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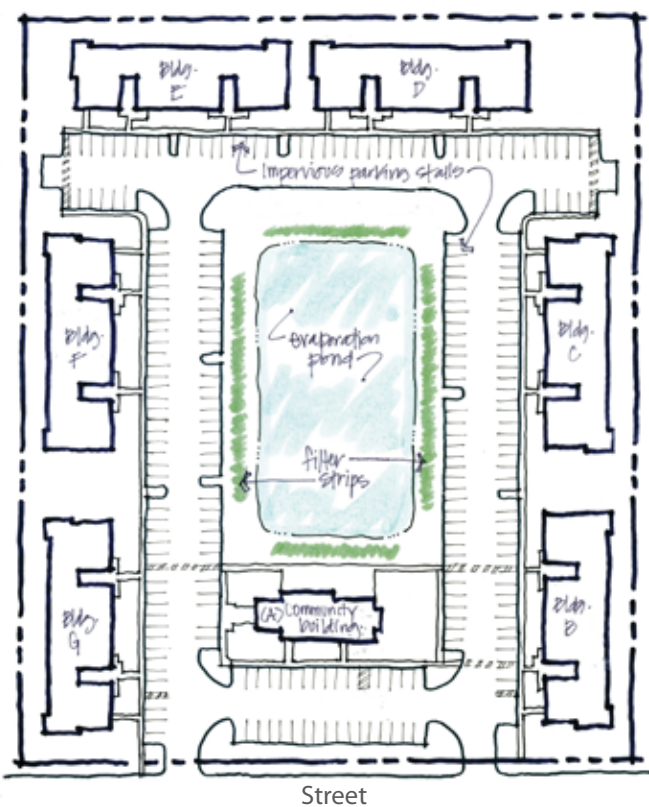
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LOW IMPACT CASE STUDY

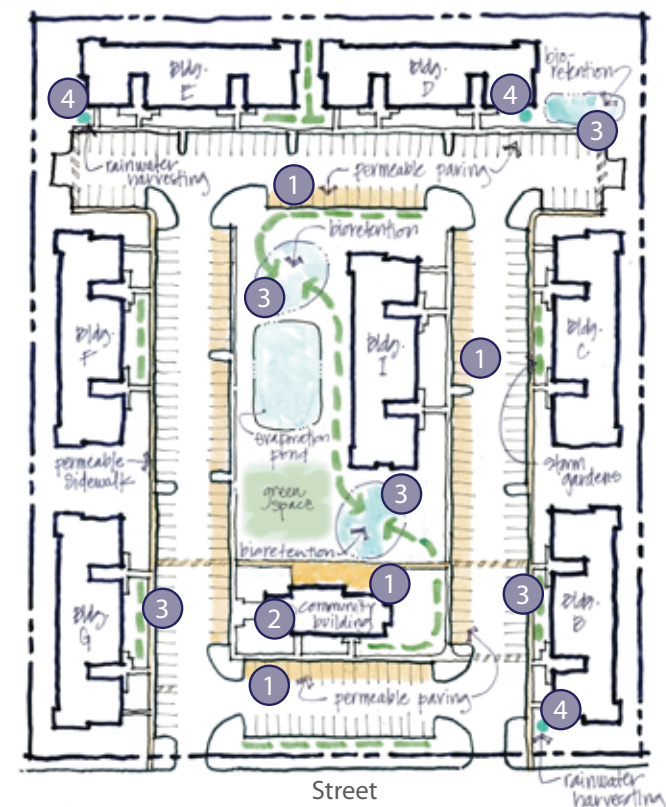
This case study demonstrates two approaches to a multi-family residential development. The site is characterized by shallow depth to bedrock requiring evaporative ponds to manage stormwater on-site. Through a low impact approach, the size of the evaporation ponds can be reduced, allowing for more flexible use of the site.

Conventional Approach

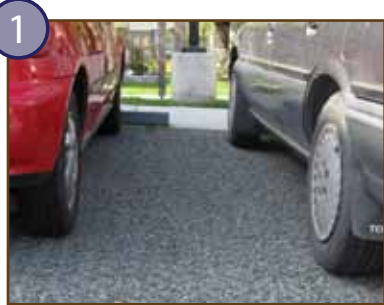


The conventional design includes paved parking lots, walkways, and patios. Stormwater management is provided by infiltration basins, grass-lined swales, filter strips, and a large evaporation pond.

Low Impact Approach



The LID design includes the same mix of uses, but uses permeable paving, vegetated roofs, roof rainwater harvesting, and storm gardens for stormwater management and storage. By using low impact strategies the size of the project's evaporation pond is significantly reduced.



- 1 Permeable Parking & Walkways
- 2 Vegetated Roofs
- 3 Storm Gardens
- 4 Rain Barrels & Cisterns



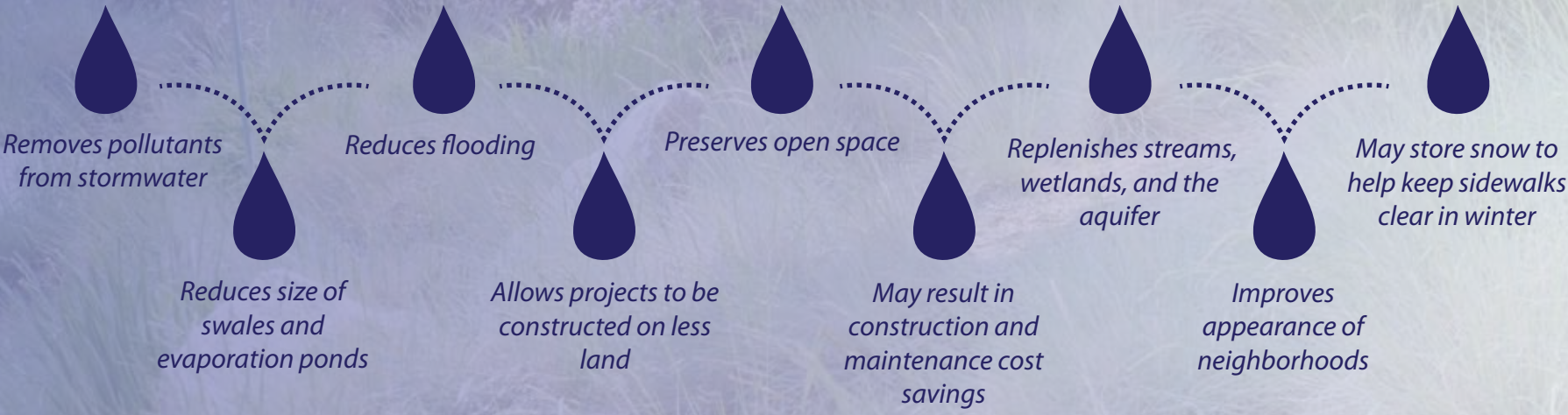
Low Impact Development

An Innovative Method for
Preserving & Protecting
Our Precious Water Resources

What is LOW IMPACT DEVELOPMENT?

Low Impact Development (LID) is a stormwater management and land development strategy that mimics nature. LID emphasizes site conservation and uses natural features to filter and retain stormwater as close to where it falls as possible.

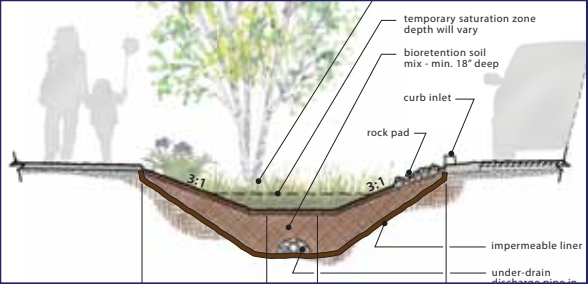
WAYS LOW IMPACT DEVELOPMENT BENEFITS YOU



Low Impact Development METHODS



Storm Gardens



Storm gardens feature organic soils, mulch, drought-tolerant plantings, and when necessary, underdrains and overflow features.

Open Conveyance



Open conveyance may reduce the size of or entirely eliminate conventional underground piped conveyance systems.

Clustered Development



Cluster homes and units to minimize building footprints, reduce road and driveway lengths, and maximize open space.

Site Conservation



Preserve native landscapes where possible and amend soils and revegetate when not.

Stormwater Reuse



Capturing roof runoff in a cistern or rain barrel allows for reuse for irrigation.

Permeable Pavement



Pavement that allows water to move through it. Some options include interlocking concrete pavers, pervious concrete, and porous asphalt. Permeable pavement is applicable to low-traffic areas such as parking areas and sidewalks.

Reduced Lawn



Replacing lawn with drought-tolerant plantings where appropriate may save money on irrigation and maintenance and reduce runoff pollution.

Limit Paved Surfaces



Narrowing street widths, using pervious pavement, and reducing building footprints may result in smaller storm drainage facilities.

Street Design



Traffic calming measures may be combined with specific LID methods, including storm gardens, narrower streets, and drought-tolerant landscaping.

RECENT PROJECTS

Lincoln Street

Lincoln Street from
29th Avenue to Cannon Hill Park



The storm gardens were installed as part of a street repair project. The storm gardens capture and treat street runoff, and drain to the pond in Cannon Hill Park.

Nevada-Lidgerwood Parking Lot

Intersection of Broad
Avenue and Addison Street



As part of a parking expansion for the Nevada-Lidgerwood neighborhood / C.O.P.S. Shop, a pervious walkway and storm gardens were used to treat stormwater runoff.

Broadway Avenue

Broadway Avenue from
Elm to Oak Streets



This street revitalization project uses storm garden planters to recharge the Spokane-Rathdrum aquifer.