

STORMWATER DETENTION, HOW WATER RIGHTS IMPLICATIONS ARE ADDRESSED

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STORM WATER REGULATORY FRAMEWORK

STORM WATER MANAGEMENT

Trying to keep this...



from becoming this:



STORM WATER MANAGEMENT

Regulatory conflict:

- ✗ Colorado is a prior appropriation state,
- ✗ Storm water detention
 - + Necessary to protect life and property, further, to manage water quality,
 - + Is a diversion of water without a water right
- ✗ Downstream water rights can feel an impact

STORM WATER MANAGEMENT

How the conflict was historically managed:

- ✗ State Engineer has allowed detention during significant storms
 - + Premised on limiting discharge to historic,
 - + All water released in 72 hours,
 - + No beneficial use/consumption

STORM WATER MANAGEMENT

Senate Bill 15-212:

✖ Necessary

- + State law did not support State Engineer's position
 - ✖ Relied on administrative discretion,
- + State Engineer's allowance did not address regional storm water detention.

STORM WATER MANAGEMENT

For this discussion, consider three categories:

- ✖ Large-scale flood control
- ✖ Detention of urban runoff, developing area
- ✖ Regional detention for an already-developed area

STORM WATER MANAGEMENT

Large Scale Flood Control

Objectives:

- ✗ Manage events of greatest magnitude
- ✗ Large cooperative efforts
- ✗ Developed and undeveloped lands
- ✗ Initiated because of past or predicted catastrophic events

STORM WATER MANAGEMENT

Detention of Urban Runoff

Objectives:

- × Manage predicted events
- × Done concurrent with development
 - × Increased flows from impervious areas
- × Small scale
- × Required by storm water districts
- × Does not reduce historic hydrograph

STORM WATER MANAGEMENT

Regional Detention

Objectives:

- ✗ Consolidated effort to manage combined developed areas
- ✗ Not done concurrent with development
- ✗ Water quality and water quantity management objectives

STORM WATER MANAGEMENT

For tonight's discussion, consider three categories:

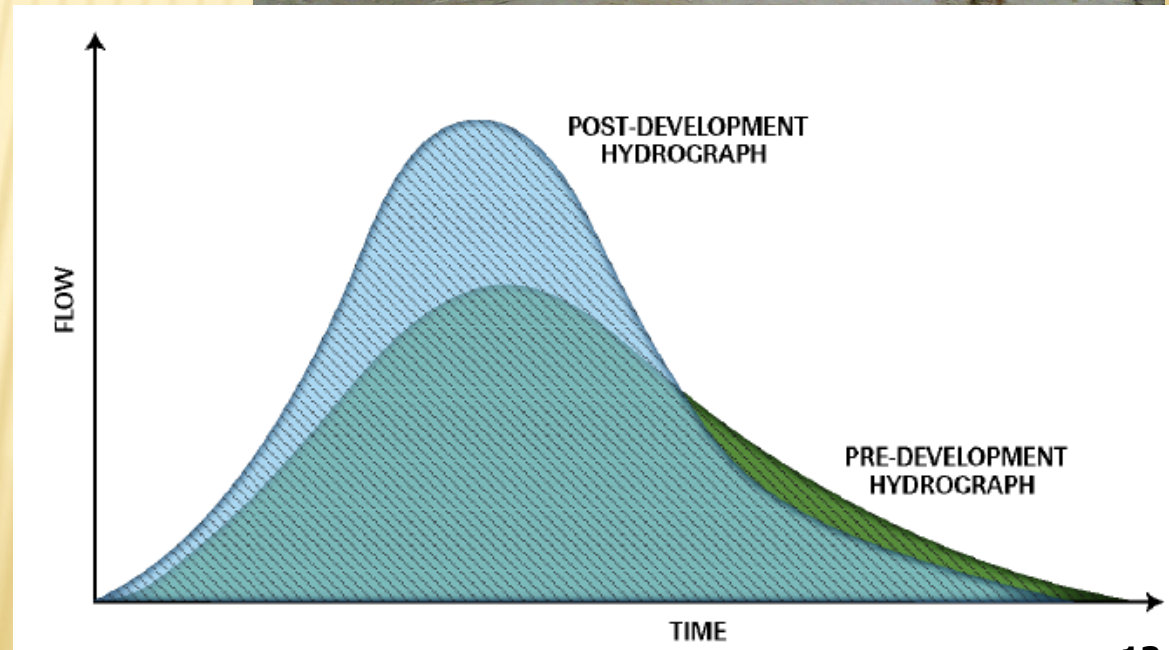
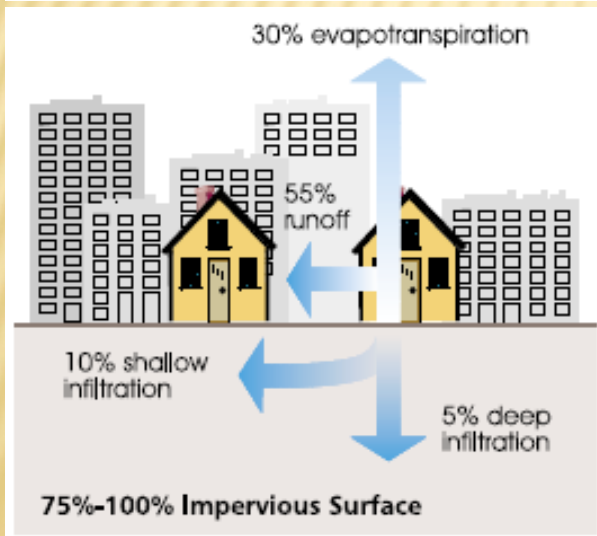
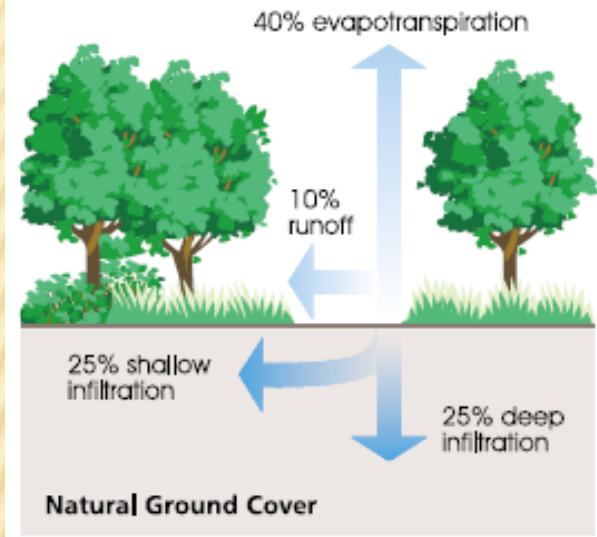
- ✗ *Large-scale flood control*
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- ✗ Regional detention for an already-developed area

STORM WATER MANAGEMENT

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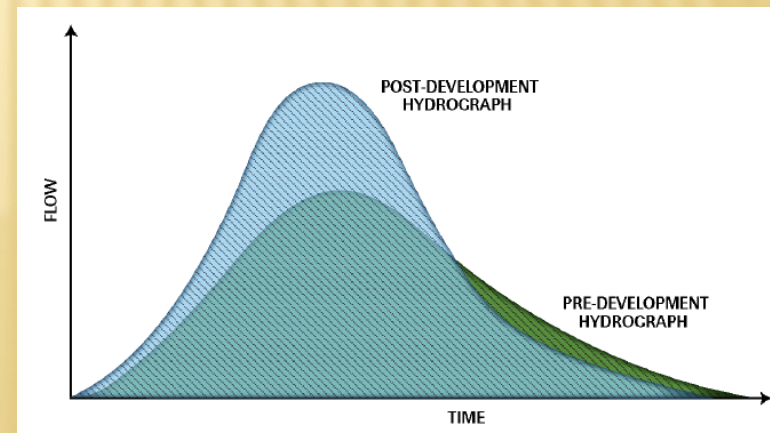
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STORM WATER MANAGEMENT, CONCURRENT WITH DEVELOPMENT



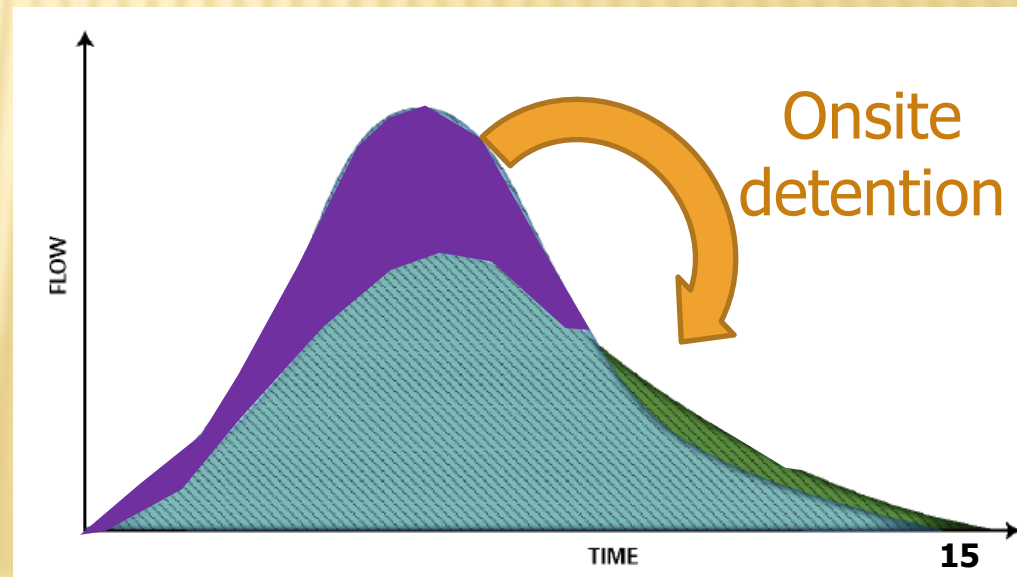
STORM WATER MANAGEMENT, CONCURRENT WITH DEVELOPMENT

- ✗ Change in hydrograph impacts the channel and may exceed capacity causing flooding
 - + No state law requires detention measures for maintenance of the hydrograph
 - + Statutory provisions authorizing municipal drainage improvements are generally “non-mandatory”



STORM WATER MANAGEMENT, CONCURRENT WITH DEVELOPMENT

- ✗ Counteract faster runoff & increased peak flow
 - + Stormwater detention & infiltration
 - + Potential impact to water rights?
 - + Generally, when timed with new development, we assume detention doesn't impact hydrograph



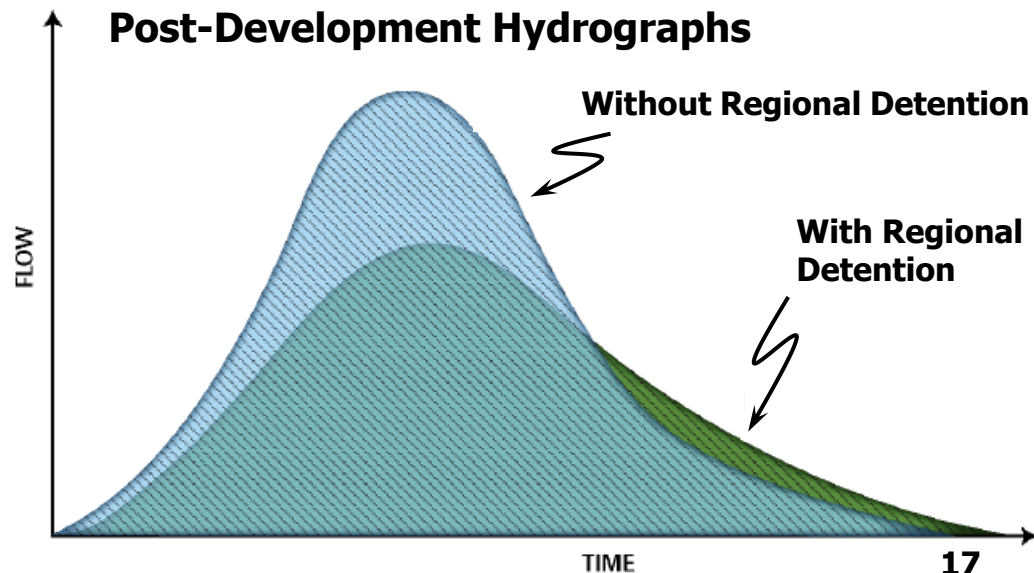
STORM WATER MANAGEMENT

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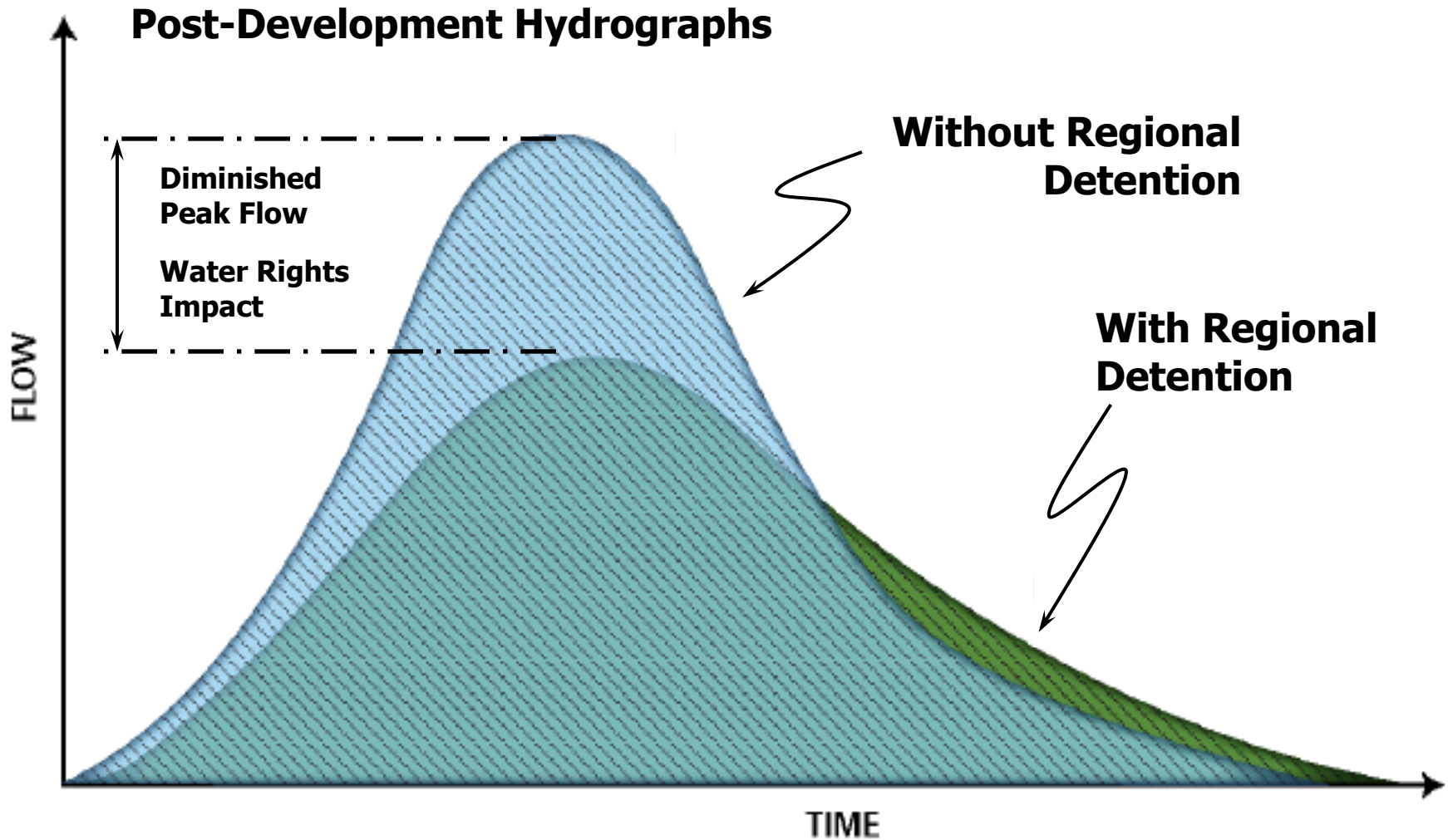
- ✗ Large-scale flood control
- ✗ Detention of urban runoff, developing area
- ✗ *Regional detention for an already-developed area*
 - + *Distinct from detention in a developing area*
 - ✗ *Well-established storm hydrograph*
 - ✗ *Detention will diminish the hydrograph*

STORM WATER MANAGEMENT, POST-DEVELOPMENT

- ✖ Hydrograph resulted from past development
 - + Hydrograph is the result of impervious areas
 - + Greater peak flow, shorter duration
 - + Established for many years, decades
 - + Water rights impacts

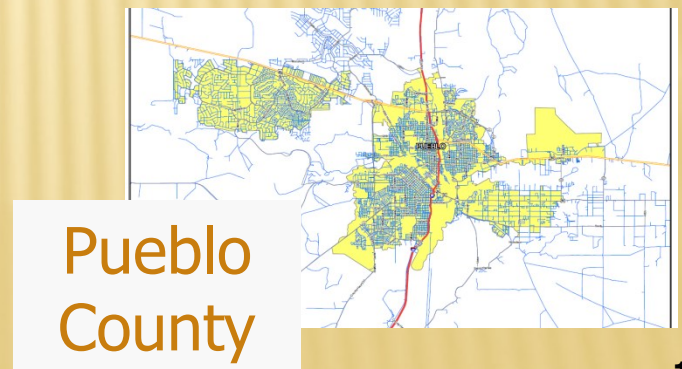
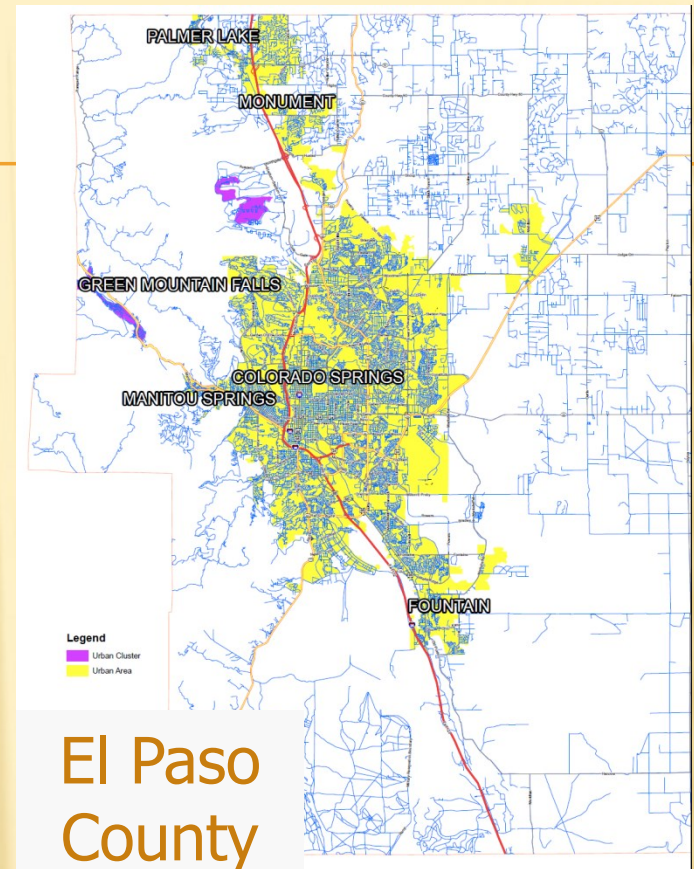


STORM WATER MANAGEMENT POST-DEVELOPMENT



STORM WATER QUALITY PERMITS

- ✗ Focused on reducing or preventing discharge of pollutants in storm water vs flood control
 - + Based on federal Clean Water Act
 - + Administered by Colorado Department of Public Health & Environment
 - + Applicable to ~50 Colorado municipalities (“MS4s”)



STORM WATER QUALITY PERMITS

- ✗ Common MS4 Permit requirements
 - + Manage illicit discharges
 - + Public education
 - + Good housekeeping
 - + Reduce or prevent pollutants from construction site runoff
 - + Control measures for new development & redevelopment



Photograph SO-3—On-site storage facility serving town home development (in background) coupled with park.

STORM WATER QUALITY PERMITS

- ✗ MS4 Permits set broad requirements for new development & redevelopment
 - ✗ Local municipalities may set more specific requirements
 - ✗ Local requirements may vary greatly
 - ✗ Some local requirements may address on-site or regional detention basins.

PENDING LEGISLATION

STORM WATER DETENTION & POST-WILDLAND FIRE FACILITIES

- ✘ Senate Bill 15-212 (Concerning a Determination that Water Detention Facilities Designed to Mitigate the Adverse Effects of Storm Water Runoff Do Not Materially Injure Water Rights)
 - + Two areas
 - ✘ Traditional storm water detention
 - ✘ Post wildland fire facilities

PENDING LEGISLATION REGIONAL DETENTION & POST-WILDLAND FIRE FACILITIES

- + Defines the facilities
- + Existing facilities do not cause injury
- + Proposed facilities:
 - × Presumption of no injury (rebuttable)
 - × Must give notice
 - × Allows for mitigation
- + State Engineer supported the bill with its protective amendments

PENDING LEGISLATION REGIONAL DETENTION & POST-WILDLAND FIRE FACILITIES

✘ Value of legislation

- + Necessary component of development, common in large cities and small towns
- + Regulation of all facilities would be difficult
- + Allows for protection from injury
- + Exempts a sensitive location
- + Therefore, best solution

QUESTIONS?
