

## MEMORANDUM

Date: Adopted July 25, 2007

By: *Chatfield Watershed Authority Board*

Authority Guidance: Authority Referral Review Guidance: *Land Use Development / Redevelopment Applications*



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**Purpose/ Goal** – The Chatfield Watershed Authority (Authority) is a referral agency to land use agencies within the Chatfield Watershed boundary, including cities and counties. The Authority, as a water quality management agency and local watershed authority, reviews referral applications for consistency with local, regional and state water quality regulations, associated policies and the Chatfield watershed plan. This “Referral Review Guidance” outlines general Authority land disturbance mitigation preferences, and Authority review and comment guidance.

**Authority Review Guidelines** – Referred land use applications that cause a land disturbance and/or a potential to negatively affect water quality are subject to review and comment by Authority. The Authority encourages site development to utilize a “4-Step Process” {Urban Drainage and Flood Control (UDFCD) *4-Step Planning Process*<sup>1</sup> (<http://www.udfcd.org>) or “Low Impact Development (LID)”. These processes include structural best management practices (BMPs) as an integral part of new development or a project with redevelopment.

Whether LID or 4-step terminology is used, the basic tenants are the same: Reduce runoff by reducing pavement, disconnecting impervious area and/or allowing infiltration all with a goal of mimicking predevelopment hydrology. Land disturbance activities using the 4-steps process or LID would use techniques that allow or restore sheetflow and infiltration/absorption such as: no raised curb, curb cuts to allow water to flow into a grass buffer or other landscaping, sumped landscaping (not raised parking lot islands), block pavement as cross walks, parking spaces, overflow to break up the impervious flatwork, grass buffers and swales.

Applications will be reviewed by Authority to determine the potential for runoff-caused water quality degradation. If land use applications do not use a *4-Step Planning or similar LID Process*, the Authority may request *additional information before the Authority can complete an adequate review of the proposal/ application*.

**Land Disturbance Review Elements**– A land use application that causes land disturbance should:

1. Use a treatment train approach and apply multiple structural and/or non-structural best management practices consistent to hydrogeological conditions of the site;

<sup>1</sup>Urban Drainage and Flood Control District, Denver Colorado. The **Urban Storm Drainage Criteria Manual** can be downloaded at: [http://www.udfcd.org/downloads/down\\_critmanual.htm](http://www.udfcd.org/downloads/down_critmanual.htm)

2. Strive to mimic pre-development hydrology and promote infiltration over off-site runoff;
3. Not reasonably increase pollutant loading over ambient conditions, with no net increase in total phosphorus loading on long-term basis; and
4. Not cause or create a potential for off-site or downstream increased erosion or water quality degradation.

***4-Step Planning Process Or Similar LID Process*** – These processes include four basic elements {See *UDFCD Urban Storm Drainage Criteria Manual, Volume 3 for information on the 4-step process and stormwater management*}. The Authority considers the following four components consistent with a *4-Step Planning or similar LID Process*:

***1) Runoff Reduction***

- The land use application should include techniques for reducing stormwater runoff. This may include porous paving surfaces, disconnected impervious area, modular block pavement as well as vegetated swales and sumps.
- Site design should promote water infiltration structures and on-site recharge, whenever feasible.

***2) Provide Water Quality (Capture Volume) Enhancement***

- Site design must consider water quality features [*Best Management Practices, LID practices or ©"Smart Growth Practices"*] to preserve surface and groundwater quality.
- Detention ponds or basins are an important aspect of water quality; however a single detention structure in sloped terrain may not mitigate all adverse water quality effects. A treatment train that may include several detention structures is the preferred Authority option.
- Runoff reduction or filtering should protect sensitive aquatic and riparian areas/ zones found in the Chatfield Watershed.
- The amount of nutrient (nitrogen and phosphorus) and other pollutant runoff from the site under post-construction conditions should not exceed ambient pre-construction conditions on a long-term basis.
- Large scale land use developments are encouraged to obtain water quality data or develop estimates on pre-construction water quality conditions, including taking photographs of pre-construction drainages and receiving waters.

**3) *Stabilized Drainageways***

- Land development projects that significantly increase impervious area on a property should identify drainageway stabilization mitigation measures in the land application process to reduce increased velocity impacts such as down cutting and scouring.
- A change in hydrology caused by development that generates higher quantities of stormwater runoff with subsequent higher potential pollutant loading to adjacent waterways requires appropriate use of BMPs or appropriate practices.

**4) *Industrial and Commercial BMPs Appropriate For Watershed***

- Industrial and Commercial BMPs should not cause a degradation of water quality conditions.
- Landscape designs should promote LID practices that prevent excessive runoff to waterways/ watershed and promote infiltration, when feasible.
- Irrigation and fertilized landscaping should not contribute excessive (above ambient conditions) nutrient loading in adjacent watershed.
- The Authority promotes use of native vegetation.