CATHY A. RAEVSKY, DIRECTOR
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WASTEWATER ADVISORY COMMITTEE

MINUTES

FEBRUARY 17, 2015

CHICO ASSOCIATION OF REALTORS ** 1160 E. 1ST AVENUE, CHICO

I. Preliminary Items

A. Call to Order

Nick called the meeting to order at 3:02 p.m.

B. Roll Call and Determination of Quorum

Nick Weigel, Rick McCauley, Lauralyn Lambert, DC Jones and Will Arnold, were present.

Bill Dinsmore, Wes Gilbert, Jan Hill, Priscilla Rawlings (alternate), and Doug Flesher (alternate were absent.

A quorum was established.

C. Introduction of Guests

Trevor Gillespie and Rob Parker attended as guests. Brad Banner, Tom Loushine, Kristen McKillop, and Charlotte Walters attended the meeting on behalf of the Public Health Department.

D. Review of Minutes

DC made a motion to accept the minutes as written. Will seconded the motion and the motion passed with Rick abstaining.

E. Agenda Review

No changes to the agenda were requested.

F. Public Comments and Input

There was no public comment.

II. Action Items

A. Election of Officers

Will and Rick nominated Nick as Chair and DC as Vice-Chair. Nick and DC accepted their nominations received unanimous votes by the committee.

B. Consideration of Changes to Parts 2 and 3 of the Manual

1. Part 2 (Materials), Chapter 2,Section A (Attachment A)

   Will made a motion to accept the modifications as proposed. DC seconded the motion and the motion passed unanimously.

2. Part 2 (Materials), Chapter 8, Section D (Attachment B)

   Lauralyn made a motion to accept the modifications as proposed. Rick seconded the motion and the motion passed unanimously.

3. Part 2 (Materials), Chapter 11, Section A (Attachment C)

   Will made a motion to accept the modifications as proposed. Lauralyn seconded the motion and the motion passed unanimously.

4. Part 3 (System Requirements), Chapter 6, Section F (Attachment D)

   a. Trevor explained the rationale for granting a 30% reduction, stating that it was allowed by the Uniform Plumbing Code, allowed in AB 885, approved in other states and other counties (including a 50% reduction that is in effect in the State of Maine) without any increased septic system failure rate in those jurisdictions.

   b. There was discussion about whether there should be a 30% drainfield sizing reduction, and whether it should read *"up to a 30% reduction."* Nick wanted the designer to have the flexibility to allow a reduction short of the full 30%. Staff expressed concern about subjectivity entering into the matter if the reduction wasn't specified as 30%.

   c. There was some discussion about whether sizing the area set aside for the drainfield and repair at 100% prior to granting a 30% implied a lack of confidence in granting the reduction.

   d. DC moved to accept the modifications as written. Will seconded the motion and the motion failed 3-1 with DC joining in with those who voted "no."

   e. Will made a motion to accept the modifications as written, except with additional wording so that the reduction would be *"up to 30%"* rather than just specifying 30%. The motion failed for lack of a second.

      After much discussion….

   f. Lauralyn made a motion to accept the modifications as written (same motion as originally made by DC, above). Will seconded the motion 4-1, with DC voting against the motion.

C. Modification to Onsite Wastewater Systems Ordinance (Chapter 19) to Exempt Civil Engineers from Continuing Education Requirements

1. Nick recused himself from the discussion and left the room.

2. Brad played a tape recorded message from committee member Jan Hill expressing support for the requirement.

3. Committee members discussed the matter and felt that the requirement was important for Civil Engineers as well as the other Certified Professionals

4. Lauralyn made a motion to oppose a modification of the ordinance to exclude Civil Engineers from the continuing education requirements. Rick seconded the motion and the motion passed 4-0, with Nick not in attendance during the vote.

III. Informational Non-Action Items

A. OM&M Inspection Form

Brad and Kristen reported that they met with Buddy two weeks ago and discussed differences between Hydrotec OM&M forms and the forms needed by Environmental Health. Discussions are ongoing at this time.

B. Notice to Submit Form 77

Brad reminded the group that they needed to submit Form 77.

C. Typos in Manual

1. Kristen pointed out several typos in the agenda's Attachment C.

2. Brad thanked Kristen and told the group that Kristen would review the entire manual and correct typos prior to the next committee meeting.

D. Continuing Education for Certified Professionals

1. The group discussed the need for continuing education opportunities for Certified professionals. Specific options discussed were:

   a. Attendance at March 26 Water Management Workshop for 8 CEUs

   b. Tours of complex system led by Buddy

   c. Industry-led workshops either at a location provided by Environmental Health or by the industry

2. Brad told the committee that his staff would follow up on developing the second two options with Buddy and with industry representatives.

IV. Agenda Preparation for Next Meeting

The next meeting will be immediately following the Board of Supervisors meeting when changes to the Manual are considered.

V. Adjourn

The meeting adjourned at 4:55 p.m.

Wastewater Advisory Committee

Sign-In Sheet

Date: February 17, 2015 **Location:** Association of Realtors, Chico

Name	Initials	Email (only for guests not on the WAC email address list)
Brad Banner		bbanner@buttecounty.net
DC JONES		
TREVOR GILLESPIE		TGILLESPIE@INFILTRATIONSYSTEMS.NET
RICK MCCAULEY	RBM	R.MCCAULEY@SOSCONSITE.NET
TOM LOUGHINE	TML	-
WILLIAM ARNOLD	WA	ARNOLD@CNCNET.COM
Kristen McMillan		
LAURALYN A. LAMBERT JJ		lauralyn@lauralynlambert.com
CHARLOTTE WALTERS	CW	
NICK WEIGEL		
Rob Parker		rfparkeriii@MSN.com

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Attachment A

I.

Part Two: Materials

Chapter 1. Building Sewer

The building sewer must be constructed with materials in conformance to building sewer standards identified in the Uniform Plumbing Code. The building sewer pipe must have a minimum diameter of three (3) inches.

Chapter 2. Septic Tank

A. General criteria: Septic tanks must:

1. Be constructed of precast reinforced concrete or other material approved by the LEA. Wood and metal tanks are prohibited. Cast-in-place, and fiberglass may be considered on a case-by-case basis provided there is adequate engineering justification and provided they meet the requirements outlined in this Manual. ~~and p~~Polyethylene and polypropylene tanks ~~may be considered on a case-by-case basis provided there is adequate engineering justification and provided they meet the requirements outlined in this Manual.~~ that meet the International Association of Plumbing and Mechanical Officials (IAPMO) standard IAPMO/ANSI Z1000 (standard for design, material, performance testing, and marking) are approved by the LEA, unless otherwise noted.
2. Have the manufacturer's name and tank capacity in gallons permanently displayed on the uppermost portion of the tank. If the tank is constructed of fiberglass, ~~or~~ polyethylene, or polypropylene then the model number must also be displayed.
3. Be protected against flotation under high ground water conditions.
4. Be approved by the International Association of Plumbing and Mechanical Officials (IAPMO) or meet IAPMO minimum standards as demonstrated to the LEA by a certification program equivalent to that provided by IAPMO with the following program elements:
   a. Evaluation and certification by an engineering firm, approved by the LEA, with expertise and experience related to septic tank design and construction, to verify substantial equivalency with IAPMO standards and compliance with the requirements of this Manual as pertaining to:
      (1) Structural design of the tank;
      (2) Quality of materials used in construction of the tank;
      (3) Acceptable construction methods and practices;
      (4) Quality control and quality assurance plan proposed by the manufacturer;

Attachment B

The electrical box for the pump and alarm system must not be located in an environment that may damage the components.

F. Wiring must be of proper construction and gauge and permanently fixed to a supporting structure under permit from the local Administrative Authority.

G. The pump and alarm must be connected to separate circuits.

H. There must be a non-resettable digital pump cycle counter in the electrical box.

I. There must be a manual override switch in the electrical box to facilitate dosing control during inspections.

Chapter 8. Pipe

A. All pipe throughout the wastewater system must be clearly labeled and installed so that the labeling can be readily identified by LEA inspectors. Labeling, consisting of durable ink, must cover at least 50% of the length of the pipe. Labeling may consist of a solid line, letters, or a combination of the two. Intervals between markings must not exceed 12 inches.

B. Schedule 40 ABS must be used from the house to the septic tank

C. Schedule 40 ABS or SDR 35 (ASTM D 3034) must be used as follows:

1. From the septic tank to the distribution box (if applicable)
2. From the distribution box outlet for a minimum of 5 feet
3. From the septic tank to the pump chamber (if applicable)

D. Gravity Distribution (leachline) Dispersal

1. One of the following grades of 4-inch perforated pipe must be used:
   a. SDR 35 (ASTM D 3034) 4-inch diameter
   b. Triple Wall ASTM F810
2. ~~Alternatives to piping, such as~~ Ggravelless chambers, may be used provided the products meet IAPMO standard PS-63 ~~when approved by the LEA~~.
3. The pipe described ~~above~~ in subsection D.1. of this section must have 2 rows of holes spaced 120 degrees apart and 60 degrees on either side of a centerline. The holes of each row must not be more than 5 inches on-center and must have a minimum diameter of one-half inch.

E. Pressure transport pipe, pressure distribution manifolds, and pressure distribution laterals (piping and fittings), must meet the most current requirements for schedule 40 PVC pressure pipe as identified in ASTM Specifications D-1785, or other material approved by the LEA. All pressure distribution laterals and all pressure transport and manifold piping must be adequately sized for the design flow.

F. Curtain drain pipe must meet the requirements specified in the Manual for gravity drainfield pipe. Other types of pipe may be approved by the LEA,

Attachment C

provided it can be demonstrated that the selected pipe has the structural strength for the application proposed.

Chapter 9. Drainrock

A. Gravel used for drainrock must be ¾ inch to 2½ inches in diameter. Uniformly graded material is recommended to maximize pore space. Drainrock must be clean, washed, non-deteriorating gravel, with the percent by weight passing the U.S. No. 200 sieve no greater than 0.5%. Alternatives to drainrock, as described in this Chapter, may be accepted on a case-by-case basis.

B. Gravelless systems are allowed provided the requirements for such systems as described in Part Three of this Manual are followed.

Chapter 10. Barrier Material

A. Untreated building paper or two inches of compacted straw may be used for standard gravity systems.

B. Filter fabric must be used for non-standard systems and must meet or exceed the specifications described in the following table:

Property	Requirement	Test Method
Grab Strength	80 lbs.	ASTM D4632
Puncture Strength	25 lbs.	ASTM D4833
Trapezoid Tear	25 lbs.	ASTM D4533
Apparent Opening	AOS < 0.297 mm, or > #50 US Standard Sieve	ASTM D4751
Size	> #50 US Standard Sieve	
Permeability	0.4 cm/sec for Soil Types 1,2 0.004 cm/sec for Soil Types >2	ASTM D4491

[1] Examples of filter fabrics meeting this specification include: Mirafi 140 N3L.

Chapter 11. Bundled EPS Synthetic Aggregate

A. As substitute for pipe, drainrock, and barrier material, Bundled Expanded Polystyrene (EPS) Synthetic aggregate meeting IAPMO standard IGC 276 may be used for wastewater dispersal. Units are cylindrically shaped; having a seamless external permeable netting that contains EPS synthetic aggregate. A geotextile is pre-inserted between the EPS synthetic aggregate and netting as a barrier material to overlying soil. At least one bundled EPS synthetic aggregate unit in the configuration shall include an internal 4-inch pipe. The internal pipe shall comply with ASTM F405.

B. Bundled EPS synthetic aggregate shall be H-10 rated. Units may contain a plastic pipe for longitudinal conveyance of water.

C. EPS synthetic aggregate participles shall be relatively uniform in shape and size. The aggregate particle size may range form 0.5 inches to 2.0 inches along any exis. EPS synthetic aggregate must provide a minimum porosity of 30%.

Attachment D

a. A pump basin with pump may be utilized when any toilet being serviced, in the case of residential application, is not the sole toilet utilized by the residence.

b. A solids handling pump, rather than a grinder pump, must be used and must pump directly into the septic tank with a 4 inch penetration 10 ft from the tank inlet.

F. Gravelless Chamber and Bundled Expanded Polystyrene (EPS) Synthetic Aggregate Systems ~~(Exclusive of Subsurface Drip Irrigation Systems)~~

1. With 100% of the area required for a gravel-filled drainfield established and dedicated (for initial and replacement fields) reduced-size gravelless chamber bundled EPS synthetic aggregate drainfields may be designed and installed.

2. System design, layout, and installation must be done in a manner easily facilitating the installation of additional gravelless chamber or bundled EPS synthetic aggregate drainfield if future conditions necessitate such action.

3. Except for those serving seasonal dwellings, the drainfield size using gravelless chambers or bundled EPS synthetic aggregate products may be reduced by 30%, provided no additional sizing reductions (such as would otherwise be allowed for use of pressurized distribution or supplemental treatment) are utilized in the design of the drainfield system.

~~1.~~4. Wastewater from residential sources must receive pre-treatment at least equal to that provided in a conventional two-compartment septic tank, before discharge to a gravelless drainfield.

~~2.~~5. Drainfields using gravelless distribution products must be installed according to the manufacturer's instructions, in a manner that is consistent with these standards and with state and local rules.

~~Chapter 6.~~Chapter 7. Deep Trench Systems

When the drainfield trench is excavated deeper than 36 inches into the finished grade, the following additional requirements will apply:

A. The trench will be filled with an approved medium to course sand to within 24 inches of the finished grade so that wastewater from the pipe and gravel dispersal system will discharge over the sand bedding in the deep trench.

B. The system will be sized based on the texture and/or percolation rate of the receiving soil at the bottom of the trench.

C. If the trench is deeper than 48 inches beneath the finished grade, pressurized distribution over the sand will be required.