

STATE OF CALIFORNIA  
STATE AND CONSUMER SERVICES AGENCY  
CALIFORNIA BUILDING STANDARDS COMMISSION  
2525 NATOMAS PARK DR., SUITE 130  
SACRAMENTO, CA 95833  
(916) 263-0916 Phone  
(916) 263-0959 Fax  
Email: BSC@dgs.ca.gov

Office Use Item No. \_\_\_\_\_

**PARTICIPATION COMMENTS FOR THE NOTICE DATED AUGUST 28, 2009**  
Written comments are to be sent to the above address.

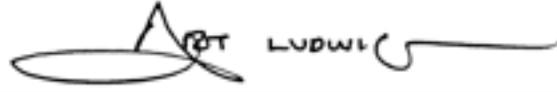
**WRITTEN COMMENT DEADLINE: OCTOBER 12, 2009**

Date: 10/6/09

From:

Art Ludwig

Name (Print or type)



(Signature)

-- City of Santa Barbara / Oasis Design/ Concerned citizen  
Agency, jurisdiction, chapter, company, association, individual, etc.

5 San Marcos Trout Club      Santa Barbara      CA      93105-9726  
Street                                  City                                  State                                  Zip

I/We **(do)**(do not) agree with:

[  ] The Agency proposed modifications As Submitted on Section No. **Emergency chapter 16a, CPC**

and request that this section or reference provision be recommended:

[  ] Approved    [  ] Disapproved    [  ] Held for Further Study    [  ] Approved as Amended

**Suggested Revisions to the Text of the Regulations:**

**Reason:** [The reason should be concise if the request is for "Disapproval," "Further Study," or "Approve As Amend" and identify at least one of the 9-point criteria (following) of Health and Safety Code §18930.]

**KEY**

~~Deletions:~~

Additions

<sup>1</sup>Footnotes give reason for each change, including relevant 9 point criteria

**General comment**

*Even without my proposed revisions, the proposed standard meets all 9 point criteria for adoption. In particular, with respect to item 3, public interest, these new graywater standards represent a huge improvement. Having standards but no permit required for simple systems is the right direction to go. If anything future revisions should go further in this direction.*

*The revisions suggested below would enable the new standard to serve the public interest even better.*

## Revision I

### 1603A.1 System Requirements.

~~If required, notification has been provided to the Enforcing Agency regarding the proposed location and installation of a graywater irrigation or disposal system.1 At the Enforcing Agency's discretion, the Enforcing Agency may inspect clothes washer and/or single fixture systems concurrent with an inspection on the property for another purpose, an enforcement action for another purpose, or an otherwise required inspection on sale of a property.2~~

## Revision II

2. The ~~installation, change, alteration or repair of the~~3 system does not include a potable water connection or a pump ~~(other than the washer pump)~~4 and does not affect other building, plumbing, electrical or mechanical components including structural features, egress, fire-life safety, sanitation, potable water supply piping or accessibility.

## Revision III

### 1603A.1.3 Complex System.

~~3. A complex system shall be designed by a person who can demonstrate competence to the satisfaction of the Enforcing Agency.5 The Enforcing Agency may require calculations for complex systems.6~~

---

1 HIGH PRIORITY—conflicts with point 3, public interest, as well as agency goals, as follows:—Goals of registration: A) Better quality systems, B) Better information on what is happening in the district, C) Greater control. **This language is likely to have the opposite of the desired effect for every one of these goals.**

A) The chilling effect of a registration requirement on professional installations is probably worse than requiring a permit. Homeowners would perceive it as an open invitation to inspect the site at any time in the future. The likely result is that installations will be done by unskilled homeowners without benefit of professional assistance in order to avoid registration, as has been the experience with requiring permits for simple systems (not one permit has been issued for any one of 1.7 million simple systems in California in 20 years). In many areas, the reduction in numbers of professional installations may cross the threshold of viability of graywater installations as a business (it is a marginal business to begin with), with the result that even those that would be happy to have their systems done professionally and registered won't have the option of professional help.

B) Registration will give an extremely skewed sample of what is happening locally, if it results in a sample at all.

C) Registration will drive people away from, rather than towards regulatory compliance.

2 HIGH PRIORITY—serves point 3, public interest, as well as agency goals, as follows:—This provision would achieve all the goals that the language above would not. A) Systems that are part of other permitted construction would get inspected, systems that are not *could be professionally installed* without the disincentive of registration. B) By allowing inspection/registration of a larger, less self-selected number of systems, the information gathered will be more accurate. C) This language makes the most of the only sample of graywater systems that is realistically accessible to regulators by providing for inspections as well as allowing registration or a database for study.

3 MEDIUM PRIORITY—serves point 3, public interest, as well as agency goals, as follows:—simplifies and clarifies language, without changing the intended effect. Note that the installation and service of the best practice laundry systems requires the temporary disconnection of the washer and connection of a hose to tune the outlets and purge lint. The washer cannot be reconnected without removing the hose first. It is my understanding that this sort of service use does not violate the intent of this section (hoses are used to rinse septage out of septic tanks on service, for example), but the way it is worded it sounds like it does.

**4 HIGHEST PRIORITY—serves point 3, public interest, as well as agency goals, as follows: clarifies the intent by making it clear that utilizing the pump in the washer itself, which very low pressure (typically under 5 psi), does not require a new electrical connection, controller, etc, does not violate this provision. Without this clarification, most of the business opportunity for simple laundry systems—the biggest practical advantage of the new standard— will be lost.**

5 MEDIUM PRIORITY—conflicts with point 3, public interest, as well as point 4, arbitrary capriciousness, as follows:—Lots of stakeholders had problems with this language. Here's Steve Bilson, for example: *This section codifies and approves potential Equal Protection Clause violations and must be removed. The EA already has authority to determine if an application for a graywater system permit does not satisfy this code. That determination is based on how the system is built, what the site is like, and other objective factors relevant to this code. There is no legal rationale for giving the EA the authority to discriminate against a person based on some imagined, arbitrary, subjective, and thus unchallengeable theory of incompetence.*

6 MEDIUM PRIORITY serves point 3, public interest, as well as eliminating arbitrary capriciousness, point 4, as follows:—This alternative language allows for a specific, equitable test of competence, in the form of relevant performance (calculations) which serves as a realistic proxy for general competence. I think this track is far preferred to the "acceptable to" language, which is practically begging for a lawsuit.

## Revision IV

### 1611A.3 Disposal Field.

- (A) ~~Disposal systems shall be not less than three (3) inches (80 mm) in cross-sectional dimension and shall be constructed of Gravelless infiltration galleys of perforated high-density polyethylene pipe, perforated ABS pipe, perforated PVC pipe, leaching chambers or other approved materials, provided that sufficient openings are available for distribution of the graywater into the trench area with open bottoms to prevent clogging from roots and louvered sidewalls to allow more infiltration, covered with at least two inches of earth. Material, construction, and perforation shall be in compliance with the appropriate absorption fields drainage standards and shall be approved by the Enforcing Agency.~~
- (B) ~~Filter material, clean stone, gravel, slag, or similar filter material acceptable to the Enforcing Agency, varying in size from three-quarter (3/4) inch (19.1 mm) to two and one-half (2-1/2) inches (64 mm) shall be placed in the trench to the depth and grade required by this section. The perforated section shall be laid on the filter material in an approved manner. The perforated section shall then be covered with filter material to the minimum depth required by this section. The filter material shall then be covered with untreated building paper, straw, or similar porous material to prevent closure of voids with earth backfill. No earth backfill shall be placed over the filter material cover until after inspection and acceptance.~~<sup>7</sup>

## Revision V

### Table 16A -1 Location of Graywater System

Exception: the Enforcing Agency may waive these setbacks in order to abate the health threat from an existing, non-conforming septic or overloaded sewer.<sup>8</sup>

---

7 MEDIUM PRIORITY—serves point 3, public interest as follows: Perforated pipe with gravel has been shown time and time again to rapidly fail with graywater. This deleted section, which was lifted entire from Appendix K, describes an old-style leachfield for clarified septic effluent. Graywater is not clarified; it is full of solids, which rapidly fail this design (the failure rate is approximately 80% in 5 years). Instead, this section should describe gravelless infiltration galleys, which have replaced perforated pipe in the majority of new leachfield installations in the US. For graywater, it offers the advantages that

- it does not clog anywhere near as readily
- It does not destroy the soil with gravel
- Installation is easier
- the actual infiltration surface can be accessed and restored (instead of abandoned in favor of 100% replacement area).

Building standards should not require or encourage a design which rarely works. The discredited perforated pipe option should be deleted unless evidence of long-term functioning greywater to perforated pipe systems can be produced.

8 MEDIUM PRIORITY ---serves point 3, public interest as follows: I believe the logic of this is self-evident; I regularly hear accounts of inspectors who, when confronted with something like an overloaded septic tank that the owners lack the wherewithal to expand, allow a greywater system that does not meet the letter of the standards to abate the far greater threat from the septic. State standards should back up this responsible exercise of common sense.

## HEALTH & SAFETY CODE SECTION 18930

### SECTION 18930. APPROVAL OR ADOPTION OF BUILDING STANDARDS; ANALYSIS AND CRITERIA; REVIEW CONSIDERATIONS; FACTUAL DETERMINATIONS

- (a) Any building standard adopted or proposed by state agencies shall be submitted to, and approved or adopted by, the California Building Standards Commission prior to codification. Prior to submission to the commission, building standards shall be adopted in compliance with the procedures specified in Article 5 (commencing with Section 11346) of Chapter 3.5 of Part 1 of Division 3 of Title 2 of the Government Code. Building standards adopted by state agencies and submitted to the commission for approval shall be accompanied by an analysis written by the adopting agency or state agency that proposes the building standards which shall, to the satisfaction of the commission, justify the approval thereof in terms of the following criteria:
- (1) The proposed building standards do not conflict with, overlap, or duplicate other building standards.
  - (2) The proposed building standard is within the parameters established by enabling legislation and is not expressly within the exclusive jurisdiction of another agency.
  - (3) The public interest requires the adoption of the building standards.
  - (4) The proposed building standard is not unreasonable, arbitrary, unfair, or capricious, in whole or in part.
  - (5) The cost to the public is reasonable, based on the overall benefit to be derived from the building standards.
  - (6) The proposed building standard is not unnecessarily ambiguous or vague, in whole or in part.
  - (7) The applicable national specifications, published standards, and model codes have been incorporated therein as provided in this part, where appropriate.
    - (A) If a national specification, published standard, or model code does not adequately address the goals of the state agency, a statement defining the inadequacy shall accompany the proposed building standard when submitted to the commission.
    - (B) If there is no national specification, published standard, or model code that is relevant to the proposed building standard, the state agency shall prepare a statement informing the commission and submit that statement with the proposed building standard.
  - (8) The format of the proposed building standards is consistent with that adopted by the commission.
  - (9) The proposed building standard, if it promotes fire and panic safety as determined by the State Fire Marshal, has the written approval of the State Fire Marshal.