- SSO projects are needed because of leaks in both the City and private sewer pipes
- Instead we could fix the leaks and improve the neighborhoods with green infrastructure at the same time



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- In Columbus we see a strong link between I/I removal and green infrastructure
 - Separately these technologies do not offer a viable alternative
 - GI alone can make I/I worse
 - I/I reduction alone can make stormwater worse
 - In combination there is an opportunity to provide an effective alternative that also provides significant benefits

Gray to Green



- Remove I/I especially private I/I
- Treat the stormwater from roofs and driveways

Benefits of Gray to Green

- Neighborhood improvements – gardens, porous sidewalks, trees, mini parks (with porous basketball courts), vacant homes
- I/I work will provide extended asset life
- Increased home values (lateral renewal and beautification)
- Creates more opportunities for local contractors and consultants
- Permanent local maintenance jobs
- Getting ahead of anticipated stormwater rules
- **Cleaner waterways**



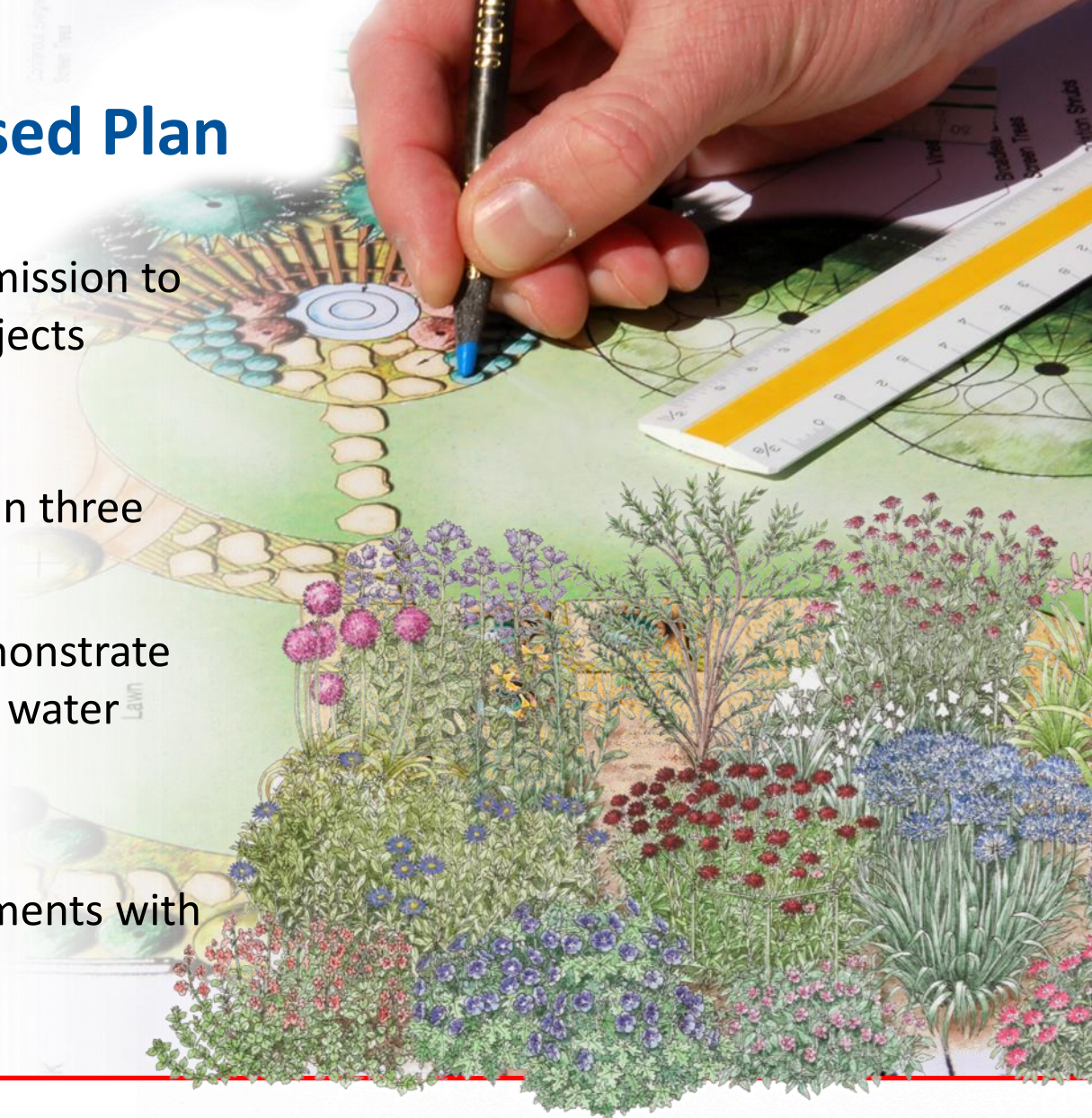
Challenges of Gray to Green

- City would access private property and spend ratepayer money to fix leaky service lines and control runoff
 - Legal challenges
 - Public education
- Public acceptance or Green Infrastructure in treelawn area
- Need permanent maintenance of Green Infrastructure



Columbus' Proposed Plan

- Asked Ohio EPA for permission to delay some WWMP Projects
- Ohio EPA is supportive
- Submit Integrated Plan in three years, September 2015
- Integrated Plan will demonstrate elimination of SSOs and water quality benefits
- Visible quick start on neighborhood improvements with pilot projects



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