Division of Prevention
Bureau of Environmental Health

BEH News

Volume 7, Issue 1 **January/February 2002**

WINTER PRINCIPLES CLASS

The Fall/Winter 2001-02 session of the Ohio Environmental Health Programs Course (Principles) had 17 sanitarians from 11 local health departments in attendance. Speakers provided information on all of the mandated environmental health programs, as well as other programs the sanitarian may bome in contact with, such as resident/day camps, foodborne illness investigation, rabies control, plan review, structure & design of the local health department, and the right of entry and investigative skills.

Those attending the three-week course and the departments they represent include: Pierre Tihfon from Cincinnati City Health Department, Ronald Broome and Ryan Deeds from the Butler County Health Department, Andrea King from the Clark County Health Department, Steven Swatzel from the Gallia County Health Department, Robert Gallenstein and Joshua Lane from the Clermont Co. Health Department, Keith Farren and Jennifer Valentine from the Fairfield County Health Department, Steve Skeens and Keri Nelson from the Portsmouth City Health Department, Shauna Bohnak of the Mansfield-Richland County Health Department, Christy Charnoky and Teri Collett from the Lake County Health Department, Catie Livery of the Tuscarawas County Health Department, Larry Hanna from the Ross County Health Department and Danielle Schultz of the Wyandot County Health Department.

Congratulations for completion of this course and GOOD LUCK as you embark upon an exciting career!! ■

IT'S TIME FOR MIDWEST WORKSHOP

Registration packets for Midwest Workshop are going to be mailed very soon. Make your plans now to attend and be sure to set aside March 25-28, 2002 for the Workshop.

The Workshop will be held at the **Holiday Inn** - Columbus/Worthington located at 175 Hutchinson Avenue, Columbus, OH 43235. This facility is just off US 23 N and is close to I-270 and I-71. Due to increased program costs the registration fee has been increased slightly in order to maintain a quality Workshop. However, at $21.00 per day, $60.00 for 3 days, or $75.00 for all 4 days, it's still the best deal around. It is anticipated that each day will provide 6 hours of continuing education credit to sanitarians.

There is a wide range of topics to be presented this year. Here is a sampling of some of the topics:

- **Monday** will offer a general session of interest to everyone. Sessions on Bioterrorism, Customer Service and Dealing with the Media will highlight the day.
- **Tuesday** will offer a choice of 3 concurrent sessions. One of your choices is a variety of information-filled sessions centering around Zoonoses. Topics range from an Update on Rabies and West Nile Virus to Fish Advisories to discussions about the Large Livestock & Poultry facilities. Food Safety will also participate in a session running concurrently. The Ohio Plumbing Code, Foodborne Outbreaks and Bioterrorism will be discussed. Marshall Johnson will present an extremely informative session on Incident Command Systems (this session is limited to 50 participants).
- **Wednesday** will showcase the Recreation Programs and the Residential Water Program. The Recreation Programs will provide a day of program updates and discussions with representatives of the Department of Commerce. The Residential Water Program will provide program updates as well as information on Well Logs, Ultraviolet Disinfection Systems and the Occurrence of Arsenic in Wells.
- **Thursday** will feature the Household Sewage Disposal Program with presentations on USEPA Guidelines, Explanation of 13 Program Elements, 5 Model Management Programs. Indoor Air will also provide an enlightening day presenting information on Indoor Air Quality (Health Effects, Assessing Problems), School Management Plans, and Facts about mold.

We look forward to seeing you at Midwest, whether you join us for all four days or come to just one. There's so much information to be passed along, you're bound to learn something new! If you have questions about or need registration information for Midwest, contact LeeAnn Hoon at 614-644-1897.■

ICS and Public Health Emergencies
Management and Partnership Opportunities

Sharon A. R. Stanley, Chief
Disaster Preparedness and Response

The Incident Command System (ICS) is *the* tool for command, control, and coordination (C3) in crisis response. ICS (also sometimes referred to as IMS for "management") provides the way to activate and coordinate personnel and resources within or between agencies for a common goal. During a public health emergency, that common goal is first and foremost protection of the public's health while stabilizing the incident in order to protect property and the environment. ICS, first used by the civilian population to coordinate resources in fighting massive forest fires, is steeped in military tactics, strategy, and tradition. ICS is required by Federal law for HAZMAT response, and has recently gained a foothold in health agency response (both public health and hospitals.)

Incident Management includes:

- ⌘ Establishing command
- ⌘ Ensuring responder safety
- ⌘ Assessing incident priorities
- ⌘ Determining operational objectives
- ⌘ Developing and implementing the Incident Action Plan (IAP)
- ⌘ Implementing appropriate organizational structure
- ⌘ Maintaining a manageable span of control
- ⌘ Managing incident resources
- ⌘ Coordinating overall emergency activities
- ⌘ Coordinating activities of outside agencies
- ⌘ Bridging communication with the media and public
- ⌘ Tracking costs
- ⌘ Evaluating ICS efforts

The Health Alert Network (HAN) is coordinated out of the Disaster Preparedness and Response Program (DPRP) in ODH's Bureau of Environmental Health. HAN is a nationwide, integrated information and communications platform for the distribution of alerts, prevention guidelines and information, and training for workforce development. With its focus on workforce development, DPRP is sponsoring a series of ICS Training Seminars within the local health department.

Ohio Department of Health entered into ICS mode in early October to work through massive statewide public health demands related to the nationwide Anthrax threat. Prior to these first full-scale ICS operations, a core of staff members received training in ICS and positions were designated for ODH staff within the ICS structure. In order for local health departments to prepare for and respond to public health emergencies, the local health jurisdiction must also understand how to implement the ICS management structure.

Mr. Marshall Johnson of Emergency Training Services, worked with the Ohio Department of Health to develop introductory ICS training that specifically targets the public health sector. Mr. Johnson has over twenty-three years of experience in law enforcement with the Michigan Department of State Police, and is a nationally recognized trainer professional. To date, over 100 employees who participate in the ODH Incident Command System have been trained.

In January through March 2002, ODH DPRP is sponsoring Mr. Johnson through the Health Alert Network in six one-day training sessions on concepts, principles, and application of ICS. Targeted invitees are: health commissioners; public health nursing directors; and environmental health directors. A critical component of getting the most out of the training is attendance of a multi-disciplinary team from the LHD.

Feb 14, 2002 – Maumee Bay Resort & Conference Center, Oregon
Feb 15, 2002 – Hueston Wood Resort & Conference Center, College Corner
March 26, 2002 - Midwest Workshop

There are 30 seats available per session. **Also note that registrations are being taken by email and FAX contact ONLY.** Registration forms and agendas were previously emailed to all LHD's in early December. Members from your health department can request another registration form and agenda by emailing Theresa Campbell, DPRP, tcampbel@gw.odh.state.oh.us

Seminar directions are found at:
http://www/dnr.state.oh.us/resorts/index.html.

The Incident Command System will continue to play a critical role in public health emergency response. Although only health department personnel are eligible for this round of training, the Ohio Hospital Association is moving ahead with statewide plans to train hospital personnel in HEICS (Hospital Emergency Incident Command System) in Spring 2002. In addition, ICS will be central to bioterrorism public health response in the Fourth Round Training bioterrorism tabletop exercise coming to your health department in late Spring and early Summer 2002.
Stay tuned! ■

THIRD ROUND TRAINING SUMMARY: LOCAL HEALTH DEPARTMENT
Response to an Overt Bioterrorism Incident

Sharon A. R. Stanley, Chief
Disaster Preparedness and Response

One DPRP's (Disaster Preparedness and Response Program) objective under the 5-Year CDC Cooperative Agreement for Bioterrorism Preparedness is to assess public health capacity at the state and local level in terms of bioterrorism response. In 1998 Emergency Response Coordinators from ODH started working with local health departments to develop functional disaster plans for public health response. During the past couple of years, that objective was accomplished by First and Second Round Training offered by DPRP through 1) a review of emergency plans at local health departments and 2) development of a preliminary template for bioterrorism planning, as well as a generic emergency plan template for use at the local level.

In May of 2001, Third Round Training (subtitled "Does the Plan Work?") was initiated. DPRP staff and Regional Field Coordinators associated with the Health Alert Network. Individual health departments were invited to schedule exercise drills involving an overt biological agent (i.e., Anthrax.) Third Round Training involved an orientation period followed by utilization of the health department's plan in a scenario-based effort. The drill enlisted the participation of key health department staff to include administration, nursing, environmental health, and emergency response coordinators. Each training session was followed by an after-action review. Third Round Training objectives included:

- ⌘ Awareness of the importance of effective intra and inter-agency communication.
- ⌘ Evaluation of the existing plan.
- ⌘ Awareness of bioterrorism potential and implications for a public health response.
- ⌘ Evaluation of current personnel, resources, and equipment available.
- ⌘ Identification of areas for training that can enhance response capacity.
- ⌘ Identification of roles and responsibilities of responders in bioterrorism events.

Third Round Training, due to a later than anticipated start, continued to be offered to local health departments through early September. Then came September 11th. Until that date, less than 40% of local health departments had "signed on." By the end of October, 70% of all health departments had participated in the training. Of that 70%, County Health Departments completed training at a rate of 84% compared to City Health Departments at a 45% completion rate. Health departments were counted as "participating" regardless of whether they were group or individually trained at the local level.

The following table summarizes participation rates by Health Alert Network region:

Region	City HD Participation Rate	County HD Participation Rate	Total Local HD Participation Rate
Northeast	9% (1/22)	80% (12/15)	**35% (13/37)**
Southeast	40% (2/5)	64% (7/11)	**56% (9/16)**
S. Central	50% (1/2)	83% (10/12)	**79% (11/14)**
Northwest	100% (6/6)	80% (20/25)	**84% (26/31)**
Southwest	92% (11/12)	100% (16/16)	**96% (27/28)**
Central	100% (3/3)	100% (10/10)	**100% (13/13)**
TOTAL	**45% (23/51)**	**84% (74/88)**	**70% (97/139)**

Table 1: Percentage and Numbers of Local Health Departments Participating in Third Round Training by City, County, and Total Departments in the HAN Region

In January through March of 2002, ODH DPRP is sponsoring six one-day training sessions on concepts, principles, and application of the Incident Command System or ICS (*see the related article in this issue.*) ICS will be central to public health response in the Fourth Round Training bioterrorism tabletop exercise opportunity coming to local health departments in late Spring and early Summer 2002.

While Third Round Training was designed to help local health departments review the workability of intra-agency disaster plans and bioterrorism annexes, Fourth Round Training will promote interagency response to incidents through use of ICS and the county-level disaster plan, focusing on public health's role. Third Round Training in 2001 gave health departments an opportunity to examine staff roles in public health response across disciplines within the health department. Fourth Round Training in 2002 will give health departments statewide the opportunity to examine interagency roles within the county and work through aspects of the county plan for bioterrorism response.

It is no secret that monies are being generated at the Federal level to support public health infrastructure related to bioterrorism response. Just last week, Congress voted $865 million in supplemental funding to be used for state and local public health capacity. Workforce development and the ability to build capacity will continue to play a major role in public health preparedness at the local level. Ohio's public health system is already on record with a 100% response rate to the Public Health Assessment portion of the Department of Justice Survey completed during Summer and Fall of 2001. Staff from the Disaster Preparedness and Response Program at the Ohio Department of Health would like to encourage local health departments in their planning efforts and future participation in exercising those plans. ■

FOOD SAFETY NEWS

In accordance with Chapter 3717 of the Ohio Revised Code, the following Opinion Letters have been reviewed and recommended by the Retail Food Safety Advisory Council.

HAIR RESTRAINT IN FOOD SERVICE OPERATIONS AND RETAIL FOOD ESTABLISHMENTS - 2001-01

Many consumers are very sensitive to hair contaminating their food even though hair in food poses a minimal risk of causing foodborne illness.

The Ohio Uniform Food Safety Code that became effective March 1, 2001 addresses hair restraints in rule 3717-1-02.3. This rule states:

> "Food employees shall wear hair restraints such as hats, hair coverings or nets, beard restraints, and clothing that covers body hair, that are designed and worn to effectively keep their hair from contacting exposed food; clean equipment, utensils, or linens; or unwrapped single-service or single-use articles. This provision does not apply to food employees such as counter staff who only serve beverages and wrapped or packaged foods, hostesses, and wait staff if they present a minimal risk of contaminating exposed food; clean equipment, utensils, or linens; or unwrapped single-service or single-use articles*".*

The intent of this provision is to keep hair from contaminating food and food contact surfaces if the probability for this to happen is reasonably high. Keeping this in mind, it is our opinion that individuals with a high potential of contaminating food by losing hair, handling their hair, or by their hair falling into food, i.e. those food employees with primary duties in food preparation, need to have their hair effectively restrained*.*

Food employees such as counter and wait staff do not need to have their hair restrained unless their hair is long and/or unmanaged and likely to come in direct contact with food. Food employees such as counter and wait staff with long and/or unmanaged hair need to restrain their hair through the effective use of hair control items such as visors, headbands, clips, barrettes, or ribbons to minimize the risk of their hair contaminating food and food contact items.

It is also our opinion that the need for hair restraints is primarily directed to head and facial hair. Hair on the arms and legs is not likely to come in contact with food. However, if an individual is mixing a food product such as meat and other ingredients for a meat loaf and their arms are in direct contact with the food product, gloves long enough to preclude direct contact with the food product would need to be used. The gloves would prevent any hair from the arms from contaminating the food product. It is impractical to cover all body hair and except for situations such as the example described, hair on arms and legs should not be a contamination issue.

With this said, it is still the prerogative of the facility to set requirements for hair restraint stricter than is indicated by the code for their employees.

DATE MARKING OF READY-TO-EAT, POTENTIALLY HAZARDOUS FOOD - 2002-01

The Ohio Uniform Food Safety Code in rule 3717-1-3.4(G) addresses the date marking of ready-to-eat, potentially hazardous food in accordance with the 1999 FDA Model Food Code. Date marking requirements apply to containers of processed food from a manufacturer once they have been opened, as well as to food prepared by a retail food establishment or food service operation, if held for more than 24 hours from the time of opening or preparation. The date marking requirements specify that the containers be marked with a "consume by" date and if not consumed by that date – discarded.

Grocery stores and similar operations have traditionally used a "sell by" date instead of a "consume by" date and their concerns have been relayed to the FDA. The 2001 FDA Model Food Code has addressed this issue by replacing the phrase "to indicate the date by which the food shall be consumed" with the phrase "to indicate the date or day by which the food shall be consumed on the premises, sold, or discarded".

In view of this change and in anticipation of a corresponding change in the Ohio Uniform Food Safety Code, it is our opinion that the date marking requirement contained in rule 3717-1-1.4(G) will be met by utilization of a "consume by", "sell by", or "discard by" date marking.

WAREWASHING MACHINES, SANITIZER LEVEL INDICATOR

The Ohio Administrative Code (OAC) section 3717-1-04.1(DD) states "A warewashing machine that uses a chemical for sanitization and that is installed after adoption of this chapter, shall be equipped with a device that indicates audibly or visually when more chemical sanitizer needs to be added." This section of the Ohio Uniform Food Safety Code is consistent with the 1999 U.S. Food and Drug Administration (FDA) Food Code.

Currently, an National Sanitation Foundation approved machine may not meet this section of the food code. The American National Standard Institute (ANSI)/ National Sanitation Foundation International (NSF) Standard for Food Equipment Standard 3 for Commercial Spray-Type Dishwashing and Glasswashing Machines requires, that if provided by the manufacturer, a chemical feeder is to conform to ANSI/NSF Standard 29 "Detergent and Chemical Feeders for Commercial Spray-type Dishwashing Machines." If the feeder is not provided, the manufacturer must provide information needed to identify and install an appropriate and functional chemical feeder. It is the ANSI/NSF Standard 29 that states "an obvious method (visual or audible, or both) to indicate the delivery and supply of the solution shall be provided. A flow indicating device, open air delivery of chemical, or similar easily discernible method shall be acceptable."

At the present time, some dishwashers are designed with open air delivery of the sanitizer while others are provided with a clear sight tube in order to comply with the standard. Although both are consistent with NSF Standards, FDA considers that the sight tube does not meet the intent of the code in alerting the operator of the lack of sanitizer injection into the final rinse cycle (It is not discernable if sanitizer is entering the machine, only that sanitizer is in the injection line). It is our understanding that some manufacturers are currently developing devices that will meet the intent of the code**.** The issue will also be considered at the 2002 Conference for Food Protection. Until manufacturers' technology meets the intent of the code or this issue is otherwise resolved at the national level, it is our opinion that restraint should be applied in enforcement of this section of the code**.** ■

If you have any questions regarding any of these Opinion Letters, please contact the Ohio Department of Agriculture, Division of Food Safety or the Ohio Department of Health, Bureau of Environmental Health

This newsletter is a bimonthly publication of the
Ohio Department of Health
Bureau of Environmental Health
246 N. High St., P.O. Box 118
Columbus, Ohio 43216-0118
614-466-1390

Articles may be reproduced and distributed without permission; author credit is appreciated. Comments and suggestions are welcome. All correspondence, including address changes, etc. should be sent to the address above.

PLEASE SHARE THIS NEWSLETTER WITH ALL HEALTH DEPARTMENT PERSONNEL.

Deadline dates for article submission are:

February 22, 2002
April 26, 2002
June 28, 2002
August 30,2002

ATTENTION!!

A New "Proactive" Prevention Opportunity Coming to Environmental Health Directors in Ohio

The Ohio Indoor Air Quality Coalition's (OIAQ Coalition) Secondhand Smoke Subcommittee is seeking support from all Environmental Health Staff to promote smoke free dining in their local areas.

What's Happening Now? Since we've sent this notice in the Summer and Fall of 2001 we have been working hard to overcome printing delays and processing printing orders so the packets can be available. We have received calls from persons interested in this project and we just want to say…. keep up the interest.

Look for our letter seeking your help in Winter/Spring 2002. For further questions call 614-466-2273 to speak with Tracy Clopton at ODH.

We look forward to partnering with all of you!!! ■

2002 WATER HAULER STICKERS AVAILABLE

The 2002 water hauler stickers are now in. Please call Russell Smith or Desiree O' Brien at (614) 466-1390 to request the number of water hauler stickers you will need for your 2002 inspections. Water hauler stickers are only to be issued for water hauling tanks that pass local health district inspection as per the requirements of rule 3701-28-18 of the Ohio Administrative Code. Each local health district is responsible for conducting the inspection of all water hauling equipment used by a water hauler whose principal place of business is located within your health district. One sticker is issued per water hauling tank.

Upon issuing an Ohio Water Hauler sticker, please advise the hauler to affix the sticker to the inside of the water hauling vehicle's front windshield on the lower right-hand side (i.e., passenger side). The sticker is a crack and peel type that is sticky on the printed side.

Please provide the Bureau of Environmental Health with a list of those persons whose trucks have been inspected and approved by your department as soon as the list is available. This information will allow ODH to be able to provide current statewide information on permitted water haulers available for emergency situations.

Please call Russell Smith at (614) 466-1390 if you have any additional questions. ■

ACCEPTABLE WATER HAULING TANK MATERIALS

Russell Smith, RS
Residential Water & Waste Water Program

Effective January 2001, there were significant changes to Ohio Administrative Code (OAC) 3701-28-18 regarding the requirements for water hauling tanks. The tanks are to be constructed of stainless steel or a material that meets NSF Standard 61. This has been interpreted to mean that, in addition to a tank being constructed of an NSF Standard 61 approved material, existing steel or other metal tanks may be coated on the inside with a NSF approved epoxy coating. These are the same coatings used on the inside of public water tanks. A complete listing of NSF approved tanks, materials, and coatings can be found at the NSF web-site (www.nsf.org/contact).

Plastic water hauling tanks that are manufactured in a non-NSF certified factory, by the same company, are considered acceptable by this department for hauling water if the chemical composition of the tank material and the manufacturing processes are identical. Norwesco has a plastic tank factory in Georgia that has a NSF certification for their plastic tanks. However, the plastic tank factory in Ohio does not have the NSF certification. Norwesco has notified the Bureau of Environmental Health that the manufacturing process for making their plastic tanks are identical in both factories. Norwesco tanks models listed on NSF 61 that are made in Ohio may be used in Ohio. Check the NSF listing of certified products to verify model numbers.

In addition, the use of plastic tanks meeting FDA 21CFR 177.1520 requirements for contact with food is regarded as acceptable. This CFR Standard describes the acceptable chemical composition of the plastics used in the manufacture of containers for food and water contact. FDA rated tanks, that do not have NSF 61 certification may be considered acceptable for water hauling with a variance issued by the LHD for this current year. Please note that 21CFR 177.1520 does not include a list of acceptable products. The 21CFR 177.1520 is being considered as an addition to the Private Water Rules when they are modified.

The question has also come up as to the acceptability of aluminum as a material for water hauling tank construction for compliance with OAC chapter 3701-28-18.

There are no aluminum products listed on NSF standard 61, other than compounds used for water treatment. However, NSF Standard 51 certifies specific products that may include aluminum in their construction for contact with food. NSF Standard 51 does not certify the aluminum.

The aluminum used in the products **must** be one of the following grades that can be found in the actual standard:

Wrought Alloys
1000-6000 series

Casting Alloys
218, 308, 319, 332, 356, 360, 413, B443, 514, 520, 713

No other alloys are acceptable for contact with food. NSF does not test the alloys for compliance but relies on accurate information from the manufacturer.

Therefore, based on the information specified in NSF Standard 51, The Bureau of Environmental Health will consider the use of aluminum water hauler tanks that meet the above grade requirements as acceptable to be in compliance with OAC 3701-28-18, when a variance is issued by the local health district. Use of approved aluminum tanks will also be considered in future changes to OAC 3701-28.

Aluminum tanks will not be found on any NSF listing and it may be difficult (or impossible) to determine the specific grade on older tanks. Best professional judgement should be used in considering the acceptability of existing tanks. New tanks should have at least manufacturer records specifying which grade of aluminum was used in the construction of the tank. ■

PONDS AS PRIVATE WATER SYSTEMS
Russell Smith, RS
Residential Water & Waste Water Program

Many homeowners wish to consider ponds for their drinking water supplies for a number of reasons including the aesthetics that ponds can add to a landscape or when ground water yields are minimal beneath their property. The use of ponds as a drinking water supply is regulated in the Private Water Systems Rules under Ohio Administrative Code (OAC) Chapter 3701-28.

According to OAC Rule 3701-28-15 (A), a pond may be used only when it can be demonstrated that no other water supply is available, or can be reasonably treated. Detailed plans shall be submitted along with the permit prior to beginning construction of a private water system pond in accordance with OAC 3701-28-03 (E) and (F).

One question of concern that often comes up is what is considered an acceptable yield from a well for adequate household uses. A well that yields one gallon per minute can supply 1440 gallons of water per day. Typical water usage is based on between 50 to 75 gallons of water per person per day. A well that yields approximately one gallon of water per minute can supply most normal sized families when the system is properly designed with a reservoir tank. It is probably impractical to operate a well that yields less than one gallon per minute although it can be done.

Another question frequently asked is when does well water quality become unacceptable due to the presence of naturally occurring contaminants such as hydrogen sulfide gas or dissolved iron. Some wells in Ohio have dissolved iron and hydrogen sulfide levels in the water that are aesthetically high. The costs of initial installation of treatment systems for a pond and a well that produces hydrogen sulfide are probably comparable. A pond will require continuous disinfection and an approved filter system for continuous filtration. Rapid sand filter systems approved by the director in accordance with OAC 3701-28-15(G)(3) require the use of coagulation and National Sanitation Foundation (NSF) Standard 53 cyst reduction filters. This can add to the cost and complexity of operating the treatment system. Treatment systems are available for water wells with high iron, hydrogen sulfide and other minerals. Hydrogen sulfide can be removed by aeration, chlorine or ozone oxidation. Chlorine reacts with hydrogen sulfide on a three-to -one basis. In other words, it takes three times the amount of chlorine to react with any given amount of hydrogen sulfide. Chlorine will react with iron on a one- to- one basis. Filters to remove the precipitated sulfur and iron would be needed, but the larger filtration system needed for pond treatment would not be required.

The problems of maintaining a complicated treatment system operation for ponds are a serious health concern. Slow sand filters, pre-coat filters, and rapid sand filters all require periodic maintenance. Coagulation treatment is not required on slow sand filters or pre-coat filters but must to be installed prior to any rapid sand filter. One-micron cyst filters must be installed after any rapid sand filters. The NSF 53 rated cyst filters are expensive and have a shorter filter run than typical particle filters. Conversely, the problems usually associated with treating aesthetic conditions present a less serious health threat.

Because of the complexity of maintaining treatment systems, OAC 3701-28-15(P) requires that a pond owner shall have a written service agreement with a registered contractor or have the water tested for bacteria on an annual basis.

It should be noted that some health departments in the past have allowed the use of ponds with no watersheds to be initially filled from creeks or drainage ditches. Filling a pond from water sources not under the control of the property **is not an acceptable practice** and is a violation of the OAC. Even though the minimum watershed requirement is three acres per acre-foot, flat terrain, such as occurs in northwest, Ohio generally requires a larger watershed for natural filling of the pond to occur. Some people use wells to supplement water in the pond that allows for natural aeration to reduce levels of the hydrogen sulfide. This practice, while dealing with the limited watershed and hydrogen sulfide problems, still requires the use of complicated treatment to make the pond water potable.

The decision whether to allow the use of a pond based on these circumstances will be subject to information presented by the property owner and the local health district's knowledge of hydrogeologic conditions in the area of concern. The intent of OAC 3701-28-15(A) is that water wells are used instead of ponds as private water systems when ever circumstances allow it due to the health risks associated with use of surface water supplies as private drinking water sources.■

GOD, THE DEVIL, & 8% or WELL SCREENS

Tim Korver
Ohio Water Well Association
(reprinted with permisison)

In the good old days, one simply selected a well screen slot size based on sieve analyses of formation samples and then determined the length of screen required to achieve the desired flow at the industry standard of 0.1 fps though-slot velocity. Now the State has complicated that process with the adoption of the 8% rule.

The newly revised Ohio Administrative Code (OAC) Chapter 3701-28 defines a well screen, in part, as "…an intake structure with uniform openings…" (Section 1, paragraph RRR, page 4 of the new blue book.) Section 111, paragraph G, subparagraph 2 also states that a screen shall have uniform openings, adding that a screen shall have a minimum open (inlet) area of not less than 8% per foot and codifies an upper entrance velocity of 0.1 fps (page 54 of the new blue book.)

As one who has had an intimate working knowledge of screen design and manufacture for the past quarter century, I would like to clarify what the new rule means for the contractor when deciding whether to purchase a "store bought" screen or fabricate his own. I suspect that many experienced screen installers may be violating this new rule without realizing it. Open area will be discussed as it applies to various screen sizes. The enclosed charts should permit you to make the appropriate decision on which type of screen is best for a given well and still meet or exceed the 8% requirement.

Wire-wound, rod base screens (a.k.a, V-wire, Continuous slot, or self-cleaning V-slot) have the most efficient design. Generally made of stainless steel for potable wells, they are available in other metals and in PVC. Open area is a simple algebraic ratio of the slot size (S) to the sum of the slot plus the face width of the wrap wire (W) at the outer surface of the screen, regardless of diameter. %OA=[S/(W+S)]x100. For small diameter stainless steel screens, a common industry-wide wire shape has a face width of .060". Thus, a .006" slot screen has an open area of 9.1%, a .010" slot 14.3%, and a .030" slot 33.3% and so on. This design provides a uniform inlet path for water to slowly pass into the screen from all 360 degrees, thus minimizing well loss, draw-down, through-slot pressure drop, mineral encrustation and allows use of minimal length to achieve its goal. (On the other hand, large diameter screens employ a variety of wire shapes, mostly proprietary to the manufacturer, designed to balance yield with collapse. That's why it is important for you to inform your supplier of the setting depth of the screen.)

PVC saw-slotted screens are popular due to cost and other factors, but perform at a lower level of efficiency. The open area is a function of the pipe wall thickness, slot size, spacing between the slots, the number of rows of slots, depth of saw cut and the length of the slot, all of which vary per manufacturer. There is no industry standard. It should be measured on the I.D. of the pipe where velocities are highest. (Some manufacturers measure it on the O.D. which gives an inaccurate picture of the true percentage.) Open area can be little as 2% or less. It is often from 1/3 to as little as 1/8 that of wire-wound stainless steel, thus requiring from 3 to 8 times as much screen length to maintain adequate yield and low velocities. Spacing between slot sizes is typically ¼", but it can be 1/8". From a design perspective, more slots are better, but differential collapse is compromised as more and more material is removed from the pipe by drilling or slotting. Check with the manufacturer to see if narrow spacing is available and how the collapse is affected, for it largely determines how deep a screen can be set.

Perforated casing: This time-honored method of using an inside perforator, torch, power saw, or electric drill may be appropriate for course gravel in very thin water bearing zones, but is the least efficient method of screening, subject to corrosion, encrustation buildup and possible accumulation of fine sand and silt due to high through-slot velocities by over pumping to maintain yield. As with slotted PVC, open area is properly measured using the inside diameter of the pipe.

The 8% rule has been interpreted to mean that the outer or main well casing can be perforated by the contractor, but is still subject to the requirements of uniformity, open area and velocity. As the enclosed charts show, this is difficult to achieve using time-consuming hand methods and begs the question, "What is your time worth?" Absolute uniformity of slot dimension, distribution and spacing without burrs or slag essentially means that such perforations be drilled or mill-slotted on a machine made for the purpose. Contractors who own a PVC slotting machine may be asked to document how their slotting procedure meets the new rule.

Historically, the percentage of open area has been of little interest except to manufacturers and design engineers and is rarely published. Now you will have to request that information from your supplier. The 8% rule is simply a minimum. It does not guarantee you sufficient open area to do the job. The total square inches of open area for the entire screen length, the theoretical yield at 0.1 fps, aquifer thickness and available drawdown all must be factored in good design practice.

The charts show area in square inches per linear foot and percentage of the screen types discussed here. In addition, for perforated casing, the size and numbers of slots or drilled holes is shown.

To summarize, wire-wound stainless steel screens can meet the 8% rule with as small as a .006" slot opening. Saw-slot PVC open area varies so much between different manufacturers, only approximate averages are shown. Suffice it to say that with 1/8" spacing, a .020" - .030" slot is the minimum, but with ¼" spacing, a .040" - .060" is the minimum. The number of drilled holes required to perforate casing is so staggering as to be not feasible, but extra wide mill cut slots could possibly be used with reasonable caution in certain coarse gravels.

Finally, the geologic formation, as nature wills it, still determines slot size, the 8% solution determines screen type. ■

ULTRAVIOLET LIGHT FOR DISINFECTION

Russell Smith, RS
Residential Water & Waste Water Program

Ultraviolet light (UV) is an effective means of disinfecting water. Ultraviolet light disinfects water by striking a microorganism with a 2537Å wavelength of electromagnetic radiation. This action disrupts the DNA preventing the microorganisms from reproducing and thus effectively killing it.

Private Water Systems Rule OAC 3701-28-09 currently provides for the use of UV as a primary means of disinfection for private water systems. Only UV systems that meet NSF Standard 55 "**Class A**" or the equivalent can be considered for approval as a means of primary disinfection of private water systems in Ohio. Any UV system that becomes listed on NSF Standard 55 Class **"A"** is acceptable for primary disinfection in Ohio without additional approval from the Ohio Department of Health. **There are currently two UV units listed as Class "A" systems on NSF Standard 55.** These are:

Trojan Technologies Inc.
(519) 457-3400
3020 Gore Road
London, Ontario N5V 4T7
Canada
Models: UVMax Pro 15 (17gpm)
UV Max Pro 7 (8.2 gpm)

UV Pure Technologies Inc.
(416) 208-9884
60 Venture Drive
Unit 19
Scarborough, Ontario M1B 3S4
Canada
Model: Hallet Water Unit 10 (10gpm)

If an UV product is not listed on the NSF Class "A" standard the regulating agency may choose to review the technical specifications for compliance with the class "A" standard or accept alternative third party certification that any particular system is in compliance with the class "A" standard. The regulating agency **is not required** to review the technical specifications. When the regulating agency chooses not to review the technical specifications it would then be up to the manufacturer to carry the burden of proof of third party certification that NSF Standard 55 Class "A" is able to be met.

Wedeco Ideal Horizons UV systems had gained temporary approval in Ohio in 2000. However, because they failed to provide the complete information required by Ohio Administrative Code 3701-28-09 (E) Wedeco Ideal Horizons UV system approval was withdrawn in February 2001. UV systems manufactured by Wedeco Ideal Horizons **can not** be used for continuous disinfection of private water systems in Ohio until they have been officially approved or listed on NSF Standard 55 Class "A". Wedeco Ideal Horizons ultraviolet light disinfection systems previously installed from January 2000 until February 2001 were done so under the interim approval of the Ohio Department of Health, and are considered to have been installed within compliance at that time.

EXPLANATION OF (OAC) REQUIREMENT FOR STANDARD 55 CLASS "A"

The National Sanitation Foundation has developed Standard 55 for class A & B UV light disinfection systems. Standard 55 "**Class A**" UV systems are required to operate at a minimum UV light dosage of 38,000 uW-sec/cm^2. "Class A" systems are also required to be designed with warning devices and / or automatic shutoffs that activate when UV light dosage reaches a fail-safe set point below 38,000 uW/-sec/cm^2. The automatic shutoff would be the preferred installation in order to avoid the consumption of untreated water. The need for additional treatment devices will be dependent of the quality of the raw water. Since UV treatment is affected by turbidity, pre-filtration is required when total suspended solids are <5 ppm. This is in addition to the required NSF 53 cyst reduction filters for protection against the protozoans Giardia and Cryptosporidia. Dissolved iron and hardness will also affect the transmittance of the ultraviolet light as build-ups occur on the quartz sleeve. Water should be treated prior to entering the UV unit when iron levels are <0.3 ppm or above and hardness is 120.0 ppm (7GPG). It should also be noted that the effective life of an UV bulb for adequate disinfection is about 1 year.

Different organisms are affected differently by varying intensities of UV light. UV disinfection dosage is measured as microwatt seconds per centimeter squared (or equivalent milliwatt seconds per centimeter squared or milli-joule). Many UV devices currently on the market operate at a dosage of 16,000 uW/sec/cm^2. This is sufficient to inactivate total coliform, but is not sufficient to inactivate many other pathogenic microorganisms at the desired reduction levels.

NSF Standard 55 "Class B" UV systems are designed to operate at a minimum dosage of 16,000 uW-sec/cm^2 and are intended to "reduce normally occurring non-pathogenic or nuisance microorganisms only. The "Class B" or similar non-rated UV systems are **not** intended for the disinfection of "micro biologically unsafe water". It is illegal (per OAC 3701-28 09) and should be considered hazardous to install these UV systems for primary disinfection of private water systems. ■

SEWAGE SAMPLING

Statewide Evaluation of Onsite Sewage Systems

John E. Smith, RS
Residential Water and Waste Water Program

Where can I build my new house, what is stopping me from putting my leach field on my lot, and can't I just have a curtain drain installed to make it work. These questions are becoming ever more on the minds of developers, builders, sanitarians, and homeowners. What used to be out of site out of mind, is now one of the Ohio Department of Health's (ODH) top ten priorities. A growing national problem is how to properly treat the sewage from an ever-increasing population density in unsewered areas.

ODH will conduct a statewide study of onsite sewage systems using an EPA 319 Grant in hopes to better understand what it is going to take to assure that households have sustainable long term onsite sewage systems. The objectives are to evaluate onsite systems in 10 of the 12 soil regions (a previous study was conducted in NE Ohio covered the other two, NOACA 2001). Permit reviews, actual onsite surveys, and water quality sampling will be a major focus of the study. Comparisons will be made of differing soils, site evaluations, and system operation. All of which will be available in a database on the web.

Local health departments (LDH) were selected based upon their geographical location to ensure that all 12-soil regions were represented in the study. To narrow the study, selection criteria included whether or not the Ohio Department of Natural Resources had county digital data available, if the LHD routinely used curtain drains in the design of onsite sewage systems, and LHD interest in working with ODH on this project.

Currently ODH is in the process of hiring a consulting engineer to assist in sampling, data management, GIS and database development, and report writing. A Request for Proposal was mailed to qualified firms in November. A contract should be awarded the first quarter of 2002.

The study will evaluate the current status of onsite systems in each of the soil regions. The study will look at several aspects of onsite sewage systems from the siting of the system to the installation, to operation and maintenance. The goal is to evaluate the existing practices across the state and determine what practices lead to longer lasting onsite systems that protect public health and the environment. ■

FOCUS ON MANAGEMENT AT MIDWEST

Jean Caudill, RS
Residential Water and Waste Water Program

This year the agenda for the Household Sewage Session at the ODH Midwest Workshop includes a detailed discussion of the **USEPA Voluntary Guidelines for Management of Onsite Systems.** A flexible approach to comprehensive management will be presented at the Thursday - March 28th session. This overview will include the thirteen elements of management, ranging from planning as the first element to financial assistance as the last (but not least).

Management is not just about operation, monitoring, and maintenance. In fact, these three important aspects of management are all included in the tenth element. With so much packed into just one element, can you imagine what the remaining ten elements will cover?

All thirteen elements are critical to a well-managed program, and all thirteen will be addressed at ODH Midwest Workshop. If you want to preview some information on the USEPA Management Guidelines, you can visit the web site at www.epa.gov/owm/decent/index.htm. ■

PRODUCT REVIEW
Tom Grigsby, RS
Residential Water & Waste Water Program

The Residential Water and Waste Water Program has recently reviewed a number of products for use in Ohio. This is a summary of the products and where more information can be found. The new listings for septic tanks and aerobic treatment units will be available on request.

AEROBIC TREATMENT UNITS (ATU)

The following units have been approved for use in Ohio as per OAC 3701-20-08 or are currently listed and have requested additional units be approved "as in a like series".

Alliance 500 Wastewater Treatment System

This unit is manufactured by H.E. McGrew Inc. It is an extended aeration activated sludge process rated at 500 gallons per day (gpd) treatment capacity. The tank is a two compartment concrete tank with a motor blower mounted outside the unit. This unit has been tested by NSF International. For more information contact:

Alliance Wastewater Treatment Systems
2835 Hollywood Ave. Suite 420
Shreveport, LA 71108
Allianceforce@aol.com

Zabel Environmental Technology ATS-AD-500 and ATS-AD-500-S

These plants also use extended aeration and the activated sludge process. These plants are fiberglass reinforced plastic. There are three ceramic fine bubble air diffusers with a cone shaped clarifier set in the middle of the aeration compartment. The ATS-AD-500-S includes an effluent filter while the ATS-AD-500 does not. Both units are listed by NSF International. For more information contact:

Zabel Environmental Technology
P.O. Box 1520
6244 Old LaGrange Road
Crestwood, KY 40014
http://www.zabel.com

Hydro-Action Inc.

The following additional units have been listed as "units in a like series".

AP-600,600 gpd	AP-750, 750 gpd
AP-900-G, 900 gpd	AP-1000-G, 1000 gpd
AP-1500-G, 1500 gpd	CLP-500-G, 500 gpd
G-500,500 gpd	G-1000, 1000 gpd
G-1100, 1100 gpd	G-1500, 1500 gpd

Hydro Action units require the addition of a 500 gallon trash trap to precede the unit. For more information contact:

Hydro-Action Inc.
8645 Broussard Rd.
Beaumont, TX 77713
www.hydro-action.com

Might Mac Aerobic Treatment Unit

Might Mac, manufactured by H.E. McGrew Inc. has added the Mighty Mac 600 gpd plant and the 750 gpd plant as in a like series following the original approval of the Mighty Mac 500.
For more information contact:

H.E. McGrew, Inc
2835 Hollywood Ave., Suite 200
Shreveport, LA 71108

SEPTIC TANKS

American Concrete Products, Inc
4944 Mason Rd.
Howell, MI 48843

The American Products 1000-gallon septic tank has been reviewed and found to be in compliance with the household sewage disposal rules.

Rochester Rotational Molding Inc.
1952 East Lucas Street
Rochester, IN 46975

This 1000-gallon polyethylene septic tank has been approved as a special device under household sewage rule 3701-29-20(C). This tank did not meet the requirement for a 12-inch air gap nor the 4-foot liquid depth. This tank is being distributed by:

Active Aeration Systems Inc.
7245 Industrial Parkway
Plain City, OH 43064

GRAVELLESS LEACHING DEVICES

Advanced Drainage Systems Inc. has begun marketing the Multi-pipe system. There is a 9-pipe and an 11-pipe system. This is a bundle of four inch-perforated pipes, stacked into a top and bottom row. These bundles can be used in place of conventional gravel and pipe in a soil absorption system. They may also be used in mounds or at-grade systems but with no sizing reduction. This product was originally approved in 1998 through the PIT Multi-Pipe Systems. The Multi-Pipe system is to be used at a sizing ratio of 1:1 with a conventional gravel pipe soil absorption system. For more information contact:

ADS Inc.
P.O. Box 218902
Columbus, Oh 43221

GRAVELLESS LEACHING DEVICES - Continued

Haviland Drainage Products Co. has had the Low Profile Effluent Distribution System approved as a special device. This is a bundle of five, four-inch pipe which can be used in a conventional leaching trench in place of gravel and pipe. It has been approved at a ratio of one:one with conventional gravel pipe system concerning system sizing. It may also be used in mound or at-grade systems but with no sizing reduction. For more information contact:

Haviland Drainage Products
Main Street
P.O. Box 97
Haviland, Oh 45851

EXPERIMENTAL SYSTEM

SeptiTech Zero Pollution Wastewater System

The SeptiTech is a recirculating biological trickling filter system. It is installed between a septic tank and a soil absorption system. It uses a filter media of hydrophobic Styrofoam beads. The septic tank effluent is sprayed over this media and is recycled back over the media repeatedly. The SeptiTech is not approved as a special device but may be used under 3701-29-20 (B) for experimental systems. The local health department must grant a variance and then submit its proposal and the company's plan for application to the Ohio Department of Health for review and concurrence. For more information contact:

SeptiTech Zero Pollution Wastewater Systems
220 Lewiston Road
Gray, Maine 04039
Website: www.SeptiTech.com

EFFLUENT FILTER

Sim/Tech Filter has recently had its Bristle Effluent Filter approved as a special device for use in Ohio.This filter acts in the same manner as all of the other effluent filters approved for use in Ohio. That is by actually physically filtering out the particles, down to 1/16 of an inch. However the Sim/Tech Bristle Effluent filter is a brush rather than a screen. It fits inside a four-inch tee on a septic tank outlet. The company estimates that the filter will operate up to three years. The filter is priced so it can be washed off or replaced.

For more information contact:
Sim/Tech Filter
06598 Horton Bay, North Road
Boyne City, MI 49712
Phone: 1- 888-999-3290
Website: www.gag.simtch.com

SEPTIC TANK LIST

The polyethylene septic tanks currently listed as Plasti-Drain Ltee of Quebec Canada and distributed by Stelling Co. of Syracuse, NY is now listed as

Xactics (2001) International
3300 Marleau Street
Cornwall, Ont
Canada
K6H 6B5
Phone: 1-877-875-1999
E-mail: xactics2001-alainstonge@yahoo.com

This change does not alter the approval of these tanks. A new septic tank listing is available on the ODH Web site or contact Tom Grigsby at 614-644-8663. ■

DOES THIS REQUIRE PLAN APPROVAL?

Diane Roller, PE
Environmental Engineering

Please refer to Chapter 3701-31 and take this quiz. Answer "Yes, it requires Plan Review" or "No, it doesn't require Plan Review" for each of the statements below:

1. You arrive at a pool for the annual inspection to find that they have installed a playground slide.
2. You discover that they have installed a new 2 Hp pump to replace the old 2Hp pump.
3. You find that they have installed a new fence.
4. You find that they have installed a new pool liner.
5. You find new larger sand filters in place of the older smaller sand filters.
6. They have removed 2 diving boards and put one board in between the removed boards.
7. They have repaired/replaced a large portion of concrete on the deck.
8. A new erosion feeder replaces the sodium hypochlorite feed pump.
9. Piping in the equipment room is new.
10. They have installed new skimmers and new drain covers.

Answers (no peeking):

1. This is a trick question. Playground slides taller than 42 inches are prohibited per OAC 3701-31-041 (U). If the slide is taller than 42 inches it must be removed. If it is shorter or a different type of slide, then you should have them submit plans.
2. OAC 3701-31-03 (A) (1) (b) states that replacement of a "properly sized" pump is not a renovation or substantial alteration. But how will you know if it is properly sized without benefit of plan review? Pumps with the same Horsepower vary significantly in their pumping capacity. Just have them fax in (Form Hea 5234), the Equipment Replacement Notification Report, and we'll review it without a fee.
3. Yes, plan review is required for a fence.
4. No, just make sure the color is white or a color from the approved list.
5. Yes, it is required for a filter size or type change. Have them submit form HEA 5234 and $35 made payable to "Treasurer, State of Ohio".
6. Yes, moving the board always requires plan approval.
7. Trick question! Small portions of the deck being replaced can be considered "repair". Call ODH Engineering to discuss the details.
8. Yes, have them submit form HEA 5234 and $35 made payable to "Treasurer, State of Ohio".
9. No, plan review would not usually be required. Just make sure they use approved type of piping and replaced it with same size or larger.
10. No, however it would be required if they replaced skimmer lines or main drain boxes and piping as well.

How did you do?
0-5 correct, you must have an old copy of the regs.
Call Jim Burkhart for a new set.
6-8 correct, pretty good. Call Steve Binns to brag.
9-10 correct, you must have peeked at the answers! ■

POLICY FOR MHP BASE SUPPORT PLAN APPROVAL AND INSPECTION-01-1

Diane Roller, PE
Environmental Engineering

For situations when an existing park is submitting a generic set of plans for "x number" of base supports to be replaced in the next three years, the following will apply:

-They must submit an application, data sheets and a check in the amount of 2% of the estimated number of base supports to be completed in the next three years.

-After the plans are approved; they must call for and receive **one** passing field inspection from ODH before concrete is poured.

-At the time of the acceptable inspection, the inspector should document the base support and site conditions then write a standard comment. It should say something like; "ODH has approved the base support installation for lot #10. The MHP owner shall ensure that all future base support installations done under this permit number will meet the same quality standards and follow plans and specifications of the approved plans. New plans **must** be submitted after the 3-year expiration date if construction continues. This concludes ODH inspections for this permit number".

-Contact the local health department and encourage them to be at the inspection.

-The locals may inspect the other base supports as they are completed since they will be out to check blocking and tie-downs, but we must not say they are responsible for the rest of the base support inspections or write that on our reports.

-The owner or owner's representative must be on site to sign the inspection form instead of the contractor as the contractor may be different for each lot.

-Try to do the plhd letter ASAP after the one passing inspection.

This policy does not apply for parks in the flood plain, as they will need a more specific permit. It doesn't apply for any unique base support designs such as single to doublewide using part of the original base support. Nor does it apply to any base support design that differs from approved plans. This is only for generic base support approvals on existing lots.

This eliminates tracking the number of completed base supports and asking for another check/revision over the allowed number of base supports because they can do as many as they want with one inspection. If the one inspection doesn't pass, then they will be charged $100 for additional inspections above **three** until they do provide a passing product and we can write the generic comment above.

A minimum plan review fee of $150 needs to be addressed by a regulation change of OAC 3701-27-06 (E) to cover the review, letter, and inspection. Currently, no minimum exists and even a $20 fee is allotted 3 inspections. ■

ASK THE "BLUE FROG"

Any questions or comments for the "Blue Frog" may be mailed to James L. Burkhart, Sanitarian Program Specialist, Ohio Department of Health, Bureau of Environmental Health, 246 N. High St., Columbus, Ohio, 43216, or e-mailed at: jburkhar@gw.odh.state.oh.us, or faxed at (614) 466-4556

Dear Blue Frog:

A newly constructed public swimming pool will be opening for business around January 1, 2002, and thus will be requesting a license. Should I issue a 2001 license or a 2002 license?

Sincerely,
Harold M.

Dear Harold:

Section 3749.04 (C) of the Ohio Revised Code (ORC) states: "**Each license issued shall be effective from the date of issuance until the last day of May of the following year**". If the proposed facility applies for a license prior to January 1, I would recommend that you issue a 2001 license, which would be effective until May 31, 2002. If the proposed facility applies for a license after January 1, I would recommend that you issue a 2002 license, which would be effective until May 31, 2003.

Dear Blue Frog:

I have a facility currently under license that, due to numerous violations, has had at least six inspections this past license period. Normally two inspections are usually conducted per license period. Since the license fee was based upon only two inspections being conducted, can I charge the facility for the extra inspections taking into consideration the sanitarian's time, mileage and ancillary expenses?

Sincerely,
Phyllis P.

Dear Phyllis:

No, you can not. The fees charged the public swimming pool were determined by the cost methodology as required under section 3701-31-023 of the Ohio Administrative Code (OAC) covering the previous license period. If the cost methodology took into consideration the total hours worked in the public swimming pool, public spa, and special use pool program by each inspecting sanitarian, you can not arbitrarily charge the facility extra fees for extra inspections conducted. You can, however, include the time spent, mileage and other expenses incurred for these inspections when calculating the fees for the next licensing period.

Dear Blue Frog:

I recently received my shipment of applications and licenses for 2002. They did not contain tabs for my tractor feed equipment . What gives?

Sincerely,
Toni S.

Dear Toni:

The Recreation Unit, which includes the swimming pools, marinas, campgrounds and the mobile home park programs, has revised some of the applications and licenses for 2002 so that they correspond with the other applications and licenses (i.e., food program) printed by the Ohio Department of Health. When we ordered our applications and licenses for 2002 we specified that they were to be printed with no tabs because most local health departments print their applications and permits via a laser printer. When we received our shipment of applications and licenses, some contained tabs, others did not. Therefore, some departments received shipments with tabs, others did not. Starting in 2003, all applications and licenses will be printed without tabs.

Dear Blue Frog:

Are there any guidelines for the inspection of vacuum limit switches?

Sincerely,
Paul T.

Dear Paul:

The installation of a vacuum limit switch was one option the owners of a public wading pool, special use pool 36 inches or less in depth, or public spa had to satisfy the requirements of section 3701-31-04 (C) (9) of the Ohio Administrative Code (OAC). Vacuum limit switches are considered to be safety devices and should be checked annually at each facility. I recommend that these switches be checked during the pre-op inspection or during the first regular inspection of the licensing year. There is an area on the inspection report form under section 3701-31-041 entitled "Provide/maintain pressure/vacuum gauge(s)" which should be marked if the switch is not functioning properly. As with all other equipment, I recommend that you do not conduct the test yourself. Instead you should request that the owner/operator conduct the test in your presence. If the owner/operator is not familiar with the testing procedure, a second option would be to have the owner/operator have the original installer or a certified technician conduct a test and certify the results in writing which would become part of the official file.

PLEASE NOTE: The answers in the feature are based upon the facts presented and are not legal advice and should not be substituted for consulting with your attorney. The opinions rendered do not commit ODH or any of its personnel to any regulatory position. ■

SWIMMING POOL AD HOC ADVISORY COMMITTEE MEETING MINUTES

Jim Burkhart, RS
Recreation Program

AUGUST 28, 2001 MEETING

Old Business
None

New Business

The meeting began with the announcement that Kurt Carmen, who represented public swimming pool education/certification, has resigned from the Swimming Pool Ad-hoc Advisory Committee. Mr. Carmen, on August 26, 2001, sent an E-mail to Mr. Burkhart stating that due to commitments for the next academic year, he would be unable to participate as a member of the committee. Mr. Burkhart stated that he would contact Mr. Carmen with thanks for the time he has contributed to the meeting he has attended in the past. He would also inquire from Mr. Carmen if he has someone in mind to suggest as a replacement.

Mr. Burkhart stated that the meetings held since January 2001 have concentrated on the review of the existing swimming pool rules and a discussion of concerns raised by various local health departments. The committee, since its first meeting on January 23, 2001, has not taken any formal action. Beginning at the September 25, 2001 meeting, specific language will be introduced calling for a revision to the existing rules. At that time, the committee will be asked to debate the proposed language, with a formal vote to follow, with a majority of the committee members present deciding the fate of the proposed changes. Individual committee members or sub-committees may present proposed language to change the existing rules at their discretion. A consensus of the committee members present agreed that all proposed changes be sent to Mr. Burkhart at least one week prior to the next committee meeting so that they may be officially placed on the agenda. Mr. Rice suggested that, when a committee member introduces proposed language, that the member also include the intent or justification for the proposed change. Mr. Burkhart also stated that, upon conclusion of the review of the existing rules, the Ohio Department of Health will ask the committee to remain in tact so that issues can be brought before them for their consideration and comment.

Mr. Burkhart introduced Rusty Schwepe from the Darke County Health Department as a guest for the day. Mr. Burkhart thanked Mr. Schwepe for attending the meeting and encouraged him to contribute by commenting on the topics as they are discussed.

Mr. Burkhart also introduced Mr. Mike McCullough who is serving as proxy for John Kessler representing the Ohio Environmental Protection Agency.

Mr. Burkhart next introduced Eric Roberts from the Ohio Department of Health, Northeast District office, as a guest for the day.

Mr. Burkhart asked if there were any comments or changes to the minutes of the July 31 meeting. Hearing none the minutes were approved as recorded.

Luci Sursi, for the benefit of the committee members present, demonstrated how a Automated External Defibrillator (AED) functions. The estimated cost of an AED is currently $4,100.00. It was stated that most airlines carry an AED on every flight and that many government building have an AED on site. In addition, lifeguards are offered a training module through a Red Cross course as to the proper use of the machine. Questions arose as to the cost of the unit and whether or not swimming pool owners could afford to purchase the unit. In addition, it was stated that the unit would be best utilized at swimming pools which are 2,000 square feet or larger since lifeguards are required to be on duty. A comment was made as to whether the committee should **recommend** rather than **mandate** the purchase of such a unit**.** Other committee members stated that if the rules recommend the purchase of such a unit, the individual insurance providers would interpret this to mean that the unit should be present. Scott Roberts offered to contact a few major insurance carriers to glean comments regarding their recommendations for the need of such a unit. It was stated that the unit should not be used on an individual weighing less than 90 pounds. It was suggested that additional information be gathered as to how many lives could have been saved had an AED been present.

Workgroups

J. Burkhart requested that the workgroups provide a report, as follows:

Diving Standards (Recreation) - John Aseere

Mr. Aseere was not present to provide a report. At the August 2001 meeting, the committee agreed that proposed language should be submitted that would eliminate the current recreational diving standards. It was unclear what effect such a rule change would have on any existing recreational diving boards. Two scenarios would be allowing existing recreational diving boards to remain until such time as the owner wishes to replace it or ordering all existing recreational diving boards to be upgraded or removed within a specified period of time, i.e., five years.

Diving Standards (Competitive) - Pat Lunsford

Mr. Lunsford was not present to provide a report. He is attempting to revise the existing rules pertaining to competitive diving. He is considering proposing that any rules developed be tied into a particular governing body such as US Diving, US Swimming, NSPI, etc. The theory being that whenever the governing body identified changes its rules, Ohio's rules would automatically change. A "Starting Platform" survey is being developed that will be mailed to all local health departments with a request that they be forwarded to facilities that holds competitive events.

Plan Review (Fees) - Barry Rice/Tim Patterson

Subcommittee continued to discuss plan review issues (fees for plan review, equipment replacement, number of inspections, etc.) The subcommittee is also considering whether the pool contractor should be the responsible party for all pool construction rather than the owner. This would include the fence that is required around the facility. In addition, if any extra fees are charged, the invoice could be sent to the pool contractor, not the owner. It was also agreed that ODH is not processing invoices in a timely

manner, sometimes lagging twelve to eighteen months behind schedule.

Safety - Luci Sursi

The subcommittee continues to work on proposed language dealing with safety issues, which, when completed, will be brought before the entire committee. Some committee members encouraged the Ohio Department of Health to complete its revision of the existing fecal accident policy procedure that would then be distributed to every local health department in Ohio as a recommendation, not a rule. Considerable discussion followed pertaining to a fecal accident policy and what it should contain.

Education - Terry Smith

The education subcommittee is attempting to encourage education of swimming pool operators without mandating specific courses. It is the opinion of the subcommittee that the Certified Pool Operators (CPO) or Aquatic Facility Operator (AFO) courses include a great deal of theory, which may be beyond the grasp of many swimming pool operators. Currently there are swimming pool technical courses being offered for swimming pool operators. Many local health departments offer seminars for swimming pool operators, which are voluntary. Unfortunately, many of the operators who need further education, in the opinion of the local health departments, fail to attend. Some committee members are not in favor of mandating training either for swimming pool operators or local sanitarians. Some committee members were under the impression that the current food and water rules mandate training for operators and sanitarians. Upon checking with program managers for both food and water, it was determined that the current rules do not mandate training. Some committee members believe there should be two different categories of swimming pools: public (government and schools) and semi public (hotels, motels, apartments, etc.).

The subcommittee is still considering a modification of Sections 3701-31-06 (J), which states:

> "The licensee . . . shall ensure that an authorized representative of the licensee who is familiar with the pool equipment is available whenever the pool is open for use to respond to requests for information or assistance by patrons of the pool or spa, the licensor, or the director."

And Section 3701-31-06 (M), which states:

> "The licensee shall ensure that operating personnel are trained in the operation of all equipment, procedures for handling, storing and using chemical compounds, procedures for performing and interpreting the required onsite chemical tests and the appropriate emergency procedures."

The Ohio Department of Agriculture addresses this concern under Section 901:9-1-14 (F) of the Ohio Administrative Code (OAC) which states:

> "Management qualifications. All facilities containing aquatic devices with full body water contact shall have at least one employee properly trained in sanitation, safety, and proper maintenance of the aquatic device, and all physical and mechanical equipment and be trained in accordance with the standard of one of the following agencies:
>
> (a) National swimming pool foundation's certified pool/spa operator course (CPO); (b) National recreation and parks association aquatic facility operator course (AFO); (c) YMCA pool operator on location (POOL) certified operator.

Pool Chemistry - Terry Smith

Subcommittee is in the process of securing additional information prior to submittal to the entire committee.

ADA - Derek Mortland

Mr. Mortland was not present to provide a report but has been in contact with Mr. Burkhart and has promised to keep the committee informed as to any proposed changes to the ADA requirements.

The committee turned their attention to comments received from the Medina County Combined General Health District, which suggested the addition into the rules definitions for **Automatic Chemical Controller** and **ORP, Oxidation-Reduction Potential**. Terry Smith agreed to prepare a definition for each which would be presented to the committee at the next meeting. The committee discussed various rule interpretations submitted by the Medina County Health Department including 3701-31-04 (C) (3), 3701-31-05 (B), 3701-31-04 (K) (3) and 3701-31-05 (H) of the Ohio Administrative Code.

Lastly, the committee turned their attention to suggestions received from various other health departments including:

3701-31-06 EMERGENCY ACTION PLAN

The licensee shall maintain an emergency action plan similar to the one outlined by the American Red Cross (ARC) or YMCA or equivalent aquatic safety organizations. All lifeguards shall receive training in the application of effective pool emergency procedures for events such as submersions, suspected spinal injury, medical emergencies, missing persons, bad weather, etc. Such training will be reviewed as necessary and kept current.

The committee was of the opinion that such a plan should be recommended, not required.

3701-31-06 FOOD, BEVERAGES, AND CONTAINERS

At new and existing pools and spas, no person may eat, drink, or smoke while in the pool or spa.

At new and existing pools and spas, food and beverage(s) shall be served only in non-breakable containers. Glass containers shall not be allowed on a deck or in a pool or spa. At new and existing pools and spas, trash containers shall be provided where food and/or beverage(s) are allowed.

The committee was of the opinion that most facilities already have such rules. Broken glass is a safety concern. Some committee members wanted to prohibit food concessions within the pool area. A concern was raised regarding the installation of bar stools and tables within a pool, which becomes a design issue.

More 3701-31-06 Issues

When a new or existing outdoor pool or spa is not in use for an extended period of time (such as off-season), clarity shall be maintained and algae growth shall be prevented; however, other water quality parameters do not need to be maintained. Other methods may be used to maintain pools and spas during extended periods of non-use if approved by the licensor.

It was the opinion of the committee that such a condition should be treated as a nuisance.

Domestic animals and other pets shall not be allowed within a new or existing pool or spa enclosure areas, except that service animals shall be allowed on the deck and within the pool enclosure, but not in the pool.

Some committee members were under the opinion that the presence of animals in a pool or spa does not cause a public health hazard.

(A) Data collected shall be maintained at least one year for inspection by the licensor, or shall be submitted to the licensor upon his request.

Since health departments are required to complete only one inspection per year, the committee was of the opinion that such a rule change would be acceptable.

3701-31-06 EMERGENCY SHUT-OFF SWITCH

A clearly labeled emergency shut-off switch for the control of both the recirculation system and the aeration and/or jet system shall be installed adjacent to the spa/pool.

Some committee members were of the opinion that the National Electric Code currently requires an emergency shut-off switch for jet pumps on spas. Mr. Burkhart will check the National Electric Code.

3701-31-06 (A) POOL RECORD

The licensee must keep a record of a public pool's operation and routine maintenance. The record must be maintained for _____ years. The record must include the following for each day the pool is open to use:

A. The operating periods of recirculation pumps and filters and corresponding rate-of-flow, meter readings;
B. Amounts of chemicals used, except chemicals added through an automated system;
C. Disinfectant residuals including both free and total disinfectant residuals;
D. pH readings;
E. The temperature readings of a pool with a heater;
F. Any other pool chemistry measurements taken, although not required to be recorded daily, such as alkalinity;
G. Maintenance of equipment;
H. Any malfunction of equipment;
I. Any accidents or injuries requiring assistance from a lifeguard, attendant, or emergency medical personnel.

ALL POOL INCIDENTS RESULTING IN DEATH OR SERIOUS INJURY THAT REQUIRE ASSISTANCE FROM EMERGENCY MEDICAL PERSONNEL MUST BE REPORTED TO THE LICENSOR BY THE LICENSEE BY THE END OF THE NEXT WORKING DAY

The committee decided to table this suggestion.

(B) Recirculation system must be operated at all times when the pool is open for use. The recirculation system may be shut off three (3) hours after the pool closes but must resume operation three (3) hours before opening the pool. Shut down time must be controlled by a time clock.

The consensus of the committee members present was that the facility should operate 24 hours a day with no interruption. Terry Smith has been studying this issue and will submit a recommendation to the full committee at a later date.

3701-31-07 CARBON DIOXIDE

Where carbon dioxide (CO_2) is used as a method of pH control, the following shall be provided:

1. CO_2 shall be injected into the recirculation pipe. The recirculation pipe shall be of sufficient size and length to provide a minimum of five-second contact time prior to bather contact.

2. CO_2 cylinders shall be anchored to prevent damage. Cylinders shall be inaccessible to the general public.
3. CO_2 cylinders should be stored in a protective enclosure at the exterior of occupied structures. If CO_2 cylinders are located in the interior of occupied structures, within an enclosed space of less than 60 square feet, they shall be placed in a ventilated enclosure. A louvered fresh air intake shall be provided near the ceiling. Mechanical exhaust ventilation shall be provided at the rate of one air change every three minutes and take suction from the floor as far as practical from the door and fresh air intake. Exhausted air shall be ducted to the exterior of the building through a continuous pipe of at least one inch in diameter with the point of discharge so located as not to contaminate air inlets to any rooms or structures.

The consensus of the committee was to table this proposal to allow Terry Smith an opportunity to research the issue. The meeting was adjourned just after 3:30 P.M. ■

SEPTEMBER 25,2001 MEETING

Old Business

Mr. Burkhart advised the committee that Chuck Kunsman has agreed to accept the position on the committee previously held by Kurt Carmen who resigned on August 26, 2001, due to commitments at the University of Toledo.

Hearing no objections to the minutes of the last meeting, 08/28/01, they were accepted as submitted.

Mr. Burkhart distributed information pertaining to the National Electric Code (NEC) 680-12 Disconnecting Means and 680-38 Emergency Switch for Spas and Hot Tubs. "A disconnecting means is required to be installed within sight of the pool, spa, and hot tub equipment to allow service personnel to disconnect the power while servicing these units." "A clearly labeled emergency shutoff or control switch for the purpose of stopping the motor(s) that provide power to the recirculation system and jet system shall be installed readily accessible to the users and at least 5 feet away, adjacent to, and within sight of the spa or hot tub."

Since it was documented that the NEC addresses the need for an emergency shut-off switch, it was determined that there was no need to incorporate this requirement into the swimming pool rules.

New Business

Mr. Burkhart advised the committee that a series of proposed rule changes will be reviewed today and during upcoming meetings with the following procedure to be followed in their review:

- The proposal will be read by the person who submitted the proposal along with an explanation or justification for the proposed change.
- An approximate cost estimate will be presented assuming the proposal is implemented.
- A brief discussion will follow regarding the proposal.
- A straw vote will be taken.
- Further discussion will follow addressing any concerns raised by the committee members.
- A formal vote will be taken. If all committee members present vote in favor of the proposed change, it will be recorded as a consensus or unanimity. If the majority of the committee members present vote in favor of the proposal, it will be recorded as a plurality with concerns noted. The concern(s) noted are to be submitted in writing to Mr. Burkhart by the individual(s) who voiced the concern(s) so that they can be formally documented in the minutes.
- All proposals accepted by consensus or plurality will be tabulated and brought back to the committee at the close of its term for final review and action prior to submittal to the Director.
- Any committee member who feels his or her concern(s) have not been properly addressed may raise their concern(s) with the Director, at public hearings, at the JCARR (Joint Committee on Agency Rule Review) hearing or at the Public Health Council hearing.

The following proposals were reviewed and acted upon:

Proposed changes submitted by Kris Bosworth, representing public health departments, northern Ohio:

EXISTING: OAC 3701-31-05(I)

> "A telephone shall be available within five hundred feet of each public swimming pool, public spa, and special use pool with a posted list of emergency numbers. The licensee shall ensure that the telephone is available at all times the pool or spa is open for use."

PROPOSED: OAC 3701-31-05 (I)

> "A telephone **UNDER THE CONTROL OF THE LICENSEE** shall be available **ON THE SITE** of each public swimming pool, public spa, and special use pool with a posted list of emergency numbers. The licensee shall ensure that the telephone is available at all times the pool or spa is open for use."

Explanation: Current language would allow for a pool operator to use a pay phone at a nearby gas station. Whether this phone will be available at all times may be unknown to the operator.

The proposal was amended to read:

> "A telephone, **UNDER THE CONTROL OF THE LICENSEE**, shall be available within five hundred feet of each public swimming pool, public spa, and special use pool with a posted list of emergency numbers. The licensee shall ensure that the telephone is available at all times the pool or spa is open for use."

CONSENSUS: All members present voted in favor of the proposed change with no concerns noted.

The discussion of the proposed changes ceased to allow for the various subcommittees to meet.

Workgroups

J. Burkhart requested that the workgroups provide a status report.

EDUCATION (Professional Development) - Chuck Kunsman

Mr. Kunsman will attempt to submit a proposal to the entire committee during the October meeting for consideration.

Pool Chemistry – Terry Smith

John Aseere will be attending an NSPI meeting in November to gather information regarding cyanuric acid. The subcommittee discussed the need for each licensed facility to have a water test kit that would accurately measure the chlorine or bromine level present, irregardless of its level.

The subcommittee is considering proposing a rule change that would establish a maximum level for chlorine and bromine and establishing a level, when exceeded, which would call for the closure of the facility. Total alkalinity is considered to be acceptable at the current level of sixty parts per million or above. The subcommittee is also considering the elimination of the maximum level of total dissolved solids (TDS) which currently should not exceed three thousand parts per million. The subcommittee is also charged with the task of writing a definition for TDS and oxidation reduction potential (ORP).

Safety - Chris Weaver & Luci Sursi

Chris Weaver and Lucie Sursi were not present to provide a report. Scott Roberts submitted a report indicating that the insurance industry was not going to require facilities to have an automated external defibrillator (AED) on site. Any additional lifesaving equipment not required by the rules, such as an AED or oxygen, should be mandated by the lifeguard training agency.

Diving Standards (Competitive) - Pat Lunsford

Mr. Lunsford revised the "Starting Platform Survey" which will be mailed to every local health department in the near future. This survey is to be used to gather information regarding existing facilities using starting platforms or starting blocks. Upon conclusion of the survey and securing additional information, Mr. Lunsford anticipates submitting a proposal at the June 2002 meeting. Mr. Lunsford was asked to address at what location in the pool the water depth should be measured for competitive diving, i.e., pool wall, one meter from the pool wall, etc.

Diving Standards (Recreational) – John Assere

The subcommittee will be working on revising the rules to combine the recreational diving standards with the competitive diving standards.

In addition, a survey may be distributed to local health departments to gleam information regarding the number and size of existing recreational diving boards in use.

Plan Review (Fees) – Tim Patterson

The subcommittee is working on the revision of Section 3701-31-03 (B)(4). In addition, the subcommittee wants to clarify their position that the ultimate responsibility for payment of any additional fees encumbered by extra construction inspections are to be borne by the owner of the facility. Lastly, the subcommittee wants to develop a formula for (banking) extra construction inspections not used at a particular facility to be used for another facility located at the same address (location).

Ada – Derek Mortland

Mr. Mortland was not present to present a report.

The committee continued their review of proposed changes to the rules.

EXISTING: OAC 3701-31-06(A)

"The data shall be recorded accurately every four hours that a public swimming pool or special use pool is in use on forms prescribed by the director."

PROPOSED: OAC 3701-31-06 (A)

"The data shall be recorded accurately every four hours that a public swimming pool or special use pool is in use on forms prescribed by the director**. A MANUAL TEST OF DISINFECTANT RESIDUAL AND pH SHALL BE CONDUCTED ON EVERY PUBLIC SWIMMING POOL, PUBLIC SPA, AND SPECIAL USE POOL AT THE BEGINNING OF EACH DAY BEFORE BATHERS ARE ALLOWED TO ENTER THE POOL OR SPA."**

Explanation: Current language would allow for operators to open a pool without assuring that pH or disinfectant levels have not fallen off or risen dramatically overnight.

CONSENSUS: All members present voted in favor of the proposed change with no concerns noted.

Proposed changes submitted by James Burkhart, chairperson.

EXISTING: 3701-31-05 (F)

"For pools that are **required to** have lifeguards, the licensee shall provide at least one rescue tube and CPR pocket mask with one way valve for each lifeguard."

PROPOSED: 3701-31-05 (F)

"For pools that **have** lifeguards, the licensee shall provide at least one rescue tube and CPR pocket mask with one way valve for each lifeguard."

Justification: Whenever lifeguards are on duty, whether required or voluntary, they should be properly equipped.

CONSENSUS: All members present voted in favor of the proposed change with no concerns noted.

EXISTING: 3701-31-05 (H)

"At public swimming pools and special use pools **required to have lifeguards** these boards shall be equipped with straps and head immobilizers."

PROPOSED: 3701-31-05 (H)

"At public swimming pools and specials use pools **where lifeguards are on duty**. these boards shall be equipped with straps and head immobilizers."

Justification: Whenever lifeguards are on duty, whether required or voluntary, they should be properly equipped. The estimated cost to retrofit each spine board is $50 to $150.

CONSENSUS: All members present voted in favor of the proposed change with no concerns noted.

EXISTING: 3701-31-06 (A)

"The completed data record forms shall be kept on file by the licensee for not less than **six months** and shall be made available…"

PROPOSED 3701-31-06 (A)

"The completed data record forms shall be kept on file by the licensee for not less than **one year** and shall be made available…"

JUSTIFICATION: Since many of the pools are open only four months out of the year and since the rules only **REQUIRE** one inspection per year, the records should be maintained for one year so that the inspecting sanitarian can review the previous years history.

CONSENSUS: All members present voted in favor of the proposed change with no concerns noted. A suggestion was made to restructure 3701-31-06 (A).

PROPOSED: 3701-31-03 (H)

"The Director may approve innovative equipment and operating procedures, if it can be demonstrated by the applicant that their use will achieve the intent of 3701-31 of the Ohio Administrative Code (OAC) to provide a reasonable environment and that any hazard to public health is not greater than that of other approved equipment and procedures."

JUSTIFICATION: This will allow the Director to review and approve new innovative equipment and operating procedures (technologies) that may be developed in the future.

PLURALITY: A plurality of members present voted in favor of the proposed change.

CONCERNS: A concern was voiced by Frank Duale as to how ODH will review new technologies.
.
A motion was made to table this proposal with all members present voting in favor.

PROPOSED: 3701-31-04 (P)

"Underwater steps and bench seats shall be provided with a horizontal solid or broken stripe two (2) inches wide on the top surface along the front edge of each step or seat. This stripe shall be plainly visible to persons on the pool or spa deck. The stripe shall be a contrasting color to the background on which it is applied, and the color shall be permanent in nature and shall be a slip-resistant surface. Underwater "bar stools" shall also be similarly identified."

JUSTIFICATION: By coloring the edges of steps, bench seats and bar stools, patrons and lifeguards can easily identify the presence of such items.

CONCERNS: Should this proposed change be applicable to all facilities or only newly constructed ones? How difficult would it be to retrofit existing facilities constructed of stainless steel or fiberglass? Does the stripe have to be painted and does it have to be 2 inches wide?

While most members present expressed support for the concept, due to concerns raised, a motion was introduced to table this proposal with all members present voting in favor.

PROPOSED: 3701-31-04 (Q)
EXPOSED PIPING COLOR-CODING FOR NEW & EXISTING POOLS & SPAS

"Exposed piping for pools and spas shall be color-coded according to the following color scheme. If any two colors do not have sufficient contrast to easily distinguish between them, a six-inch band of contrasting color shall be painted on one or more of the pipes at approximately 30-inch intervals. The name of the liquid or gas and arrows indicating direction of flow should be painted or otherwise permanently indicated on the pipe. As an alternative to color-coding for new exposed pipes or as recommended for existing pipes, pipes can be labeled to easily and adequately identify the piping function and direction of flow to the operator."

PIPING	COLOR-CODE
Portable Water Lines	Dark Blue
Recirculation	
Filtered	Aqua
Skimmer or gutter return	Olive Green
Main Drain	Black
Chemical Lines	
Alum	Orange
Chorine	Yellow
Bromine	
Soda Ash	White
Acid	Pink
Waste Lines	
Backwash Waste	Dark Brown
Sewer	Dark Gray
Deck Drains	Light Brown

JUSTIFICATION: By color coding all exposed piping the operator and/or inspecting sanitarian could more easily identify the various plumbing lines.

CONSENSUS: All members present voted in opposition to the proposed change.

PROPOSED: 3701-31-04 (R) SUCTION OUTLETS

"Suction outlets (other than skimmers) shall be provided with anti-vortex covers or grates that have been tested by a nationally recognized testing laboratory and comply with ASME/ANSI A 112.19.8MR96, "Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Whirlpool Bathtub Appliances." The installation of the anti-vortex or grate shall be according to manufacturer's specifications."

JUSTIFICATION: All suction outlets should be equipped with an anti-vortex cover or grate to prevent possible body entrapment.

CONSENSUS: All members present voted in opposition to the proposed change.

PROPOSED: 3701-31-04 (S) FILL SPOUT

A. "NEW POOLS AND SPAS - An over-the-rim spout, if used in a new pool or spa, shall be located under a diving board, adjacent to a ladder, or otherwise properly shielded so as not to create a trip or other hazard. Its open end shall have a secured soft pliable end (for example, a short section of a rubber hose) to prevent injury to patrons and shall not protrude more than two (2) inches beyond the edge of the pool or spa. The end of the soft pliable outlet shall be separated from the maximum possible pool or spa water level by an air gap at least two (2) times the diameter of the pipe. Other methods for addition of water to the pool may be used as long as cross-connections control and other safety considerations are adequately addressed.

B. "EXISTING POOLS AND SPAS - An over-the-rim spout, if used in an existing pool or spa shall have a secure soft pliable end (for example, a short section of rubber hose) to prevent injury to patrons and shall not protrude more than two (2) inches beyond the edge of the pool or spa. The end of the soft pliable outlet shall be separated from

the maximum possible pool or spa water level by an air gap at least two (2) times the diameter of the pipe."

JUSTIFICATION: All fill spouts, whether existing or proposed, should be located and modified so as not to create a safety hazard.

PLURALITY: The majority of members present voted in opposition.

EXISTING: 3701-31-03 (A) (1) (c) Plan Approval

"Installation of a diving board or diving stand, except for a replacement, as provided in paragraphs (F) **(6)** and…"

PROPOSED:

"Installation of a diving board or diving stand except for a replacement, as provided in paragraphs (F) **(7)** and…"

JUSTIFICATION: Typographical error.

CONSENSUS: All members present voted in favor of the proposed change with no concerns noted.

EXISTING: 3701-31-03 (A) (1) (f) Plan Approval

"Replacement of a chemical feeding or generating device with an erosion feed device **which has equal or greater rated flow capacity**, or replacement of an erosion feed device with a chemical feeding or generating device **which has equal or greater rated flow capacity**; or…"

PROPOSED: 3701-31-03 (A) (1) (f) Plan Approval

"Replacement of a chemical feeding or generating device with an erosion feed device or replacement of an erosion feed device with a chemical feeding or generating device; or…"

JUSTIFICATION: The engineering division of the Ohio Department of Health will determine if the replacement feeders are of the proper size and approved by the National Sanitary Foundation (NSF).

CONSENSUS: All members present voted in favor of the proposed change with no concerns noted.

PROPOSED: 3701-31-03 (D) Plan Approval

(16) The location of starting blocks (platforms).

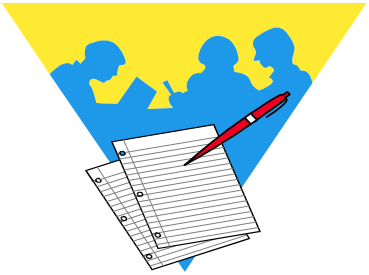
JUSTIFICATION: If the applicant is proposing to install starting blocks, the plans should indicate where they are to be located.

CONSENSUS: All members present voted in favor of the proposed change with no concerns noted.

Having no further business to discuss, the meeting was adjourned at 3:30 P.M. The next meeting will be **Tuesday October 30, 2001**, 9:30 a.m. at the same location. ■

CALENDAR OF UPCOMING EVENTS

==========



2002

MARCH 2002

25 - 28 **Midwest Workshop** - Holiday Inn Columbus/Worthington, 175 Hutchinson Ave. Columbus, OH. Contact LeeAnn Hoon at 614-466-1390 for more information.

APRIL 2002

16 - 17 **Ohio Environmental Health Association** - Annual Educational Conference. University Plaza Hotel, Columbus, OH. For more information contact Karen Draper, at the Cincinnati City Health Department

18 **RS Exam** - Columbus - PES Examination 10:00 am. For more information contact the State Board of Sanitarian Registration at 614-466-1772.

29-May 3 **Ohio Environmental Health Programs Course (Principles)** - Spring/Summer Session Week 1. Division of Safety & Hygiene, Columbus, OH. For more information or to register, contact LeeAnn Hoon at 614-644-1897.

MAY 2002

13 - 15 **Public Health Combined Conference** - "Where is Public Health? Everywhere you are!" Columbus Marriott North. For more information contact Patty Franz at 614-833-2600

JUNE 2002

3 - 7 **Ohio Environmental Health Programs Course (Principles)** - Spring/Summer Session Week 2. For more information contact LeeAnn Hoon at 614-644-1897.

JULY 2002

8 - 12 **Ohio Environmental Health Programs Course (Principles)** - Spring/Summer Session Week 3. For more information contact LeeAnn Hoon at 614-644-1897.

AUGUST 2002

15 **RS Exam** - Columbus - PES Examination 10:00 am. For more information contact the State Board of Sanitarian Registration at 614-466-1772.

DECEMBER 2002

12 **RS Exam** - Columbus - PES Examination 10:00 am. For more information contact the State Board of Sanitarian Registration at 614-466-1772.