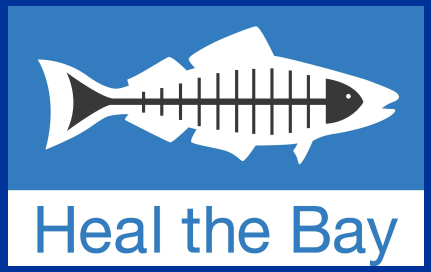
Comments on the Draft Ventura County MS4 Permit



April 5, 2007

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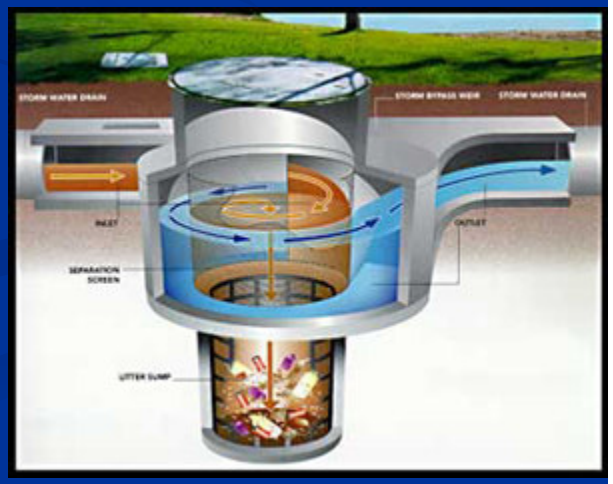

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Attachment A to Resolution No. R4-2006-012

Table 7-19.2 Calleguas Creek Watershed Metals and Selenium TMDL: Implementation Schedule

Item	Implementation Action[1]	Responsible Party	Completion Date
1	Effective date of interim Metals and Selenium TMDL waste load allocation (WLAs), and final WLAs for other NPDES permittees	POTWs, Permitted Stormwater Dischargers[2] (PSD), Other NPDES Permittees	Effective date of the amendment
2	Effective date of interim Metals and Selenium TMDL load allocation (LAs)	Agricultural Dischargers	Effective date of the amendment
3a	Submit Calleguas Creek Watershed Metals and Selenium Monitoring Program	POTWs, PSD, Agricultural Dischargers	Within 3 months after the effective date of the amendment
3b	Implement Calleguas Creek Watershed Metals and Selenium Monitoring Program	POTWs, PSD, Agricultural Dischargers	Within 3 months of Executive Officer approval of the monitoring program
3c	Re-calibrate HSPF water quality model based on first year of monitoring data	POTWs, PSD, Agricultural Dischargers	1 year after submittal of first annual monitoring report
4a	Conduct a source control study, develop and submit an Urban Water Quality Management Program (UWQMP) for copper, mercury, nickel, and selenium	MS4s	Within 2 years after the effective date of the amendment
4b	Conduct a source control study, develop and submit an UWQMP for copper, mercury, nickel, and selenium	Caltrans	Within 2 years after the effective date of the amendment
4c	Conduct a source control study, develop and submit an UWQMP for copper, mercury, nickel, and selenium	NAWS point Mugu (US Navy)	Within 2 years after the effective date of the amendment
5	Implement UWQMP	PSD	Within 1 year of approval of UWQMP by the Executive Officer
6	Develop and submit an Agricultural Water Quality Management Program (AWQMP) as described in the Conditional Waiver Program	Agricultural Dischargers	Within 2 years after the effective date of the amendment
7	Implement AWQMP	Agricultural Dischargers	Within 1 year of approval of AWQMP by the Executive Officer
8	Develop WLAs and LAs for zinc if impairment for Mugu Lagoon is maintained on the final 2006 303(d) list	Regional Board or USEPA	Within 1 year of the final 2006 303(d) list
9	Submit progress report on salinity management plan, including status of reducing WRP effluent discharges to Conejo and Calleguas Creek reaches of the watershed	POTWs	Within 3 years after the effective date of the amendment
10	If progress report identifies the effluent discharges reduction is not progressing, develop and	POTWs	Within 4 years after the effective date of the

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Low Impact Development (LID)

What Is LID?

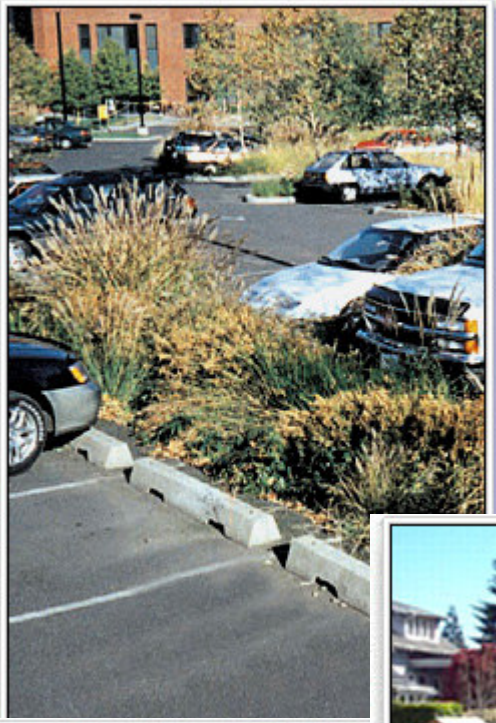
General LID Principles

- LID is an ecologically-friendly approach to site development and stormwater management that helps prevent impacts to land & water resources.
- LID conserves the natural systems and hydrologic functions of a site.
- LID focuses on prevention rather than mitigation.

10 Common LID Practices:

1. Reduce & disconnect impervious surface (*Effective Impervious Area*)
2. Soil amendment
3. Permeable pavers
4. Rain gardens & bioretention
5. Sidewalk storage
6. Vegetated swales, buffers, & strips
7. Roof leader disconnection
8. Rain barrels & cisterns
9. Rooftop gardens
10. Pollution prevention & good housekeeping

Examples of LID In Practice



Why LID?

LID Is Cost-Effective

NAHB RESEARCH CENTER

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Guides to Low Impact Development

Ever wish you could simultaneously lower your site infrastructure costs, protect the
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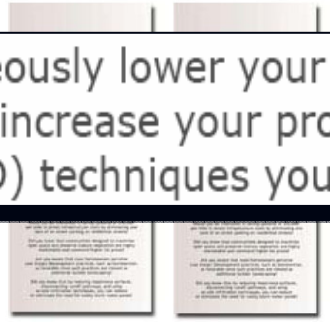
Ever wish you could simultaneously lower your site infrastructure costs, protect the environment, and increase your project's marketability? Using Low Impact Development (LID) techniques you can.



LID has a va
Environment such as:

- The reduction of land clearing and grading costs;
- Balancing the need for growth and environmental protection;
- The protection of local land and water resources.

LID utilizes a system of source controls and small-scale, decentralized treatment practices to help maintain a hydrologically functional landscape. The conservation of open space, the reduction of impervious surfaces, and the use of small-scale storm water controls, such as bioretention, are just a few of the LID practices that can help maintain predevelopment hydrological conditions.

Featured case study

Somerset is an 80-acre development in suburban Maryland consisting of 199 homes on 10,000 square foot lots. During Somerset's creation, the developer used LID practices to reduce its storm water management costs. By using LID, the developer:

- Eliminated the need for storm water ponds by using bioretention techniques saving approximately $300,000;
- Gained 6 additional lots and their associated revenues;
- Reduced finished lot cost by approximately $4,000.

For more information, download copies of the Builder's Guide to Low Impact Development and Municipal Guide to Low Impact Development brochures.

NAHB Research Center
400 Prince Georges Blvd.
Upper Marlboro, MD 20774
301.249.4000 / 800.638.8556
www.nahbrc.org

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LID Is Cost-Effective

What is Low Impact Development (LID)?

Ever wish you could simultaneously lower your site infrastructure costs, protect the environment, and increase your project's marketability? With LID techniques, you can. LID is an ecologically friendly approach to site development and storm water management tha
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and planning technique
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Source: Prince George's County DER

LID Benefits

In addition to the p
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Developers

- Reduce land clearing ar
- Potentially reduce infra
  curbs, gutters, sidewalk
- Reduce storm water ma
- Potentially reduce impact fees and increase lot yield
- Increase lot and community marketability

Municipalities

- Protect regional flora and fauna
- Balance growth needs with environmental protection
- Reduces municipal infrastructure and utility maintenance costs (streets, curbs, gutters, sidewalks, storm sewer)
- Increase collaborative public/private partnerships

Environment

- Preserve integrity of ecological and biological systems
- Protect site and regional water quality by reducing sediment, nutrient, and toxic loads to water bodies
- Reduce impacts to local terrestrial and aquatic plants and animals
- Preserve trees and natural vegetation

Cover Photo: R. Arendt

Case Study

Kensington Estates is a conventional development on 24 acres consisting of 103 single-family homes in Pierce County, WA. A study was conducted to redesign the site using a new state storm water model and to illustrate the full range of LID practices and technologies avail-

Overall, the redesigned LID site could have:

- Resulted in construction cost savings of over 20%;
- Preserved 62% of the site in open space;
- Maintained the project density of 103 lots;
- Reduced the size of storm pond structures and eliminated catchments and piped storm conveyances; and
- Achieved "zero" effective impervious surfaces.

For More Information

- Low Impact Development Center
  http://www.lowimpactdevelopment.org
- Prince George's County, Maryland
  http://www.goprincegeorgescounty.com
- NAHB Research Center Toolbase Services
  http://www.toolbase.org
- U.S. EPA
  http://www.epa.gov/owow/nps/urban.html

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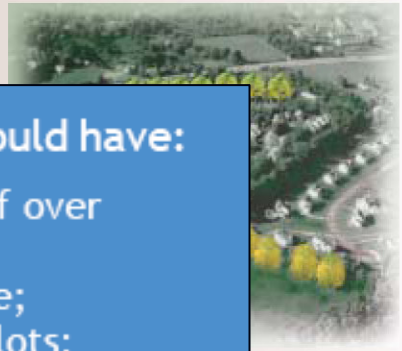
*Assumes paving costs of $15/sq. yd.

Printed on recycled paper with soy ink



Guide
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Would you be interested in saving upwards of $70,000* per mile in street infrastructure costs by eliminating one lane of on-street parking on residential streets?

Did you know that communities designed to maximize open space and preserve mature vegetation are highly marketable and command higher lot prices?

Are you aware that most homeowners perceive Low Impact Development practices, such as bioretention, as favorable since such practices are viewed as additional builder landscaping?

Did you know that by reducing impervious surfaces, disconnecting runoff pathways, and using on-site infiltration techniques, you can reduce or eliminate the need for costly storm water ponds?

LID Is Flexible

GREEN from the Ground Up

Nature-friendly design practices for land-savvy developers

This fact sheet is one of a series on nature-friendly development practices created by Metro through its Nature in Neighborhoods initiative

Low impact site design

Description of practice

Low impact site design uses planning techniques that are intended to conserve the

Appropriate site conditions

One of the best attributes of low impact site design principles and techniques is that they are extremely flexible. They can be incorporated into any site; the unique characteristics of a site will dictate what practices are best suited to a particular project. These practices work in highly constrained urban areas as well as on sites with larger lots and valuable natural resources.

that every citizen in the region has access to nature.

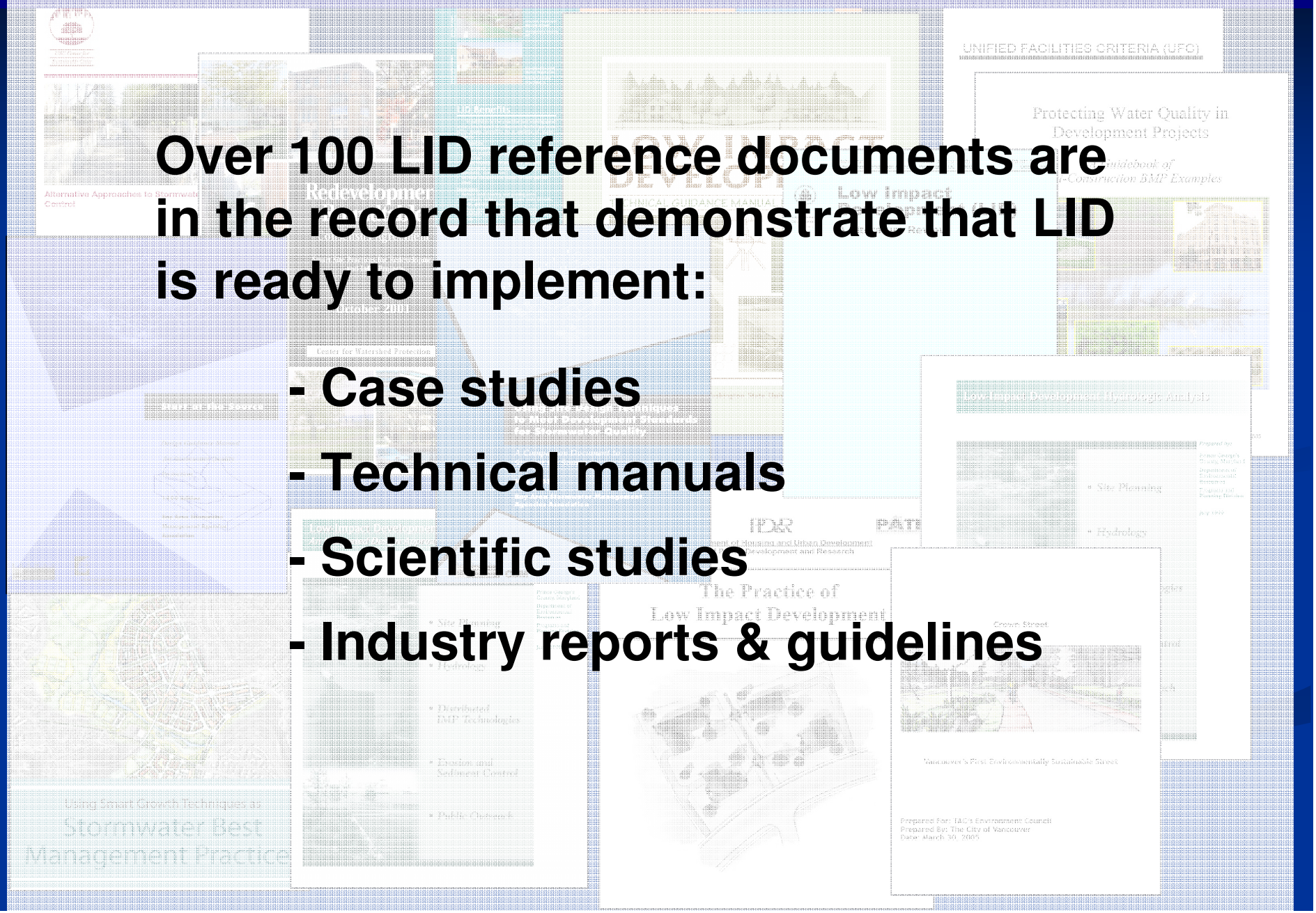
vacy, and design swales and rain gardens as visual features

- retain buffers along streams and rivers.

Keep Nature in Neighborhoods METRO

www.metro-region.org/nature

LID Can Be Implemented Now



Over 100 LID reference documents are in the record that demonstrate that LID is ready to implement:

- **Case studies**
- **Technical manuals**
- **Scientific studies**
- **Industry reports & guidelines**

LID Can Be Implemented Now

Planning & Zoning 3.7

SWMPs, SWPPPs, and BMPs

The current construction environment presents designers and developers with an array of mandates, regulations, and conditions for approval that relate to stormwater quality. By understanding the alphabet soup of acronyms, review agencies, and conditions it becomes easier to navigate the approval process and anticipate the design strategies that will be successful.

The National Pollution Discharge Elimination System (**NPDES**), a provision of the federal Clean Water Act, mandates that each large population center obtain a permit to discharge stormwater. BASMAA's seven participating stormwater programs, for example, serve as umbrella organizations for their co-permittee municipalities.

These NPDES permits are issued by the Regional Water Quality Control Board (**RWQCB**), a division of the State of California Environmental Protection Agency. There are nine regions throughout the state, and each Regional Board monitors each permittee for compliance.

To meet the goals of the NPDES permit, each local stormwater program, and each co-permittee within a program, establishes a

for a construction permit, each new development project resulting in a land disturbance of five acres or larger must prepare a Storm Water Pollution Prevention Plan (**SWPPP**). In a typical project, a SWPPP is a document consisting of narrative and a separate sheet within the construction document set, usually in the Civil Engineering or Landscape series, that outlines both a plan to control stormwater pollution during construction (temporary controls) and after construction is completed (the permanent constructed stormwater pollution prevention elements). The permanent controls are usually found on the sheet within the construction documents.

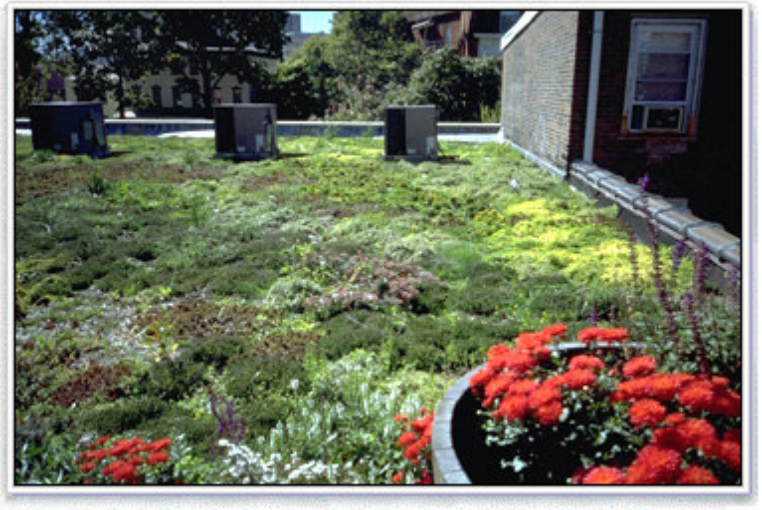
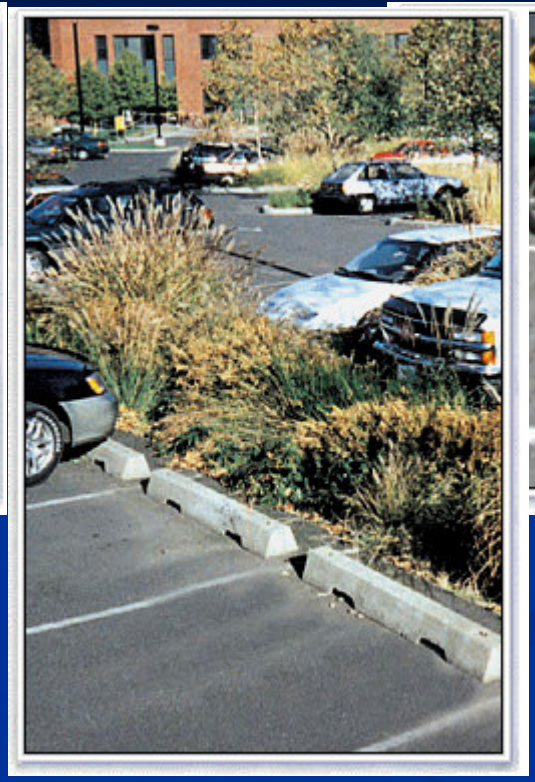
A SWPPP is a series or collection of Best Management Practices (**BMP**). The term Best Management Practice is a widely used, but somewhat inaccurate nomenclature, because the elements described as BMPs are not necessarily always best, nor are they always management practices. They can range from public education, like stenciling catch basins (which may not be as good as replacing the catch basin with an infiltration area), to site planning and design features, like a vegetated swale (which requires management but is not a management practice), to street sweeping (which actually is a management practice). In any case, the term BMP has wide currency and has been formalized in many local ordinances and codes. This document doesn't explicitly use the term BMP to describe the design alternatives presented, though each could be identified as a BMP in any particular SWPPP, depending on the requirements of the local SWMP.

The true management practices widely adopted in the past twenty years like stenciling catch basins and street sweeping, can be considered *"first wave BMPs."* These housekeeping practices have value, and deserve to be continued. But they perpetuate a conventional approach to stormwater management based on collection and conveyance.

ing about impervious land coverage and stormwater management. They are a collection of proven methods and techniques that integrates stormwater management into planning and design, that reduces overall runoff, and manages stormwater as a resource, by starting at the source.

These *"second wave BMPs"* require a new way of thinking about impervious land coverage and stormwater management.

"...a collection of proven methods and techniques that integrates stormwater management into planning and design, reduces overall runoff, and manages stormwater as a resource, by starting at the source."

No further study is needed to adopt the LID program today:

Examples of LID In Practice