

**FINAL STATEMENT OF REASONS
FOR
PROPOSED BUILDING STANDARDS
OF THE
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
REGARDING THE 2013 CALIFORNIA PLUMBING CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5**

(HCD 05/12)

The Administrative Procedure Act requires that every agency shall maintain a file of each rulemaking that shall be deemed to be the record for that rulemaking proceeding. The rulemaking file shall include a Final Statement of Reasons. The Final Statement of Reasons shall be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action:

UPDATES TO THE INITIAL STATEMENT OF REASONS

(Government Code Section 11346.9(a)(1) requires an update of the information contained in the initial statement of reasons. If update identifies any data or any technical, theoretical or empirical study, report, or similar document on which the state agency is relying that was not identified in the initial statement of reasons, the state agency shall comply with Government Code Section 11347.1.)

No data or any technical, theoretical or empirical study, report, or similar document on which the Department of Housing and Community Development (HCD) is relying has been added to the rulemaking file that was not identified in the Initial Statement of Reasons.

HCD has made sufficiently related changes and/or editorial corrections to the following sections after the 45-day public comment period that ended on October 8, 2012: Sections 214.0, 220.0, 1101.3, 1102.1.1, 1602.9.2, 1602.9.3, 1602.9.4, 1602.11.2, 1604.10, 1702.9.3 and 1702.9.5.5.

HCD has made sufficiently related changes to the following sections after the subsequent 15-day public comment period that ended on November 6, 2012: Sections 220.0 and 1702.9.3.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

(Pursuant to Government Code Section 11346.9(a)(2), if the determination as to whether the proposed action would impose a mandate, the agency shall state whether the mandate is reimbursable pursuant to Part 7 of Division 4. If the agency finds that the mandate is not reimbursable, it shall state the reasons for the finding(s).)

HCD has determined that the proposed regulatory action would not impose a mandate on local agencies or school districts.

OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S)

(Government Code Section 11346.9(a)(3) requires a summary of EACH objection or recommendation regarding the specific adoption, amendment, or repeal proposed, and explanation of how the proposed action was changed to accommodate each objection or recommendation, or the reasons for making no change. This requirement applies only to objections or recommendations specifically directed at the agency's proposed action or to the procedures followed by the agency in proposing or adopting the action or reasons for making no change. Irrelevant or repetitive comments may be aggregated and summarized as a group.)

The following is HCD's summary of and response to comments specifically directed at the agency's proposed action or to the procedures followed by the agency in proposing or adopting the actions or reasons for making no change.

In each case, HCD has evaluated the submitted comments and provided the responses below.

NOTE: *The complete text of each comment may be reviewed at the following internet address:*
<http://www.bsc.ca.gov/>

COMMENTS RECEIVED DURING THE 45-DAY PUBLIC COMMENT PERIOD ARE LISTED BELOW.

(The text with proposed changes clearly indicated was made available to the public from August 24 2012, until October 8, 2012.)

1. COMMENTERS:

Paul Binding. **(EM-1, EM-4)**
Santa Cruz County Mosquito and Vector Control
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Ken Bayless **(EM-3)**
Mosquito and Vector Control
Association of California
1215 K Street, Suite 2290
Sacramento, CA 95814

Jamesina J. Scott **(EM-6)**
District Manager/Research Director
Lake County Vector Control District
410 Esplande
P.O. Box 310
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Mathew C. Ball **(EM-7)**
Butte County Mosquito and Vector Control District
5117 Larkin Road
Oroville, CA 95965-9250
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Branka B. Lathrop **(EM-8)**
Coachella Valley Mosquito and Vector Control District
43-420 Trader Place
Indio, CA 92201
CVmosquito@cvmvcd.org

Mitchel R. Weinbaum **(EM-9)**
Compton Creek Mosquito Abatement District
1224 South Santa Fe Ave.
Compton, CA 90221
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Rob Quiring **(EM-10)**
Kern Mosquito and Vector Control District
4705 Allen Road
Bakersfield, CA 93314
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Jon A. Blegen **(EM-11)**
Solano County Mosquito Abatement District
2950 Industrial Court
Fairfield, CA 94533-6500
solmad@aol.com

Vicki Kramer (**EM-14**)
California Department of Public Health
16616 Capitol Ave (MS 7307)
P.O. Box 997377
Sacramento, CA 95889-7377
vicki.kramer@cdph.ca.gov

Kenneth L. Bayless (**EM-19**)
Greater Los Angeles County
Vector Control District
12545 Florence Avenue
Santa Fe Springs, CA 90670
klbayless@glacvcd.org

COMMENTS: EM-1, EM-3, EM-4, EM-6, EM-7, EM-8, EM-9, EM-10, EM-11, EM-14 and EM-19.

The above listed commenters expressed support for proposed Sections 1602.9.2 and 1702.9.5.6(A) citing the need for properly installed and maintained screens on gray water and rainwater storage tank openings to prevent mosquito breeding and reduce the risk of West Nile Virus and mosquito-borne diseases.

HCD RESPONSE:

HCD appreciates the comments in support of the proposed amendments.

2. COMMENTER: Mark Sanders (**EM-2**), (**EM-5 – Duplicate**)
Sloan Valve Company
10500 Seymour Avenue
Franklin Park, IL 60131
Mark.Sanders@sloanvalve.com

COMMENT: EM-2.

The commenter made the following statements:

- gray water systems are divided into complex and simple systems;
- a simple system is defined as less than 250 gallons of discharge per day;
- the treatment standards for complex and simple systems are the same (NSF 350);
- Large, complex systems capture water from many locations and reuse it for many things;
- Small, simple systems are only used for toilet flushing;
- The treatment criteria in NSF 350 discusses bacteria kill, total suspended solids (TSS) and turbidity;
- In toilet flushing, it is important to maintain a bacteria kill to preserve health and safety;
- Filtering the water so it appears totally clear is unnecessary;
- The testing “soup” required by NSF 350 is not indicative of the normal sources of waste water where “simple gray water” systems perform;
- The “soup” is brimming with bacteria, E-coli, and heavy particulate which would normally never be found in a simple system.

Additionally, the commenter expressed his appreciation for the subdivision of the system sizes, and also stated that by applying the NSF 350 standard to both types of systems, there is in essence no distinction.

The commenter further expressed an opinion that Chapter 16 of the California Plumbing Code should contain provisions that would allow small gray water systems which capture water from lavatory’s to be used for toilet flushing.

HCD RESPONSE:

As stated in the Initial Statement of Reasons, HCD proposed to carry forward provisions from the 2010 CPC Chapter 16A for gray water systems and proposed adoption of standards for Alternate Water Source Systems, including On-site Treated Nonpotable Gray Water. This requires water to be treated to the requirements of the public health Authority Having Jurisdiction, or NSF 350 in the absence of any local water quality requirements. Water treated to either of these standards may be utilized to supply water closets, urinals, trap primers, above and below ground irrigation, and other uses, where approved by the Enforcing Agency.

Under the sink type systems supplying gray water to a water closet may be used when approved by the local enforcing agency. HCD did not propose specific requirements or discuss targeting this specific type of technology during the current rulemaking. Pursuant to the Notice of 45-Day Public Comment Period for Proposed Building Standards, comments are limited to proposed modifications to the text. Although the comment is outside the scope of this rulemaking, HCD may look into this type of technology and discuss it with stakeholders during the next rulemaking cycle.

No changes to the Express Terms were made as a result of this comment.

3. COMMENTERS:

Martin Cooper (**EM-12**)
City of Foster City
610 Foster City Blvd.
Foster City, CA 94404

Jeffrey Hatcher (**EM-28**)
City of Oakland, Building Services
250 Frank H. Ogawa Plaza
Oakland, CA 94612

COMMENTS: EM-12 and EM-28. Section 408.5:

The commenters propose a modification to Section 408.5, adding a third sentence to specify that the area immediately outside showers without thresholds are to be considered wet areas and must comply with the requirements of the California Building Code, California Residential Code, and the California Electrical Code.

Further, the commenters express that Section 408.5 does not address any method or installation standard for curbless showers, and that this section may “be used in direct conflict with the California Electrical Code Article 410.10D, California Residential Code Section R307.2, and California Building Code Section 1210.1.” The commenters also express that “without developing further installation standards, electrical switches and receptacles may be located in wet areas which may require floors and walls to be water proofed.”

HCD RESPONSE:

HCD’s proposed amendment to this section is limited to removing the reference to Chapter 11B. HCD also identified the renumbering of this section due to the Uniform Plumbing Code’s reformatting and numbering revisions to Chapter 4.

HCD staff did investigate the commenter’s suggestions and found that the IAPMO Technical Committee was presented with a similar proposal (item #61) during the 2011 UPC code development cycle. Further, the proposal did not achieve the required two-thirds majority vote, even after an appeal. The decision of the Standards Council was to approve item #61 as originally proposed without the addition of the third sentence.

Pursuant to the Notice of 45-Day Public Comment Period for Proposed Building Standards, comments are limited to proposed modifications to the text. The commenter’s proposals suggest substantive modifications to a section that is only proposed for editorial formatting and re-numbering. Therefore, the comments fall outside the scope of this rulemaking. The commenters are welcome to participate in future rulemaking activities and propose that HCD re-evaluate their comments for consideration during the 2013 Annual Code Adoption Cycle or the 2015 Triennial Code Adoption Cycle when HCD has sufficient opportunity to fully evaluate the proposal and solicit stakeholder input.

4. COMMENTERS:

Steve Bilson (EM-13)
ReWater Systems
P.O. Box 19364
Thousand Oaks, CA 91319
stevebilson@rewater.com

Art Ludwig (EM-15)
Oasis Design
5 San Marcos Trout Club
Santa Barbara, CA 93105-9726
oasis@oasisdesign.net

COMMENT: EM-13. Section 1602.11.2(7) [Formerly Section 1611A.2(7) of the 2010 CPC]:

Commenter EM-13 expressed an opinion that Section 1611A.2(7), renumbered as Section 1602.11.2(7), conflicts with itself, causing difficulty when attempting to obtain a permit for a gray water irrigation system, and also expressed an opinion that Section 1602.11.2(7) will cause surface runoff of gray water. Further, the commenter suggests that both antisiphon valves and flush valves will cause surface water and ponding, which is in violation of the code, and that Section 1602.11.2(7) should be repealed.

COMMENT: EM-15. Sections 1602.11.2(6) and 1602.11 (7):

Commenter EM-15 echoed the sentiments expressed by commenter EM-13 by confirming that flush valves and antisiphon valves should not be required on gray water irrigation systems due to the possibility of gray water surfacing and/or ponding. The commenter further stated that the 20 psi pressure limitation for irrigation systems does not work in all cases, especially in pump type applications when irrigation lines are higher than the pump.

HCD RESPONSE:

Section 1611A.2 (7), based on the 2010 CPC numbering format, is renumbered to Section 1602.11.2(7) as shown in the 2013 CPC proposed Express Terms for the 45-day public comment period. During the 45-day public comment period, HCD proposed to carry forward the provisions contained in Sections 1611A.2(6) and 1611A.2(7) from the 2010 CPC into the 2013 CPC. Based upon HCD's intended direction and stakeholder request, HCD proposed to bring forward the provisions of Chapter 16A from the 2010 CPC, and merge those provisions into Chapter 16 of the 2013 CPC without adding additional stringency or regulatory burden.

However, after further review and discussion, HCD staff concluded that the pressure limitation of 20 psi for all irrigation systems may be too low in some instances, and instead should be determined by the allowable operating pressure range of the specific components installed in the irrigation system.

HCD staff also determined that the installation of antisiphon valves in some instances has the potential to cause gray water to be discharged onto the ground. Further, antisiphon valves used in gray water irrigation lines may become corroded, preventing the valve from functioning properly, causing gray water to surface at the location of the antisiphon valves. HCD recognizes that the requirement for flush valves on gray water irrigation lines in some cases has the potential to cause surfacing and/or ponding of gray water when opened.

Based upon review and dialogue with the commenters, HCD proposes to remove the 20 psi limitation for irrigation systems in Section 1602.11.2(6) and modify Section 1602.11.2(7) requiring backwater valves to be installed downstream of any pump on irrigation systems which utilize a pump and discharge water at a point higher than the pump.

5. **COMMENTER:** Rachel Kraai (EM-16)
San Francisco Public Utilities Commission
525 Golden Gate Ave.
San Francisco, CA 94102
RKraai@sfgwater.org

COMMENT: EM-16. Sections 220, 1601.1, 1601.7, 1602.0, 1602.1, 1702.8, 1702.9.3, 1702.9.4 and Table 1702.9.4:

Section 220 – The commenter suggested changes to the definition of “Rainwater”, and adding a definition for “Stormwater”.

Section 1601.1 – The commenter suggested expanding the applicability of Section 1601.1 to include reference to Chapter 17.

Section 1601.7 – The commenter suggested that NSF 350 shall apply to all occupancies.

Section 1602.0 – The commenter suggested changing the heading of this section to “Untreated” Gray Water Systems, and to add other text relative to untreated gray water.

Section 1602.1 – The commenter suggested changing “gray water systems” to “untreated gray water systems for outdoor irrigation and infiltration”.

Section 1702.8 – The commenter suggested removing the word “WATER” after the word “RAINWATER”.

Section 1702.9.3 – The commenter suggested modifications to this section, expanding the scope to include storm water, and also that local agencies when issuing permits should consult with the local health department to ensure that local health concerns are addressed by local standards or ordinances.

Section 1702.9.4 – The commenter suggested that HCD add the exception allowing no water treatment for rainwater used for non-spray irrigation where the storage volume is less than 360 gallons.

Table 1702.9.4 – The commenter suggested that in row 2 the application should be changed to only drip irrigation, and that a new row be inserted between row 2 and 3 for applications including “non-spray, surface, and subsurface irrigation” with a debris excluder as the only treatment requirement.

HCD RESPONSE:

Section 220 – HCD proposed further modification to the term “Rainwater Catchment System” during the 15-day public comment period. This was initiated due to passage of AB 1750. Upon further consideration, HCD has withdrawn the 15-day modifications to the definition of “Rainwater Catchment System” and proposes to continue adoption of the language as submitted for the initial 45-day public comment period. HCD did not propose a definition for “Stormwater” and will not consider adopting this term during this rulemaking.

Section 1601.1 – HCD staff believes provisions for Nonpotable Rainwater Catchment Systems in Chapter 17 are clear and does not necessitate additional pointers. No supporting testimony was received by HCD during this rulemaking indicating that confusion exists interpreting this section.

Section 1601.7 – HCD worked closely with stakeholders to advance use of gray water for both indoor and outdoor applications. This included consultation with the California Department of Public Health (CDPH). HCD was able to gain support of the NSF/ANSI 350 Standard from CDPH by limiting NSF 350 to “owner occupied single family dwellings” during this rulemaking. SFPUC and local enforcing agencies may legally (by ordinance, resolution or charter) adopt NSF 350 standards for other occupancies.

Sections 1602.0 and 1602.1 – The provisions of these sections originated from Chapter 16A, Section 1601A.0 of the 2007 and 2010 CPC. HCD proposed to carry forward these provisions, which apply to gray water systems in the 2012 UPC Chapter 16, and incorporate them into the 2013 CPC without change. Many stakeholders who helped develop the CPC Chapter 16A requested that gray water provisions developed during the previous rulemakings be brought forward into the 2013 CPC unchanged. Additionally, HCD staff does not agree that it is necessary to identify gray water as “untreated” gray water. This designation was not discussed during the focus group meetings held by HCD prior to the California Building Standards Commission’s Code Advisory Committee meeting on July 24, 2012.

Section 1702.8 – HCD contacted IAPMO regarding the use of the words “Rain Water Water.” IAPMO will resolve this in the next code update; therefore, HCD did not propose to amend the model code for this editorial issue.

Section 1702.9.3 – HCD proposed further amendment of this section after the 45-day public comment period, and the changes were available for review during the subsequent 15-day public comment period. After further consideration, HCD has withdrawn the 15-day proposed modifications to this section and intends to adopt the language as submitted for the initial 45-day public comment period. HCD did not propose a definition for “Stormwater” and will not consider adopting this term or ancillary provisions based upon this definition during this rulemaking. *[For*

further information, see Comment A under “COMMENTS RECEIVED DURING THE 15-DAY PUBLIC COMMENT PERIOD” on Page 14 of this document.]

Section 1702.9.4, Table 1702.9.4 – HCD proposed an amendment to Section 1702.9.4 increasing the allowable storage volume to 5000 gallons for certain uses, indicating that when there are no water quality requirements by the local Authority Having Jurisdiction, Table 1702.9.4 shall apply. This is also consistent with the storage volume amendment proposed in Section 1702.2.1.

Table 1702.9.4 allows the use of collected rainwater and specifies minimum treatment and water quality for any approved storage volume. HCD staff believes that row 2 of this table succinctly delineates requirements for surface and subsurface irrigation, which requires a debris excluder. Column 2 in the same row also identifies that 100 micron filtration is required for drip irrigation.

No changes to the Express Terms were made as a result of these comments.

6. COMMENTER: Thomas Enslow (**EM-17, EM-18**)
Adams Broadwell Joseph & Cardozo
520 Capitol Mall, Suite 350
Sacramento, CA 95814
TEnslow@adamsbroadwell.com

COMMENT: EM-17. Section 1602.9.2:

The commenter suggested that the above referenced section should be adopted by HCD. The commenter stated that this section is consistent with the 2010 CPC Section 1610A.1 that contained reference to Sections 604.0, 605.0, and 606.0, which identify the requirements for plumbing pipe, valve, and fitting materials.

HCD RESPONSE:

HCD agrees with the comment. HCD intended to carry forward provisions of the 2010 CPC Chapter 16A into the 2013 CPC. HCD revised the Express Terms proposal to include this section during the 15-day public comment period.

COMMENT: EM-18 Sections 214.0, 1101.3 and 1102.1.1:

The commenter suggested HCD carry forward “HCD 2” banners and continue to apply these banner designations to the above referenced sections. It was further suggested that removing the HCD-2 designations created ambiguity.

HCD RESPONSE:

HCD’s initial proposal was to delete references to “HCD 2.” This was based upon staff’s opinion that the banner designations were not appropriate or necessary. The “HCD 2” designation applies specifically to permanent buildings in Mobilehome/Special Occupancy Parks which are typically of occupancy classifications other than residential. However, HCD received comment at the PEME Code Advisory Committee meeting held July 24, 2012, advocating retention of “HCD 2” designations. HCD agreed to remove the strikeout of the “HCD 2” banners prior to submitting the Express Terms for the 45-day public comment period. Upon review, HCD discovered that the remaining “HCD 2” banners that were intended to be reinstated were, in fact, still shown in strike-out in the Express Terms. HCD editorially corrected the Express Terms by restoring the “HCD 2” banners during the 15-day public comment period.

7. COMMENTER: Richard LeWarne (**EM-20**)
Monterey County Health Department
Environmental Health Bureau
1270 Natividad Road
Salinas, CA 93906

COMMENT: EM-20. Section 1604.10:

The commenter suggested HCD add a subsection to identify that setbacks in Table 1602.4 applied to treated gray water systems, and also suggested HCD add a subsection to Section 1604.10 addressing operational and design requirements for larger high production gray water plants which generate more than 5,000 gallons per day.

HCD RESPONSE:

As written, Table 1602.4 applies to all gray water systems on a building site, but does not specify whether onsite treated nonpotable gray water systems are included. Because this proposal requires substantive modification to HCD's proposed Express Terms and it was not discussed at HCD's focus group meetings or at the Code Advisory Committee meeting held by the California Building Standards Commission on July 24, 2012, no further action is being taken at this time. Pursuant to the Notice of 45-Day Public Comment Period for Proposed Building Standards, comments are limited to the proposed modifications to the text. Therefore, HCD believes the comment to propose additional operational and design requirements to Section 1604.10 falls outside the scope of this rulemaking. HCD may consider these comments and suggestions in a future rulemaking cycle when the issues can be discussed with stakeholders.

No changes to the Express Terms were made as a result of this comment.

8. COMMENTER: Christina Berteau (EM-21)
Greywater Action

COMMENT: Chapters 16 and 17:

The commenter mentioned concerns regarding several sections of HCD's proposal, including: the definition of "Reclaimed (recycled) Water", applicability of Chapter 16 to rainwater, component listing requirements, rainwater quality requirements, and filtration requirements for drip irrigation systems.

HCD RESPONSE:

HCD proposed to amend the model code definition of "Reclaimed (recycled) Water" carrying forward the definition of "Reclaimed (recycled) Water" from the 2010 CPC Chapter 16A Part II. This is the same definition HCD proposed for adoption in Chapter 2 of the 2013 CPC. However, HCD did not explain this sufficiently in the Initial Statement of Reasons (ISOR), which may have contributed to some confusion on the part of the commenter. HCD intended to state that with the proposed adoption of Chapter 16 of the 2012 UPC, the definition would be carried forward from the 2010 CPC Chapter 16A Part II and relocated into the 2013 CPC Chapter 2.

No changes to the Express Terms were made as a result of this comment.

9. COMMENTER: Tracy Quinn (EM-22)
Natural Resources Defense Council
1314 2nd Street
Santa Monica, CA 90401

COMMENT: EM-22. Chapter 17, Section 1702.9.4:

The commenter expressed support for HCD's proposal in the above referenced chapter and section, specifically the proposals relating to water treatment and water quality.

HCD RESPONSE:

HCD appreciates the comments in support of the proposals.

10. COMMENTER: Tracy Quinn (EM-23)
Natural Resources Defense Council
1314 2nd Street
Santa Monica, CA 90401

COMMENT: EM-23. Section 1601.7:

The commenter expressed general support for the above referenced section, but also stated that HCD should consider allowing simple systems for collecting gray water from a lavatory faucet without meeting the water quality requirements of NSF/ANSI 350. The commenter suggested that requiring only filtering and disinfection of gray water from a single source should be adequate for the protection of public health for applications such as urinal and water closet flushing.

HCD RESPONSE:

HCD acknowledges that emerging technology and products may be available in the marketplace which can collect gray water from single sources and reuse the collected gray water to supply water closets and/or urinals. HCD also recognizes that whereas these systems for capturing, filtering and disinfecting gray water from a lavatory faucet (or other source) for reuse in other fixtures may be available, under the sink type systems supplying gray water to a water closet or urinal may only be used when approved by the local enforcing agency. HCD did not propose or discuss this type of technology during this rulemaking. Pursuant to the Notice of 45-Day Public Comment Period for Proposed Building Standards, comments are limited to proposed modifications to the text. Although the comment is outside the scope of this rulemaking, HCD may look into this type of technology and discuss it with stakeholders during the next rulemaking cycle.

No changes to the Express Terms were made as a result of this comment.

11. COMMENTER: Tracy Quinn (EM-24)
Natural Resources Defense Council
1314 2nd Street
Santa Monica, CA 90401

COMMENT: EM-24. Section 418.0 (408.3):

The commenter proposed modifications to the above referenced section regarding control valves for showers and tub/showers. The commenter stated that thermal protection of shower valves can be adversely affected by low flow showerheads. The commenter further stated that there appears to be an incompatibility issue between shower valves and low flow showerheads, where the low flow showerhead prevents the valve from working properly and cannot maintain the proper temperature and thereby failing to provide thermal protection.

HCD RESPONSE:

HCD did not propose any amendments to this section. Pursuant to the Notice of 45-Day Public Comment Period for Proposed Building Standards, comments are limited to proposed modifications to the text. Therefore, this comment is outside the scope of this rulemaking. The commenter is welcome to participate in future rulemaking activities and propose that HCD re-evaluate these comments for consideration during the next rulemaking cycle when HCD has sufficient opportunity to fully evaluate the proposal and solicit stakeholder input.

No changes to the Express Terms were made as a result of this comment.

12. COMMENTER: Roy Nordblom III (EM-25)
greenbuildingexpert@gmail.com

COMMENT: EM-25. Chapter 16:

The commenter shared numerous concerns relating to: licensed design professionals, component identification, contact with root/food crops, diverter valves, and gray water estimating.

HCD RESPONSE:

Qualification requirements for a "licensed design professional" referenced in Section 1601.2 were based on the 2012 IAPMO Green Plumbing and Mechanical Code Supplement language in Section 501.2 and are similar to the language in Section 1603A.1.3 of the 2010 CPC.

Identification of system components is a general requirement contained in Chapter 3 of the 2013 CPC and requires any pipe, fitting, device, or material used in plumbing systems to be marked with the manufacturers' name etc. Section 1601.2 of the 2012 UPC contained a requirement for alternate water source system components, piping, and fittings to be listed. It was adopted into the 2013 CPC with further amendment. The requirement for plumbing materials to be listed and of approved materials has been a code requirement for decades.

Section 1602.2.1 which prohibits gray water from being used to irrigate root crops or food crops (for human consumption) that comes into contact with the soil is unchanged from Section 1601A.0 (I) of the 2010 CPC. It has been carried forward into the new model code with no change in regulatory effect. HCD accepts that this requirement may need review in order to provide further clarification; however, no supporting testimony was received by HCD

during this rulemaking indicating that confusion exists interpreting this section. Additionally, revisions to Section 1602.2.1 were not discussed or considered during the rulemaking process.

HCD's proposed amendment to Section 1602.2.3 carries forward provisions from Section 1601A.0 (E) of the 2010 CPC. This is a general requirement for gray water systems. HCD Section 1602.1.1(2) contains specific requirements for a "Clothes Washer System." Pursuant to Chapter 1 criteria, where there is a difference between a general and a specific requirement, the specific requirement shall prevail.

A clothes washer is defined as a "plumbing fixture" by Chapter 2 of the 2013 CPC. Section 1001.1 requires all plumbing fixtures to be separately trapped, regardless of whether they discharge to a sanitary drainage system or a gray water irrigation or disposal field.

HCD received comments during the development of this rulemaking that alternate calculations for gray water discharge in water efficient homes should be developed. HCD evaluated the estimated gray water discharge calculation of Section 1602.8.1 and compared the results with lower flow fixtures and water use studies, and found no appreciable difference between the calculation method and current fixture flows. HCD solicited data and/or substantiation, but none was provided to HCD that demonstrated water efficient fixtures (showerheads, lavatory faucets, and laundry machines) generate less gray water, based on use patterns in water use studies.

HCD will be glad to work with the commenter during future rulemaking activities. Staff encourages the commenter to get involved in the initial rulemaking development stages, such as HCD's Focus Group meetings and the Code Advisory Committee meetings held by the California Building Standards Commission (CBSC). The changes advocated by the commenter may be prudent, but will need to be discussed with all stakeholders and interested parties prior to the 45-day public comment period.

No changes to the Express Terms were made as a result of this comment.

13. COMMENTER: Bob Adler (**EM-26**)
801 N. First Street Room 200
San Jose, CA 95110

COMMENT: **EM-26. Sections: 204.0, 206.0, 224.0, 908.2, 908.2.1 and 908.2.1.1 – 908.2.1.5:**
The commenter proposed modifications to the above listed sections, including the definition of "Bathroom Group" and "Bathroom"; "Dry Vent" and "Vent Pipe".

HCD RESPONSE:

HCD understands the commenter made this proposal to align the 2013 CPC with a Tentative Interim Agreement (TIA), which was approved by IAPMO and scheduled to be published in a subsequent printing of the 2012 Uniform Plumbing Code (UPC). Customarily, HCD adopts the first printing of the UPC and has not adopted TIA's or additional model code revisions that have been incorporated after the first printing until the next code adoption cycle. HCD appreciates the commenter's suggested modifications to Chapter 2, Section 908.2 and its subsections. HCD had insufficient knowledge or time to evaluate the commenter's proposals and discuss them with stakeholders during this rulemaking cycle. The Uniform Plumbing Code and Standards Organizations often have adoption cycles and/or procedural activities that do not align with California's building standards rulemaking calendar. California recognizes this discrepancy. Therefore, California Building Standards are updated through an Annual (Interim) Code Adoption Cycle and the Triennial Code Adoption Cycle in order to mitigate these differing adoption intervals to better ensure the regulated public has the most up-to-date codes as possible. Pursuant to the Notice of 45-Day Public Comment Period for Proposed Building Standards, comments are limited to proposed modifications to the text. Therefore, this comment is outside the scope of this rulemaking. No changes to the Express Terms were made as a result of this comment.

A source indicated that the TIA, which the commenter proposed HCD adopt provisions, will be printed in subsequent publications of the 2012 UPC. HCD will verify this declaration and work with the commenter, IAPMO and stakeholders with the intention of incorporating this TIA into the 2013 CPC during the next code adoption process if it is indeed printed in the 2012 UPC.

14. COMMENTER: Ali M. Fattah (EM-27)
City of San Diego
Development Services Department
1222 First Street, MS # 401
San Diego, CA 92101

COMMENT: EM-27. Sections 701.1(2)(A), 903.1.1 and 1101.3:

The commenter proposed several modifications to the above referenced sections of the model code suggesting that HCD remove the amendment limiting ABS/PVC to not more than two stories of areas of residential accommodation.

HCD RESPONSE:

HCD did not propose amendments which would expand the use of ABS and PVC pipe in residential occupancies. HCD amendments to these sections made during the 45-day public comment period consisted of renumbering, based upon model code formatting and an editorial correction to remove the "HCD 2" banner. HCD received a comment during the 45-day comment period requesting that HCD continue the "HCD 2" banner to eliminate ambiguity. HCD agreed with the commenter. During the 15-day public comment period, HCD corrected the banner issue. HCD is bringing forward Sections 701, 1101 and 1102 from the 2010 CPC into the 2013 CPC with no change in regulatory effect. Pursuant to the Notice of 45-Day Public Comment Period for Proposed Building Standards, comments are limited to proposed modifications to the text. Therefore, this comment is outside the scope of this rulemaking. The commenter is welcome to participate in future rulemaking activities and propose that HCD re-evaluate these comments for consideration during the next rulemaking cycle when HCD has sufficient opportunity to fully evaluate the proposal and solicit stakeholder input.

No changes to the Express Terms were made as a result of this comment.

15. COMMENTER: Laura Allen (EM-29)
Greywater Action
laura@greywateraction.org

COMMENT: EM-29. Sections 209.0, 1601.7, 1602.2, 1602.8.1, 1602.9.2 and Table 1602.10:

The commenter made several suggestions to revise the above mentioned sections: (1) water from kitchen sinks and dishwashers should be included as gray water sources, or kitchen sink water should be included as "dark gray" water; (2) NSF 350 should apply to all dwellings; (3) mulch basins should be allowed for any system under 250 gallons; (4) allow alternate calculation for estimating gray water discharge for water efficient homes; (5) screens on gray water pipes will quickly clog; and (6) soil types should be changed to most common types as listed in Table 1602.11.

HCD RESPONSE:

HCD received several comments that gray water should include water from kitchen sinks and dishwashers; however, water from these sources may contain food and other putrescible wastes. Senate Bill 1278 clearly defined gray water and the sources the commenters suggested are not approved gray water sources. In fact, the suggested code modification would violate statute. HCD proposed to carry forward the provisions from Chapter 16A of the 2010 CPC into the 2013 CPC Chapter 16 without additional restriction or regulatory burdens. HCD did not engage in discussions with stakeholders to expand the use of gray water during this rulemaking to include other sources.

HCD initially proposed that the water quality standards of NSF 350 apply to all residential buildings unless another standard was adopted locally. HCD worked closely with the CDPH and other stakeholders during this rulemaking toward that goal. HCD agreed to limit NSF 350 to owner occupied single family dwellings during this rulemaking due to CDPH concerns of larger buildings where system control is outside of the individual occupants control, such as in multifamily housing. The number of systems certified to NSF 350 is limited since this standard is still new. As the NSF standard for treatment of gray water for on-site reuse for toilet and urinal flushing develops and becomes more widely used and accepted, HCD hopes to revisit the expansion of that standard to other residential occupancies.

Mulch basins are allowed where approved for systems over 250 gallons per day, and would be classified as a complex system under Section 1602.1.3. HCD received other comments during the development of this rulemaking that there should be an alternate calculation for gray water discharge for homes with low-flow appliances and fixtures, such as those required by CALGreen. HCD evaluated estimated gray water discharge calculations in Section 1602.8.1 and compared the results with low flow fixtures and water use studies. HCD found no appreciable difference between the calculation method and current fixture flows. No commenter provided supporting information

or data to HCD that demonstrated water efficient fixtures (showerheads, lavatory faucets, and laundry machines) generate less gray water, based on use patterns in water use studies.

HCD's proposal to require screens on gray water tank openings, vent pipes, and over flow pipes is intended to protect openings exposed to the outside environment which would allow mosquitos, birds, and rodents to enter the tank. It was largely supported by Mosquito Vector districts.

HCD proposed to adopt Table 1602.10, which carries forward the provisions of, Table 16A-2 of the 2010 CPC Chapter 16A. Table 16A-2 was referenced in the 2010 Section 1611A.1 "Mulch Basin", and similarly Table 1602.10 is referenced in the 2013 CPC Section 1602.11.1 "Mulch Basin".

No changes to the Express Terms were made as a result of these comments.

16. COMMENTER: Joyce Dillard (**EM-30, EM-31**)
P.O. Box 31377
Los Angeles, CA 90031
dillardjoyce@yahoo.com

COMMENT: **EM-30 and EM-31. Chapters 2, 14, 16 and 17:**

The commenter expressed general concern for public health in L.A. due to jurisdictional confusion, lack of understanding of who the lead agency is, concern about the ecosystems, hazardous chemicals in storm water runoff and the potential for birds and animals to become contaminated or diseased, and stated that gray water is complex.

HCD RESPONSE:

Comment EM-30 was an attachment only. The commenter provided HCD with comment (EM-31) during the 45-day public comment period. The comments were not focused on any specific section of the 2013 CPC and did not suggest any specific changes. HCD contacted the commenter based upon the lack of specificity of the comments to find that the comments were directed at a specific project or projects within the City of Los Angeles.

No changes to the Express Terms were made as a result of this comment.

17. COMMENTER: Jesse Froehlich (**EM-32**)
BlueBarrel Rainwater Collection Systems
BlueBarrelSystems@gmail.com

COMMENT: **EM-32. Chapters 16 and 17:**

The commenter expressed concern that the provisions of Chapter 16 are confusing when viewed from the rainwater perspective and suggesting HCD rename the chapter as it seemed to only apply to Gray Water Systems. The commenter also expressed the opinion that requiring 100 micron filters for car washing and drip irrigation may have been an oversight. The commenter indicated that there may be a typographical error in Section 1702.9.5.5, and suggested that Chapter 17 should identify the pipe color requirements directly.

HCD RESPONSE:

HCD does not agree that Chapter 16 should be renamed. Provisions contained in Section 1601.0 apply to Gray Water and also Recycled (Reclaimed) Water, Rainwater, and Onsite Treated Nonpotable Gray Water. In regard to the comment about a typographical error, HCD determined that an oversight had occurred during the development of Section 1702.9.5.5 and has made the editorial correction to remove the extraneous word(s) in this section. HCD does not propose to amend model code to state the color of piping materials for Rainwater Catchment Systems. The model code provides adequate reference in Section 1702.8 directing code users to the appropriate provisions in Chapter 6 where pipe color, marking and identification requirements are identified.

No changes to the Express Terms were made as a result of this comment.

18. COMMENTER: Mark Tetterer (**EM-33**)
Irvine Ranch Water District
15600 Sand Canyon Ave.
P.O. Box 57000
Irvine, CA 92619-7000
Tetterer@irwd.com

COMMENT: EM-33. Sections 1604.4 and 1702.4:

The commenter pointed out that alternate water sources such as gray water, treated gray water, and rainwater would be categorized by Title 17 of the California Code of Regulations (CCR), as either “Sewage and Hazardous Substances” or “Auxiliary Water Supplies” and should be “protected by an air gap or reduced pressure principle backflow prevention device”. The commenter then stated that “Title 17 does not permit any connection at all” between an alternate water system and a potable water system and “an air gap is the only way to convey potable water to an alternate water system”. The commenter expressed the concern that “alternate water supplies may be considered sewage” and “may be chemically treated, raising the concern that this water could be considered a hazardous substance”. The commenter also stated that Title 17 requires an air gap unless an RP device is allowed by the water supplier and the local health agency. The commenter also suggested that HCD completely remove the provisions which allow protected connections between gray water and rainwater systems and public water systems because Title 17 “does not allow any connections at all regardless of whether the connection is protected or not”.

HCD RESPONSE:

During HCD’s development of the 2013 California Plumbing Code (CPC), including CPC Chapters 16 and 17, HCD held two Plumbing Code/Gray Water Focus Group meetings where HCD solicited stakeholder comments. HCD received no comment, concerns, or suggestions during this process, including at the Plumbing Code Advisory Committee meeting held on July 24, 2012 by the California Building Standards Commission.

HCD’s previous gray water focus group meetings have attracted a wide range of stakeholders with varied backgrounds, experience and interests. Participants have included water purveyors, gray water and rainwater experts, California Building Industry, International Code Council (ICC), International Association of Plumbing and Mechanical Code Officials (IAPMO), The California State Pipe Trades Council, the National Resource Defense Council (NRDC), San Francisco Public Utility Commission (SFPUC), and the California Department of Public Health (CDPH). The amendments to Sections 1604.4 and 1702.4 carry forward consistent language from Section 1601A.0 (A) of the 2010 CPC, which required an air gap or other physical device to prevent backflow. HCD’s direction and pledge to stakeholders in the development of Chapter 16 in the 2013 CPC was to carry forward provisions developed in the 2010 CPC without further modification as much as possible. HCD made every attempt to bring forward the existing provisions from Chapter 16A of the 2010 CPC including the provisions regarding protected connections and merge these provisions into the 2013 CPC Chapters 16 and 17. HCD also understands the concern of local water purveyors and health officials regarding permitting of Alternate Water Sources for Nonpotable Applications. Therefore, HCD amended 2013 CPC Section 1601.3 to adequately address this concern, providing guidance, language and reference to existing law in the California Water Code.

The 45-day public comment period began on August 24, 2012 and ended on October 8, 2012. The commenter submitted his comments electronically to HCD on October 15, 2012, which fell outside the 45-day public comment period. The commenter is welcome to participate in future rulemaking activities and propose that HCD re-evaluate these comments for consideration during the 2013 Annual Code Adoption Cycle or the 2015 Triennial Code Adoption Cycle when HCD has sufficient opportunity to fully evaluate the proposal and solicit stakeholder input.

No changes to the Express Terms were made as a result of this comment.



COMMENTS RECEIVED DURING THE 15-DAY PUBLIC COMMENT PERIOD.

(The text with proposed changes clearly indicated was made available to the public from October 23, 2012, until November 6, 2012).

NOTE: *The complete text of the comment below may be reviewed at the following internet address:*
<http://www.bsc.ca.gov/>

A. COMMENTERS:

Doug Hensel (**EM-A**)
Assistant Deputy Director
Department of Housing and Community Development
Division of Codes and Standards
Sacramento CA, 95811
dhensel@hcd.ca.gov

Alf Brandt (**EM-B**)
Principal Consultant
Assembly Select Committee on Regional Approaches to Addressing the State's Water Crisis
State Capitol, Room 3146
Sacramento, CA 95814
Alf.Brandt@asm.ca.gov

Noah Garrison and Tracy Quinn (**EM-E**)
Natural Resources Defense Council
1314 2nd Street
Santa Monica, CA 90401
TQuinn@nrdc.org

John Scarpulla (**EM-F**)
San Francisco Public Utilities Commission
525 Golden Gate Ave.
San Francisco, CA 94102
JScarpulla@sfwater.org

COMMENTS: EM-A, EM-B, EM-E and EM-F. Sections 220.0 and 1702.9.3:

Commenter EM-A stated that based on the passage of recent legislation, HCD modified the language of the above referenced sections for the subsequent 15-day public comment period; however, after further review, HCD staff determined that the language proposed for these sections during the 45-day public comment period is accurate and does not require additional modification.

Commenter EM-B urged the CBSC to avoid any new limits on rainwater capture, such as limiting collection of rainwater to only rooftop surfaces. Commenter EM-B also stated that the final amendments to AB 1750 were intended to eliminate interference or limitation with Chapter 17 of the California Plumbing Code, as proposed in the current rulemaking cycle. The commenter noted that AB 1750 authorizes rainwater capture and does not impose limitations on rainwater capture.

Commenter EM-E submitted comments stating that rainwater collection surfaces as originally proposed in Section 1702.9.3 during the 45-day public comment period should be maintained, and the changes proposed during the 15-day public comment period should be reconsidered.

Commenter EM-F submitted comments suggesting modification of the definition of "Rainwater Catchment System" in Section 220.0 and recommending HCD not limit rainwater catchment systems to water collected only from building rooftops.

HCD RESPONSE:

HCD thanks the commenters for their participation and the suggestion that HCD keep the language of Sections 220.0 and 1702.9.3 as submitted during the 45-day public comment period. HCD agrees with the commenters rationale and proposes to withdraw the 15-day changes to Sections 220.0 and 1702.9.3, and instead adopt the language as initially submitted during the 45-day public comment period.

B. COMMENTER: Michael Cudahy (**EM-C**)
Plastic Pipe and Fittings Association (PPFA)
800 Roosevelt Road
Glen Ellyn, IL, 60137

COMMENT: EM-C. Sections 1101.3 and 1102.1.1:

The commenter proposed a modification to the above referenced sections and stated that PPFA is unaware of a reason for this amendment, which limits ABS and PVC piping to 2 stories in residential buildings, since there appears to be no logical reason to continue this limitation.

HCD RESPONSE:

HCD did not propose amendments which would expand the use of ABS and PVC pipe in residential occupancies. HCD's amendment to these sections made during the 45-day public comment period consisted of renumbering, based upon model code formatting and an editorial correction to remove the "HCD 2" banner. HCD received a comment during the 45-day comment period requesting that HCD continue the "HCD 2" banner to eliminate ambiguity. HCD agreed with the commenter and during the 15-day public comment period, HCD editorially corrected this issue. HCD is bringing forward Sections 701, 1101 and 1102 from the 2010 CPC into the 2013 CPC with no change in regulatory effect. Pursuant to the Notice of 45-Day Public Comment Period for Proposed Building Standards, comments are limited to proposed modifications to the text. Therefore, the comment is outside the scope of this rulemaking. The commenter is welcome to participate in future rulemaking activities and propose that HCD re-evaluate these comments for consideration during the 2013 Annual Code Adoption Cycle or the 2015 Triennial Code Adoption Cycle when HCD has sufficient opportunity to fully evaluate the proposal and solicit stakeholder input.

No changes to the Express Terms were made as a result of this comment.

C. COMMENTER: David W. Smith, PhD (**EM-D**)
Managing Director
WateReuse California
621 Capitol Mall, 25th floor
Sacramento, CA 95814

COMMENT: EM-D. Section 601.2:

The commenter submitted comments to the above referenced model code section, regarding the identification requirements for potable and nonpotable water systems. The commenter expressed the opinion that the above referenced 2012 UPC section could lead to cross connections between different water systems.

HCD RESPONSE:

The comment is not directed toward changes or modifications proposed by HCD during either the 45-day or the 15-day public comment periods. HCD proposed to adopt 2012 UPC model code language into Section 601.2 of the 2013 CPC HCD's proposed Express Terms were presented to a wide range of stakeholders and interested parties, including state agencies, without adverse comments. HCD's outreach and coordination included two focus group meetings prior to the Code Advisory Committee Meeting held by the California Building Standards Commission and the subsequent 45-day public comment period. Pursuant to the Notice of 45-Day Public Comment Period for Proposed Building Standards, comments are limited to proposed modifications to the text. Therefore, this comment is outside the scope of this rulemaking. The commenter is welcome to participate in future rulemaking activities and propose that HCD re-evaluate these comments for consideration during the 2013 Annual Code Adoption Cycle or the 2015 Triennial Code Adoption Cycle when HCD has sufficient opportunity to fully evaluate the proposal and solicit stakeholder input.

No changes to the Express Terms were made as a result of this comment.

DETERMINATION OF ALTERNATIVES CONSIDERED AND EFFECT ON PRIVATE PERSONS

(Government Code Section 11346.9(a)(4) requires a determination with supporting information that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons than the adopted regulation, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law.)

No alternatives were available for HCD to consider. HCD is statutorily required to adopt by reference specific national model building codes, which contain prescriptive standards. Prescriptive standards provide the following: explicit guidance for certain mandated requirements; consistent application and enforcement of building standards while also establishing clear design parameters; and ensure compliance with minimum health, safety and welfare standards for owners, occupants and guests. Performance standards are permitted by state law; however, unlike prescriptive standards, performance standards must demonstrate equivalency to the literal code requirement to the satisfaction of the proper enforcing agency.

Adoption of the most recent building standards on a statewide basis, as required by statute, results in uniformity and promotes affordable costs.

REJECTED PROPOSED ALTERNATIVE THAT WOULD LESSEN THE ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES

(Government Code Section 11346.9(a)(5) requires an explanation setting forth the reasons for rejecting any proposed alternatives that would lessen the adverse economic impact on small businesses, including the benefits of the proposed regulation pursuant to Government Code Section 11346.5(a)(3).)

There were no alternatives available to HCD. HCD is required by statute to adopt this model code by reference. Providing the most recent methods and applying those building standards on a statewide basis, as required by statute, results in uniformity and promotes affordable costs.