2012 Codes Adoptions & Amendments, Expanded Summary, August 14, 2012:

General. The International Code Council (ICC) publishes new editions of their family of nationally recognized model codes every 3 years, with 2012 being the latest edition. Boulder County adopts the following codes:

- International Building Code (IBC)
- International Residential Code (IRC)
- International Energy Conservation Code (IECC)
- International Fuel Gas Code (IFGC)
- International Mechanical Code (IMC)
- International Plumbing Code (IPC)

For 2012, the county may also consider adopting the International Green Construction Code (IGCC), ICC 700, the Residential Green Building Standard; the International Performance Code and the International Wildland-Urban Interface Code (IWUIC); all or in part. The National Electrical Code (NEC) is adopted by the State Electrical Board for application by Colorado's local jurisdictions. The current edition is the 2011 NEC.

Administrative. Boulder County combines the Chapter 1 administrative provisions of all the adopted model codes into a single Chapter 1, which is known, along with the other amendments, as the "Boulder County Building Code" (BCBC). As part of the adoption process, the BCBC administrative provisions are compared with the current published requirements. If possible, local amendments are deleted in favor of the published model code language. Some examples of issues and changes:

- Sec. 105.2(2). 2012 Codes changed to exempt 7-ft. fences from requiring permits. Recommend retaining at 6 ft. to correlate with Land Use Code, provide for traffic safety (sight distance), etc.
- Sec. 105.2(10). Swings and other playground equipment accessory to detached one- and two-family dwellings (same wording as published IBC). This will require permits for public or commercial playgrounds.
- Sec. 107.1.1. Information on construction documents. Consider adding language from IRC 106.1.1 requiring identification of braced wall lines, bracing methods, etc.
- Sec. 110. Inspections. Add a Mid-Roof inspection for roofs. Consider adding "shear" or pre-frame, radon, shower pan, radiant heat, masonry attachment and exterior lath inspections.

2012 Changes. The changes to the 2012 editions from the currently adopted 2009 editions will be evaluated. Changes that conflict with Colorado statutes for counties, local conditions or practices or other existing programs are to be deleted or amended, although the general goal is to attempt to minimize local amendments. A summary of some of the changes to the 2012 codes can be found on the ICC web site at: http://www.iccsafe.org/Store/Documents/2012-New.pdf

Residential Fire Sprinklers. The 2009 and now the 2012 edition of the IRC include minimum requirements for installing fire sprinkler systems in all new one- and two-family dwellings and townhouses. The county included these provisions in its adoption of the 2009 IRC, but delayed the effective date until January 1, 2013 in accordance with the recommendations of the Colorado Joint Ad-Hoc Residential Sprinkler Committee.

Under Sections R313 and P2904 the IRC, a fire sprinkler that is said to be "95%" of an NFPA 13D system may also be installed. "P2904 multipurpose" systems, which use the same water supply as the rest of the dwelling, may also be installed by state-licensed plumbers.

Some of the county's 20+ fire protection districts have already proposed to adopt the 2009 or 2012 editions of the International Fire Code (IFC), which include these same fire sprinkler requirements. Boulder County has required fire sprinkler systems for new homes over 3,600 sq. ft. and additions plus existing homes totaling 4,800 sq. ft. or greater since 1995. In addition to the requirements for all new dwellings, the fire sprinkler amendments will likely include requirements for large additions to existing dwellings, with the possible exception of very minor additions to large existing houses.

Please refer to the latest draft of the fire sprinkler requirements (attached).

Ignition-Resistant Construction (IBC 722, IRC R325 amendments). The county's amendments requiring ignition-resistant construction and defensible space around new homes and additions to existing homes in areas prone to wildland fire have been in place and evolving since the aftermath of the Black Tiger Fire in 1989. More recently, the Fourmile Canyon Fire, the ensuing Udall Report, the latest Colorado fires and other sources from around the country have provided additional information regarding the latest fire science and the "best bang for the buck" in terms of reducing the risk of homes being destroyed in wildfires. Another option being considered is the adoption, in whole or in part, of the International Wildland-Urban Interface Code (IWUIC). Our goal is to apply the latest fire science in helping to reduce the risk that county homes will be destroyed by future wildfires.

The final "Udall" report, "Fourmile Canyon Fire Findings," August 2012, stresses the importance of the characteristics of the "Home Ignition Zone, or "HIZ," an area extending for 100 feet around the building. According to the report's findings, maintaining a high degree of ignition resistant materials within the HIZ, including the structure itself, greatly increases the chances that a home will survive on its own when exposed to extreme fire behavior.

- Sec. 722, IBC and R325, IRC. Reduce attic vent screening dimension from current ¼-ich to 1/8-inch in all locations where vent screening dimensions are specified.
- Consider requiring noncombustible or ignition-resistant construction materials for exterior walls in all wildfire hazard zones. Structures in moderate hazard zones are currently allowed to use any materials for exterior walls.
- Consider an amendment to not permit wooden fencing of certain types to be attached to buildings.

Energy Code (IECC). Our current adoption of the 2009 International Energy Conservation Code (IECC), includes amendments for "above code" requirements for the prescriptive path and performance paths, as well as the addition of provisions for upgrades to existing buildings with large additions/renovations, system commissioning, water conservation, deconstruction, construction jobsite waste reduction and recycling and trash storage and recycling areas.

The 2012 IECC is generally recognized as meeting the goals of the U.S. Department of Energy (DOE) and others to incorporate minimum requirements that reduce energy use by 30% over the 2006 IECC. As we adopt the 2012 edition, we're looking toward remaining "above code," although a number of provisions in our amendments are now in the published code and may no longer require local amendments.

The energy provisions in the IECC and the IRC are no longer developed under separate processes. The residential provisions of the IECC are now simply reprinted as Chapter 11 of the IRC.

BuildSmart. BuildSmart is the county's residential green building program, which has been in place, and evolving, since it first became effective on May 1, 2008. BuildSmart is also an "above code" program, and includes provisions that save more energy and provide for more sustainability than Chapter 11 of the 2009 IRC as published.

Due to the "ramping up" of the 2012 IECC and IRC, they contain requirements that almost meet, meet, or, in a few cases, exceed, the current BuildSmart program.

- For example, the 2012 IECC prescriptive requirement for the *U*-value of windows in our climate zone is 0.32, which exceeds the current BuildSmart requirement of 0.35. Since these windows are commonly available, it is proposed that the window *U*-value be changed to 0.32.
- Another example is the blower door test specification. The 2009 IRC Ch. 11 requires no more than 7 air changes per hour (7 ACH) at 50 pascals (0.007 psi), the existing 2009 BuildSmart requires 5 ACH and the 2012 IECC/IRC requires 3 ACH. It is likely that BuildSmart will be changed to match the 2012 IECC/IRC figure of 3 ACH.

Similar to the discussion of the IECC above, the county is looking toward remaining "above code" with our 2012 BuildSmart provisions, and, similarly, some of the current "above code" provisions, like mechanical ventilation, are now part of the minimum requirements of the published model code and may no longer require local amendments.

Another part of the evolution of BuildSmart is a continuing effort to simplify the provisions as much as possible, especially with regard to the requirements for small additions and remodels.

International Green Construction Code (IGCC). The current BCBC includes a partial adoption of an early draft of the IGCC that applies only to commercial buildings greater than 25,000 sq. ft. The 2012 edition is to be evaluated for adoption, including factors such as the potential for application in the unincorporated county, avoiding conflicts or redundancy with other model codes or amendments, the enforceability of "post occupancy" requirements by a statutory county, the need for coordination with other county regulations, standards and staff, etc. A typical IGCC adoption might require energy usage or a carbon footprint or similar measurement of 10% less than the Energy Code.

ICC Performance Code. Part of the program for the 2012 adoptions is to consider adopting this code, but only as a guide for evaluating appeals for the use of modifications and alternate methods and materials. The performance code facilitates the use of tools like fire, smoke and egress modeling to evaluate alternate designs for equivalency to the prescriptive codes.

Agricultural Policies. The county's agricultural policies and land use regulations are currently under review for changes to encourage agricultural uses of various types and sizes, including building code issues dealing with farm stands, worker housing and "hoop houses." This may result in the need for amendments to the BCBC. Amendments being considered include treating smaller agricultural buildings, such as farm stands occupied only by employees or by a very limited number of the general public, more like structures that are accessory to residential or agricultural use, as opposed to treating them as full blown commercial buildings.

- Amend IBC Appendix Chapter C, Group U - Agricultural Buildings, to make allowances for agricultural buildings with lower occupant loads, i.e., employees only, less than 10 and/or less than 50.

Medical Marijuana Facilities. With the recent advent of the county's local licensing procedure, evaluate any potential needs for amendments, i.e., energy code and lighting, etc. The general consensus is that such facilities should be treated the same as any commercial business. The potential for an amendment to require increased efficiency for grow lighting is being researched and considered.

Miscellaneous. General cleanup and fixes, deletion of any existing local amendments that now appear in the latest published codes, etc.