



BEST MANAGEMENT PRACTICES ALONG THE URBAN TO RURAL TRANSECT



Houston-Galveston Area Council

Best Management Practices (BMPs)

- BMPs are guidelines and practices that are designed to reduce pollution from storm water runoff
- Nonpoint source pollution comes from a variety of sources and land uses
- Depending on the source of the contaminant, pollutants and remediation varies
- Land uses throughout the San Bernard River Watershed vary

Types of Nonpoint Source Pollutants

- ❑ Excess fertilizers, herbicides and insecticides
- ❑ Oil, grease, and toxic chemicals
- ❑ Sediment from construction sites, crop and forest lands, eroding stream banks
- ❑ Salt from irrigation
- ❑ Bacteria and nutrients from livestock and pet waste and faulty septic systems

Types of Nonpoint Source Pollution and Land Use Relationships with the Transect Zones

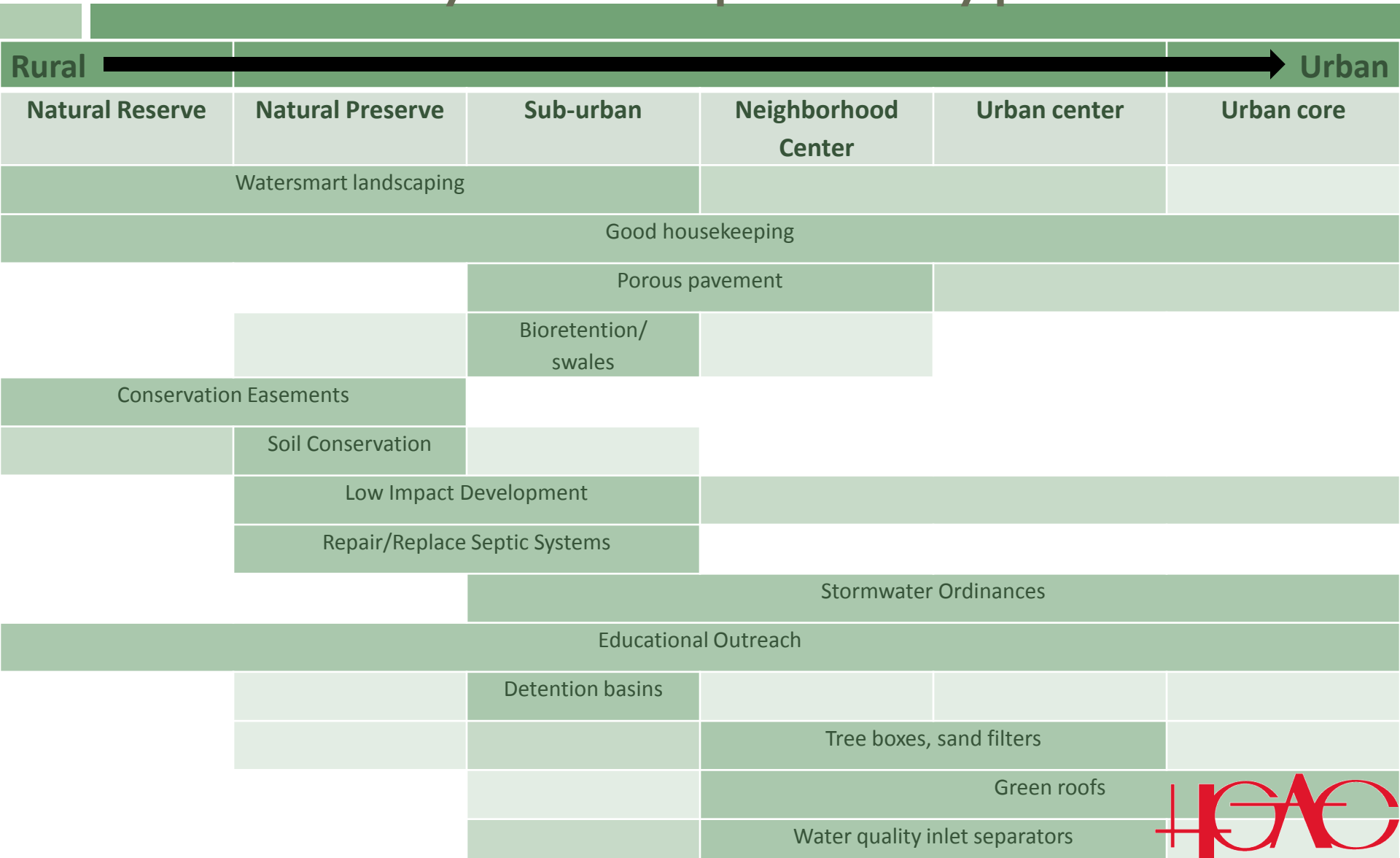
Developmental Zone	Dominant Land Uses	Typical Pollutant Examples
Natural	recreation	bacteria (natural)
Rural	agricultural	nutrients, sediment, pesticides, bacteria (food animal)
Sub-Urban	residential	nutrients, bacteria (pet waste)
General Urban	mix of residential, commercial, industrial	oil and grease, toxics, bacteria (effluent), metals
Urban Center	dense residential, dense commercial, industrial	oil and grease, toxics, bacteria (effluent), metals
Urban Core	densest commercial and residential	oil and grease, toxics, bacteria (effluent)

Categories of Best Management Practices

- Low Impact Development
 - Porous Pavements
 - Retention Ponds
- Construction Site Erosion Control
 - Use of silt fences around sites
 - Use of compost as a filter berm
- Good Housekeeping
 - Education on proper use, storage and management of household materials
 - Encourage use of alternative, nontoxic products
- Water Smart Landscaping
 - Use of native and non-invasive adapted plants that require less fertilizer and no pesticides



Selected Storm Water Treatment Practices by Development Type



Agricultural BMPs

- Re-vegetate riparian areas along waterways
- Control soil erosion
- Limit use of fertilizer and pesticides
- Control manure
- Precision irrigation
- Terracing
- Minimal tillage
- Vegetated filter strips

Urban/Residential BMPs

- Use fertilizer and pesticides sparingly
- Bag yard clippings
- Use proper lawn irrigation
- Inspection septic systems every 3 years
- Wash cars in an area where the runoff will infiltrate into the ground
- Repair leaks and dispose of used fluids/chemicals and batteries at drop-off or recycling centers
- Pick up pet waste and dispose of it properly

BMP Effectiveness Monitoring

- To demonstrate the impacts of measures through targeted monitoring vs. ambient monitoring
- This will be done under an approved QAPP to ensure consistent results and records
- Will demonstrate proof of effectiveness of practices



BMP Sites Needed for San Bernard WPP:

- Row Cropping
- Cattle Grazing
- OSSF Areas

