

Clark County

# Phase 1 Municipal Stormwater Permit

*National Pollutant Discharge Elimination System &  
State Waste Discharge General Permit*

**2013-2018**

*Permit Overview for Technical Advisory Committee*

Updated 6.26.13



Round Lake  
Photo: Gary Piazza



# Presentation Overview:

- What is stormwater and how do we manage it in Clark County?
- Municipal stormwater permit
  - *Who are the agencies and partners involved in permit compliance*
  - *Components of the permit*
  - *Changes as a result of the new permit*
- Outreach effort
- Schedule
- Next steps.....



*Protecting our natural resources for generations to come*



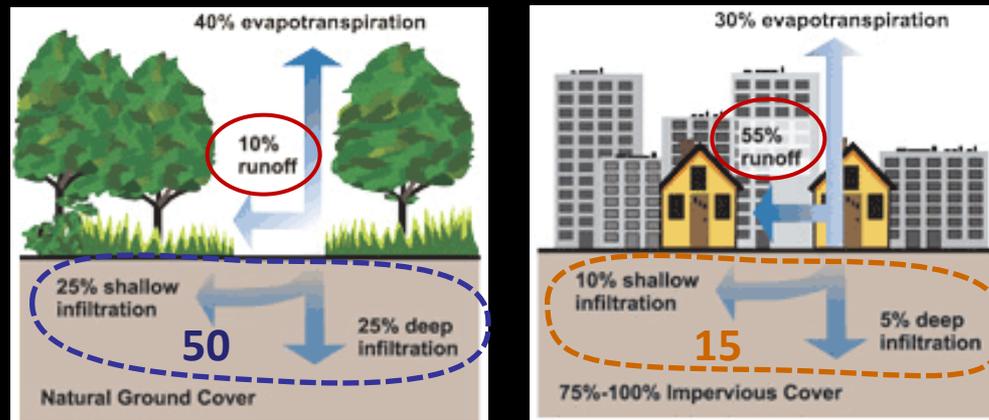
North Fork Lewis River, from Yale Bridge  
Photo: Gary Piazza





# Stormwater management 101

- In developed areas, stormwater drains to our “municipal separated storm sewer system” (MS4)
- Per the municipal stormwater permit issued by the State of Washington, the county is required to prevent pollution in the runoff and limit the amount of runoff from developed sites that will discharge to our MS4.



Graphics: EPA Stormwater Management



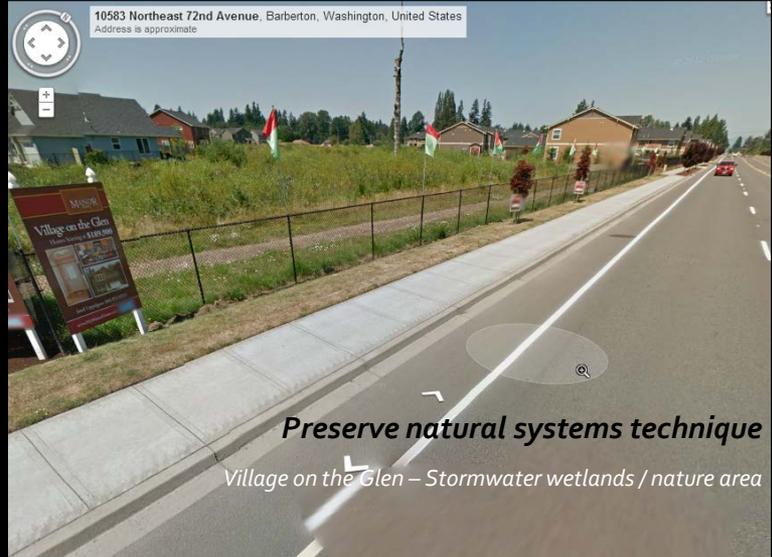
# How our stormwater system looks.....



**Catch and pipe technique**  
Conventional Stormwater Management  
Drain to catch basin and pipe to river



**Trap and detain technique**  
Conventional Stormwater Management  
Entire neighborhood drains to a treatment basin that is mowed and fenced



**Preserve natural systems technique**  
Village on the Glen – Stormwater wetlands / nature area

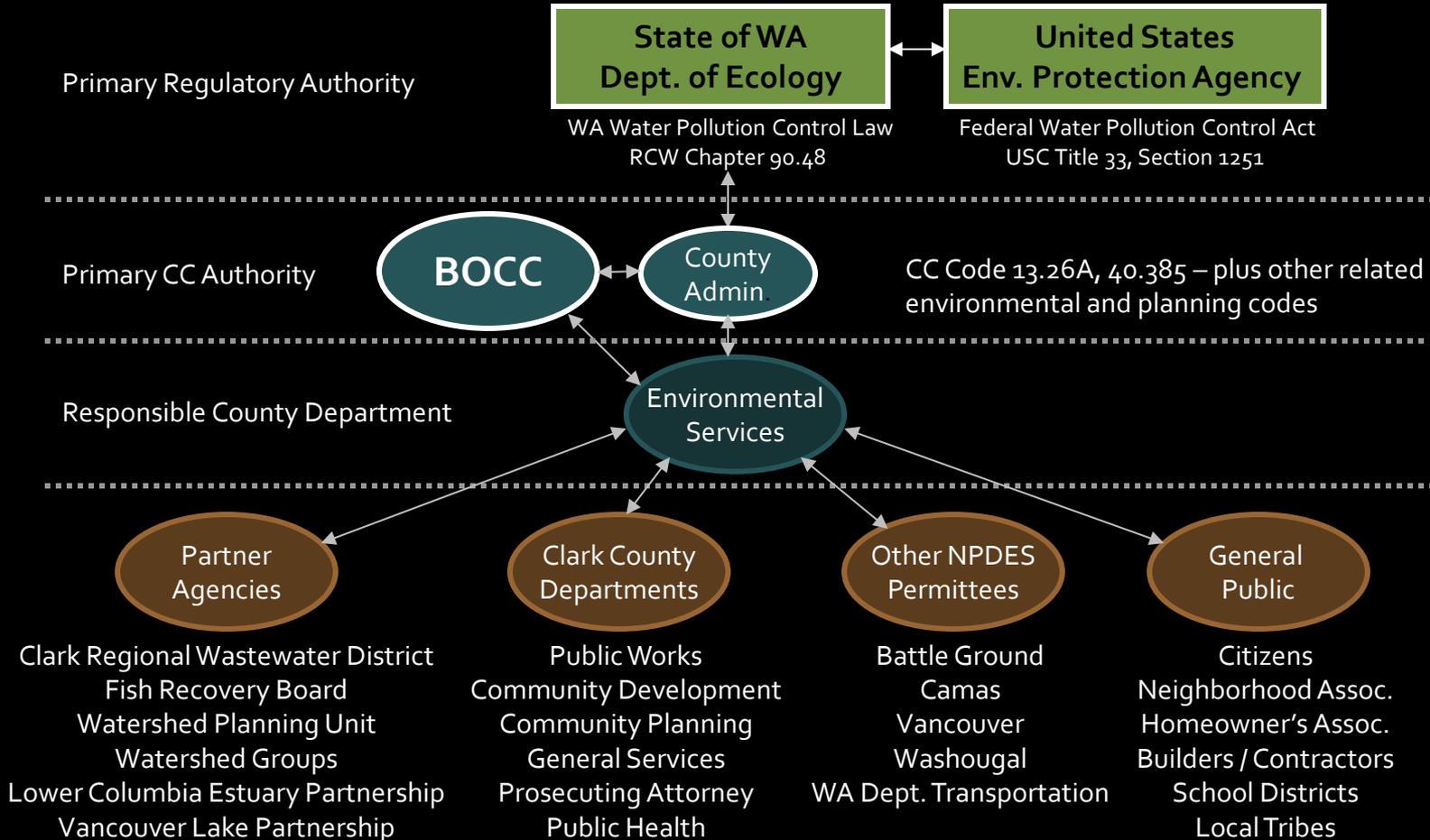


**Vegetated basin technique**  
Cold Creek Industrial Park – Stormwater Bioretention

All photos: Google Maps



# Who is involved in coordination of the Clark County NPDES permit?

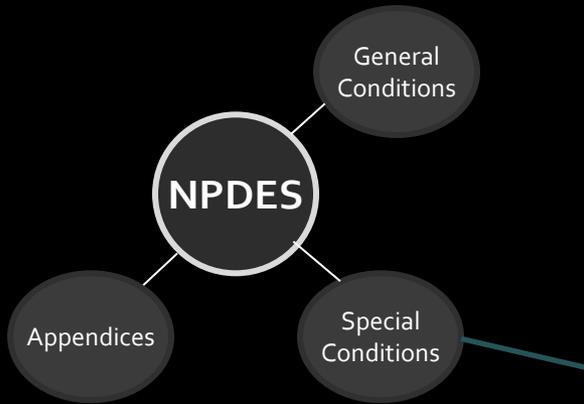


# Ways Clark County currently addresses storm water:

why	PRESERVE CONSERVE PROTECT	RETAIN MAINTAIN	REDUCE RETROFIT	RETROFIT UPDATE
what				
how	<ul style="list-style-type: none"> <li>• CONSERVATION FUTURES</li> <li>• VEGETATION MANAGEMENT</li> <li>• SUSTAINABLE FORESTRY</li> <li>• PARKS</li> <li>• GREENWAYS</li> </ul>	<ul style="list-style-type: none"> <li>• GROWING GREEN</li> <li>• NEW LOW IMPACT DEVELOPMENT</li> </ul>	<ul style="list-style-type: none"> <li>• NEW LOW IMPACT RE/DEVELOPMENT</li> <li>• PUBLIC EDUCATION TO REDUCE POLLUTION</li> </ul>	<ul style="list-style-type: none"> <li>• CAPITAL PROGRAM</li> <li>• PARTNER AGENCIES</li> <li>• OPERATIONS &amp; MAINTENANCE</li> </ul>



# What are the components of the permit?



- S1 Permit Coverage and Permittees
- S2 Authorized Discharges
- S3 Responsibilities of Permittees
- S4 Compliance with Standards
- S5 Stormwater Management Program
- S6 Stormwater for Secondary Permittees
- S7 Compliance with Total Maximum Daily Loads
- S8 Monitoring
- S9 Reporting

### Major areas of focus:

Legal Authority  
 MS4 Mapping/Documentation  
 Coordination  
 Public Involvement/Participation  
 Runoff from New Development – LID\*  
 Watershed Scale Planning\*  
 Structural Stormwater Controls\*  
 Source Control from Existing Dev.  
 Operation & Maintenance Program\*  
 Inspection Program  
 Education & Outreach Program

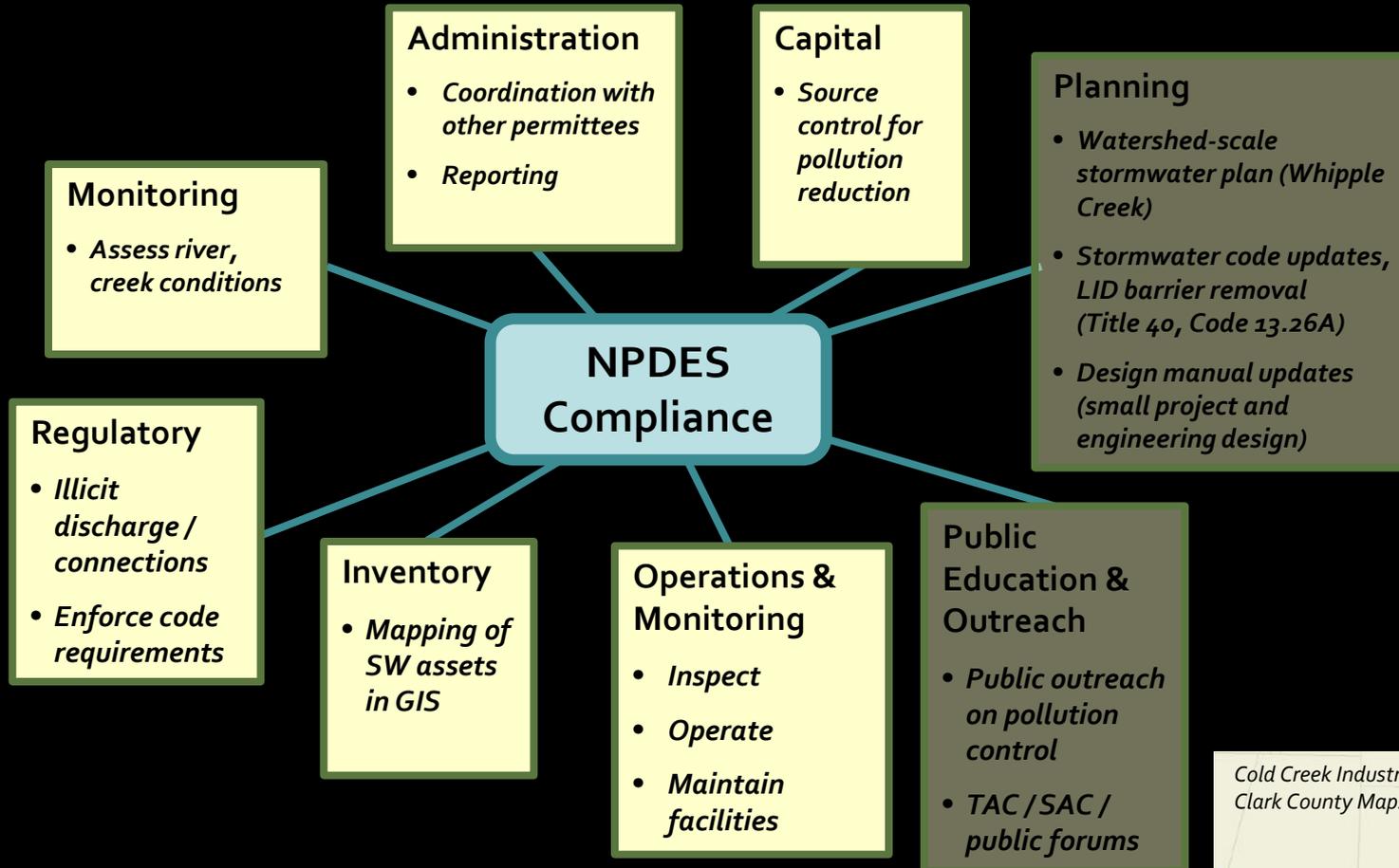
Stormwater Characterization\*  
 Program Effectiveness\*

Annual Report  
 Attachments – Summaries, Maps, Descriptions, Etc.

\* Major cost elements



# What are the changes as a result of the new permit? We will continue to (with moderate level work).....



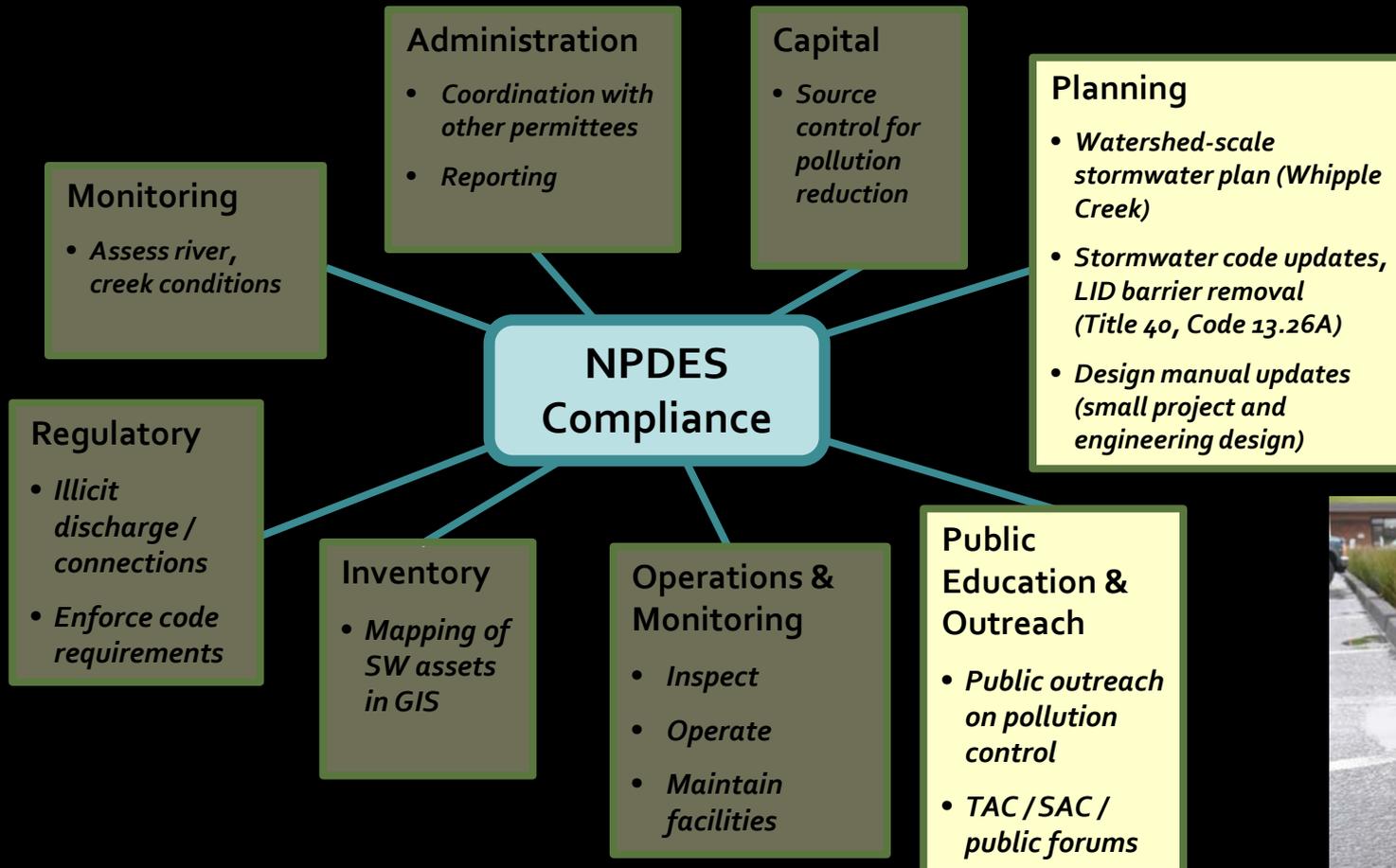
## FACTs –

- Clark County owns 870 stormwater facilities with over 170,000 individual assets (e.g. catch basins, manholes, inlets, ponds, etc.)
- The MS4 contains over 400 miles of pipes
- Staff inspects all county owned facilities, plus 1,020 private stormwater facilities annually

Cold Creek Industrial Park – Stormwater Basin  
Clark County MapsOnLine – Stormwater Layer



# What are the changes as a result of the new permit? Major work load items.....



New Seasons  
164<sup>th</sup> Avenue, Vancouver  
Rain Gardens and Rooftop plantings



# Updating Our Stormwater Rules

## VISION

Clark County's stormwater runoff is managed to protect the vitality of our community's waterways including our groundwater, rivers, and lakes while supporting an economically vibrant and livable community.

## MISSION

To create stormwater management regulations that comply with state and federal regulations while being flexible and tailored to multiple project types, including making *Low Impact Development (LID)*\* the approach for stormwater management in site development.

\* **LID** is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. – EPA, webpage



# Updating Our Stormwater Rules

## GOALS

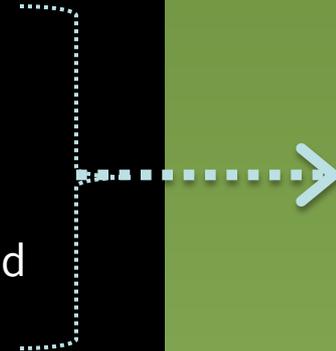
- **Adopt regulations that comply with state and federal water pollution laws** in reducing polluted storm runoff
- **Meet NPDES permit deadlines** to minimize exposure for the county to regulatory and legal challenges
- **Develop an integrated set of development codes** that protect surface and groundwater from stormwater runoff, including the broad use of techniques that utilize low impact development (LID) practices
- **Tailor LID feasibility requirements** to local conditions ensuring projects are effective and safe, as well as identifying flexible alternatives for implementation



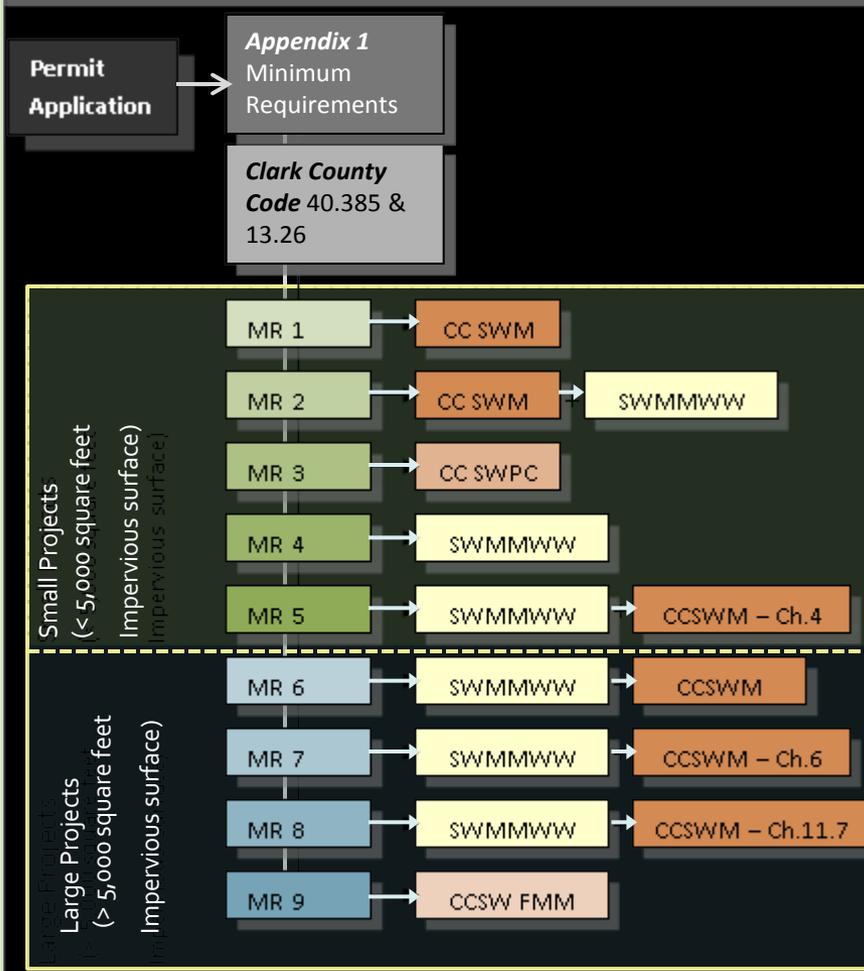
# Updating Our Stormwater Rules

## GOALS - continued

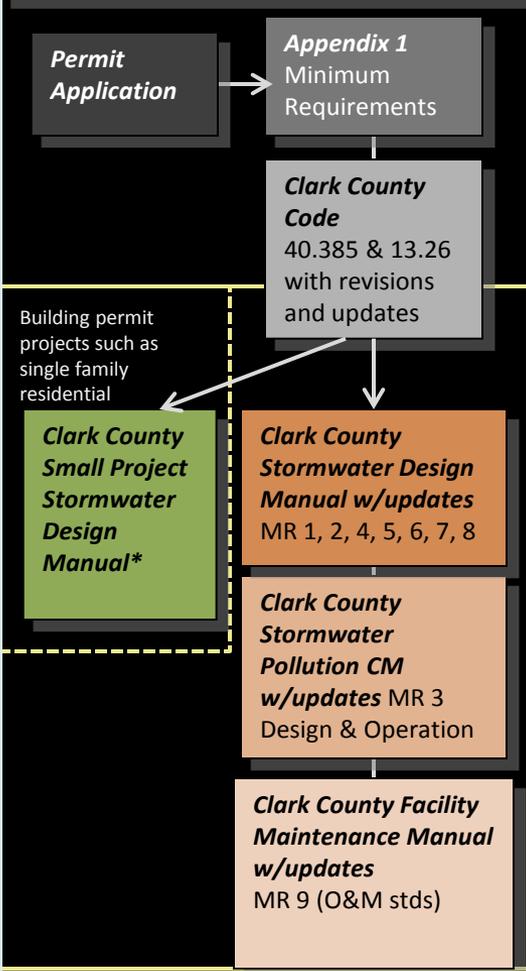
- **Create a single Stormwater Design Manual** for development projects that require engineering , including county roads
- **Create a clear and concise 'Small Project' manual for residential building projects** using a minimal amount of text and well-designed illustrations
- **Revise application and review processes to be streamlined,** articulate, effective and supported by county staff.
- **Engage internal and external stakeholders in the update process** so that the resulting code is understandable and applicable to development projects
- **Provide sufficient training and education for staff and the public** to understand how to implement new code requirements



**Current Development Application Process**



**Proposed Process**



- CC SWM Clark County Stormwater Manual
- CC SWPC Clark County Stormwater Pollution Control Manual
- CCSW FMM Clark County Stormwater Facility Maintenance Manual
- SWMMWW Stormwater Management Manual for Western Washington
- Clark County Small Project SW Manual\*** New manual



# What does this mean for my development?

## Understanding the Minimum Requirements (MRs) and Thresholds for when to apply the MR's.....

MR #1: Preparation of Stormwater Site Plans

- Retain native vegetation and minimize impervious surfaces to the extent feasible

MR #2: Construction Stormwater Pollution Prevention Plan (SWPPP)

- Prevent erosion and discharge of sediment and other pollutants into receiving waters (*varies per thresholds*)

MR #3: Source Control of Pollution

- Source control BMPs must be required for all projects approved by the County

MR #4: Preservation of Natural Drainage Systems and Outfalls

- Natural drainage patterns shall be maintained

MR #5: On-site Stormwater Management

- Require on-site stormwater management LID BMPs (*varies per thresholds*)



# What does this mean for my development?

All development or redevelopment projects need to meet BMP T5.13\*\* (Post-Construction Soil Quality and Depth)

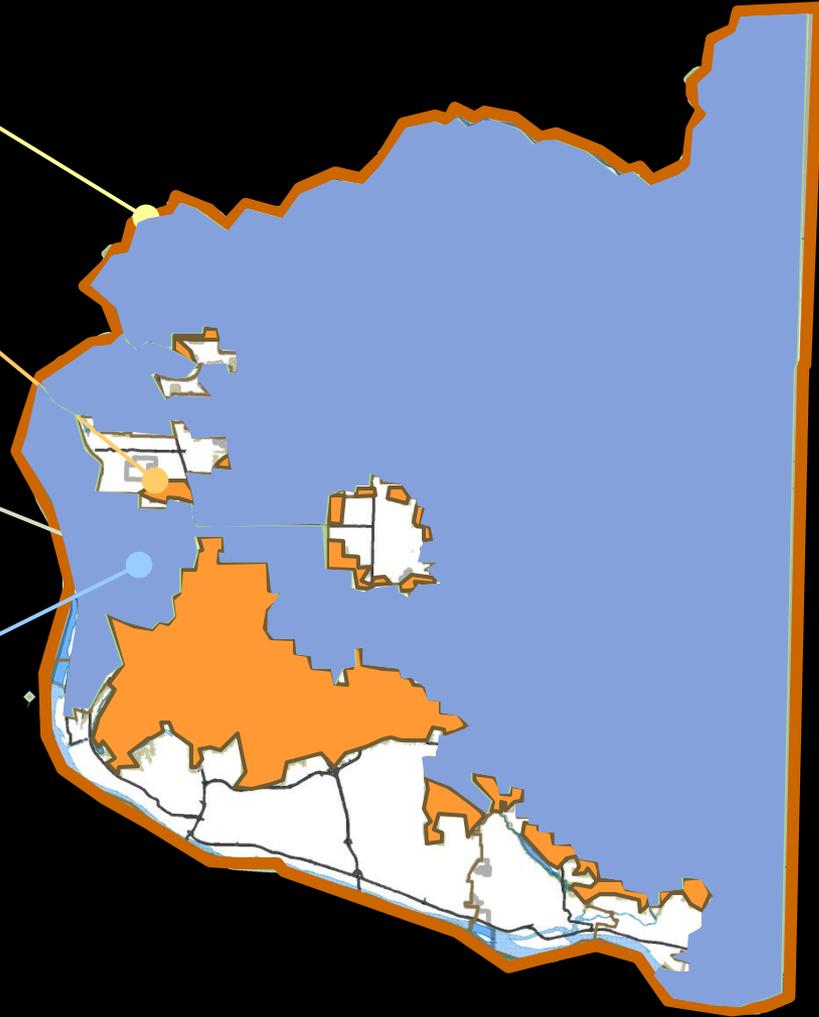
All development or redevelopment projects within the UGA need to meet Low Impact Development Performance Standard\* and BMP T5.13\*\*

**OR** List #2 (prioritized list of BMPs)

All development or redevelopment projects outside the UGA less than 5 acres need to meet Low Impact Development Performance Standard\* and BMP T5.13\*\*

**OR** List #2 (prioritized list of BMPs)

All development or redevelopment projects outside the UGA larger than 5 acres need to meet Low Impact Development Performance Standard\* and BMP T5.13\*\*



\* **LID Performance Standard** – SW discharges shall match development discharge durations to pre-developed durations for the range of pre-developed discharge rates from 8% of the 2-year peak flow to 50% of the 2-year peak flow.

\*\* **BMP T5.13** – Post-construction Soil Quality and Depth – naturally occurring soils provide SW functions



# *What does this mean for my development?*

## Understanding the Minimum Requirements (MRs) and Thresholds for when to apply the MR's.....

### MR #6: Runoff Treatment

- Provide water quality treatment for contaminants, such as oils, phosphorus, basic treatment, etc.

### MR #7: Flow Control

- Reduce the impacts of stormwater runoff from hard surfaces and land cover conversions

### MR #8: Wetlands Protection

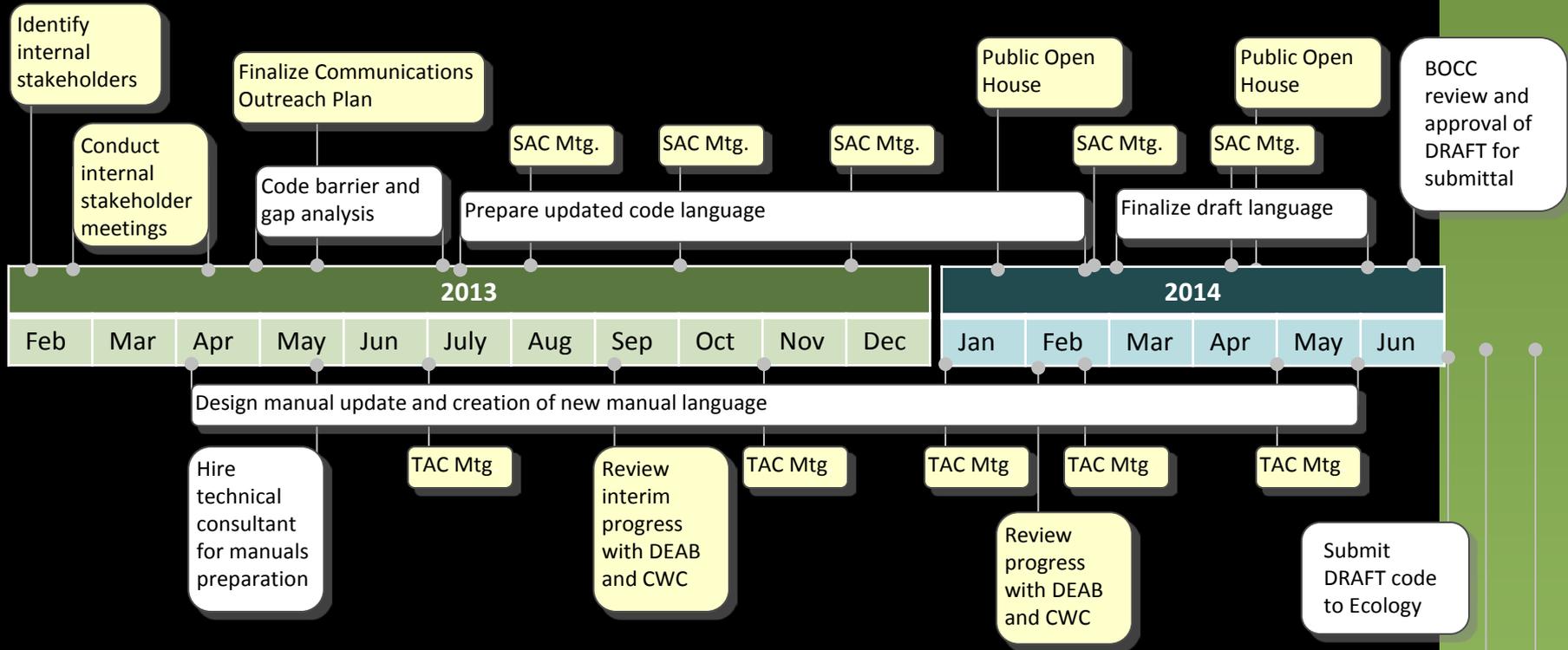
- Projects whose stormwater discharges into a wetland, either directly or indirectly through a conveyance system

### MR #9: Operations and Maintenance

- Requires an operation and maintenance manual



# What is the anticipated schedule (tentative)



**NOTE:** Other outreach efforts will be scheduled based on more refined timelines and target audience, per the communications outreach plan. Number of scheduled meetings will be refined throughout the process.

Adopt final code and stormwater program updates **by June 30, 2015**

Submit Annual Report with summary of review and revision process by **March 31, 2016**



# Need more information...

Department of Environmental Services (DES)

[www.clark.wa.gov/water-resources/SWMP/sw%20ordinance%20update.html](http://www.clark.wa.gov/water-resources/SWMP/sw%20ordinance%20update.html)

# What you can do...

- Participate in the process and let us know your thoughts
- Participate in our Green Neighbors and Green Business programs (lots of ideas and options)

[clarkgreenneighbors.org](http://clarkgreenneighbors.org) & [clarkgreenbiz.com](http://clarkgreenbiz.com)



*Comments & questions?*

