Roof Drainage Building Code Guideline References from National Rain Gutter Contractors Association http://www.nrgca.org/rainguttercodeinformation.php That means most houses need gutter!!

International Code Council

International Residential Code 2006 Ch. 8 Roof-Ceiling Construction: Section R801
R801.3 Roof Drainage - "In areas where expansive or collapsible soils are known to exist, all dwellings shall have a controlled method of water disposal from roofs that will collect and discharge roof drainage to the ground surface at least 5 feet (1524 mm) from foundation walls or to an approved drainage system."
International Residential Code 2000 Commentary - Vol. 1
"Saturated expansive or collapsible soils can lead to foundation failures because their additional loads are imposed on the foundation wall. To minimize the potential for the soil adjacent to the foundation wall to become saturated due to roof drainage, the code requires that the roof drain 5 feet (1524 mm) from the foundation."

National Association of Home Builders

NAHB Model Green Home Building Guidelines - click here Version I, Section 2.2 Enhance Durability and Reduce Maintenance
2.2.4 Install drip edge at eave and gable roof edges.
Intent: The drip edge directs roof runoff water into the gutters and away from the fascia and roof sheathing.
2.2.5 Install gutter and downspout system to divert water at least 5 away from foundation and from there into the overall onsite drainage area.
Intent: Moisture intrusion of foundations is avoided by moving runoff water beyond the foundation.

U.S. Green Building Council

LEED for Homes Program Water Efficiency: Credit #1 Water Reuse - Maximum Points: 2
There are no mandatory requirements. Optional requirements include:
1.1 Design and install of rainwater harvesting system which includes the collection of surface and roof run-off for irrigation uses. (1 Point)
1.2 Design and install gray water re-use system, with minimum of dedicated clothes washer with 2 inch drain directed to subterranean drain field for landscape irrigation. (1 Point)
USGBC Rationale: 50% of potable water use in a home may be for maintenance of lawns and gardens. This credit promotes the re-use of indoor waste water and rainwater to help meet landscape water demands. **Materials and Resources: Credit #4 Durability Plan - Maximum Points: 3** The mandatory requirement is:
4.1 Prepare a detailed durability plan per the design process in Exhibit MR4-A.
Optional requirement:
4.2 Verify implementation of durability plan via third party inspection as described in Exhibit MR4-C.
The synergy between durability, energy efficiency, and indoor air quality are inextricably linked in high performance homes. Moisture management becomes more critical as energy management

reduces the buildings overall drying potential.�
Moisture can be a major cause of indoor environmental problems (e.g., mold)�. The point value of this credit therefore reflects the related indoor environmental benefits of improved water management at the foundation, exterior walls, and roof.
Water management of the property (i.e., both lot and structure) is a combination of surface and ground water management, with the dual goals of protecting the structure from water as well as keeping as much water as possible on the site in order to limit the burden on municipals infrastructure, recharging the aquifer, etc. To the greatest extent possible, the site and landscape should be designed with these goals in mind. The durability plan is intended to prevent damage to the home by water - both surface and ground - that can not be effectively managed at the site level, as well as to protect the structure from other damage functions.
USGBC Rationale is that durability problems can substantially shorten the life of assemblies, systems, and/or materials in a home and indeed the home itself. While the development and implementation of a durability plan can not guarantee improved durability, there are a number of precedents in the insurance industry, in particular, supporting the premise that a prescribed process aimed at improving durability can indeed correlate to improved performance, as measured by decreases in warranty claims for durability-related building defects and failures.

Energy Star

Indoor Air Package Pilot Specification - April 4, 2005
1. Moisture Control Required Measures References(s)Water Managed RoofsReference(s)1.1 Provide Minimum No. 30 roof felt under layment or equivalent.Copper Development Assn. Design Handbook, Sec. 41.2 In IECC 2004 Climate Zones 5 and higher, provide self sealing water protection membrane ice flashing over the sheathing at the eave extending 2 feet inside the exterior wall plane.Moisture Control Handbook
IRC1.3 Provide metal drip edge at all exposed roof decking.1.4 Provide self-sealing bituminous membrane at all eaves, valleys and penetrations except in climates with less than 20 inches annual rainfall.EBBA Builder Guide
Moisture Control Handbook1.5Provide Insulated wind baffle or other air barrier to block wind washing at all attic eave bays in roof assemblies with soffit vents.EEBA Builder Guide
EEBA Water management Guide1.6Provide step flashing at all intersections of roof and walls with the exception of continuous flashing at metal and rubber membrane roofs. Metal �kick-out� flashing shall be provided at the end of roof/wall intersections to direct water away from wall. Drainage plane above shall be directed water flow onto and not behind flashing. Intersection wall siding shall terminate a minimum of 2 inches above roof. HUD/NAHB specs for gutters and downspoutsIRC code 801.c
EEBA Builder Guides1.7Direct roof water from house with either:HUD/NAHB specs for gutters and downspouts
Moisture Control Handbook
IRCGuttering and downspouts shall empty to lateral piping that deposit(s) water on finish grade a minimum of 5 ft. from foundation, or in limited spaces, deposit to underground catchment system that carries water 10 ft. from foundation.In dry climates with less that 20 inches annual rainfall as shown in EEBA Builder Guides, provide minimum 18" roof overhangs that deposit water to grade sloped away from home.