

# Emergency & Operations Action Plan

## Work Sheet

### For Limited-Use Pools & Spas

<b>Pool/Spa Name:</b>	<b>24 hr. Emergency Contact Phone (manager):</b>			
<b>Manager</b> (if different from Licensee):	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;">Cell:</td> <td style="width: 33%; border: none;">Home:</td> <td style="width: 33%; border: none;">Other:</td> </tr> </table>	Cell:	Home:	Other:
Cell:	Home:	Other:		
	<b>Licensee (owner):</b>			

Pool/Spa hours of operation: \_\_\_\_\_

### Important Phone Numbers: For Emergencies Dial: '911'

<b>Local Police Department:</b> 911 or 541-386-2711	<b>Local Fire Department:</b> 911 or 541-386-2711	<b>Local Ambulance:</b> 911 or 541-386-2711	<b>Local Health Department:</b> 541-387-1115 541-387-6885 <i>541-386-2711 (afterhours)</i>	<b>Local Electricity Utility:</b>
<b>Pool Chemical &amp; Equipment Supplier:</b>	<b>Local Water Utility:</b>	<b>Local Gas Utility:</b>	<b>Other Utility:</b>	<b>Poison Control Hotline:</b>  1-800-222-1222

**Hood River County Reverse 911:**  
*Hood River County has a new reverse 911 system. It **ONLY** works if you opt-in ahead of time ([register](#)). Use the following link or search the web for the 'Hood River County' and find the link for the 'Citizen Alert System OPT-IN', then register. <https://member.everbridge.net/index/892807736721762>*

### Communication:

A media spokesperson should be designated to handle media inquires, and inevitable result of a major aquatic emergency. Generally, the media spokesperson is a management-level employee with specific training in how to properly respond to media inquires while minimizing legal exposure.

**What is your policy regarding communication with the media during an emergency?**

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**Who is responsible for interviewing witnesses and recording the event(s) in the accident log?**

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**Who is responsible for contacting the local Health Department to report the event(s)?**

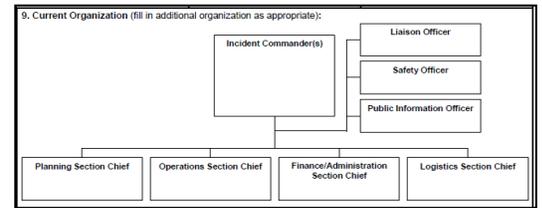
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# Health & Accident Emergencies:

Some examples of health emergencies include: (1) Drowning; (2) Heart attacks & Strokes; (3) Falls; (4) Spinal cord injuries; (5) Seizures; (6) Cuts, Abrasions, & Broken limbs; and (7) Head Injuries; (8) Chemical Exposure, (9) Disease Outbreaks & (10) Criminal Acts.



Who is **'in-charge'** during an emergency? Who is the substitute? \_\_\_\_\_

Who calls **'911'** during an emergency? Who is the substitute? \_\_\_\_\_

Who is responsible for retrieving the **First Aid Kit**? \_\_\_\_\_

Who is responsible for waiting for **EMS** and directing them to the scene? \_\_\_\_\_

Who is responsible for controlling **crowds**? \_\_\_\_\_

## Steps to Follow During a Drowning Emergency:

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## Steps to follow During a Health Emergency *(heart attack for example)*:

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## Steps to follow during a head, spinal or other injury emergency:

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# Safety:

## Oregon Code mandates the following safety rules in pools & spas:

<p><b>Pool:</b></p> <p><b>For Swimmers OAR 333-060-0210(3):</b></p> <ol style="list-style-type: none"><li>1. No person shall swim alone;</li><li>2. Non-swimmers and children under 14 years of age shall not use the pool unless a lifeguard is present or, in a limited-use pool, a responsible adult observer is present;</li><li>3. Bathers shall take a cleansing shower before entering a general-use pool;</li><li>4. No person suffering from a communicable disease transmissible via water or under the influence of an intoxicating liquor or drug shall use the pool;</li><li>5. No person shall take food or drink inside the pool enclosure except in areas specifically designated for such use as described in Food Services;</li><li>6. No person shall bring, throw or carry food, drink, smoking material, trash, debris, or any other foreign substances into the pool;</li><li>7. No person shall run or engage in horseplay in or around a public swimming pool;</li><li>8. Persons in street shoes shall not be permitted on the pool deck areas used by bathers.</li></ol> <p><b>For Operators:</b></p> <ol style="list-style-type: none"><li>1. Gates and doors in swimming pool enclosures shall be self-closing and shall be equipped with a lockable self-latching device... 333-060-0105(2)(f)</li><li>2. At limited-use public pools only... operators or managers shall maintain surveillance over the pool during operating hours. Such surveillance shall be no less frequent than the frequency of manual pool water testing... 333-060-0210(2)(b)</li></ol>	<p><b>Spa:</b></p> <p><b>For Bathers ((333-62-175(3)):</b></p> <ol style="list-style-type: none"><li>1. Non-swimmers and children under 14 years of age shall not use the spa pool unless a lifeguard or responsible adult observer is present;</li><li>2. Bathers shall take a cleansing shower;</li><li>3. No person suffering from a communicable disease transmissible via water or under the influence of an intoxicating liquor or drug shall use the pool;</li><li>4. No person shall take food or drink inside the pool enclosure except in areas specifically designated for such use as described in OAR 333-62-155;</li><li>5. No person shall bring, throw or carry food, drink, smoking material, trash, debris, or any other foreign substances into the pool;</li><li>6. No person shall run or engage in horseplay in or around a public spa pool;</li><li>7. Persons in street shoes shall not be permitted on the pool deck areas used by the bathers</li></ol> <p><b>For Operators:</b></p> <ol style="list-style-type: none"><li>1. Public spa pools shall be protected by an enclosure. Such enclosure shall be a fence, wall, or building without private entrances to the pool area (333-62-080(1).</li><li>2. Operators or managers shall make visual observation of the spa pool during operating hours. Such visual observation shall be at least once every two hours (333-62-175(2).</li></ol>
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**What steps do you take throughout the day to ensure that safety rules are being enforced?**

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**What are your policies regarding surveillance of the pool/spa area?**

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**What special challenges for safety exist in your facility?**

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# **Communicable Disease Outbreak:**

1. If you are contacted by persons who are ill or who have questions, how would you answer their questions and complaints? To whom would you refer these individuals? How would you manage press inquiries in the event of an outbreak?

*Hint: Have them call the HRC Health Department (541-386-1115) to report any suspected illness. Their illness may not necessarily originate from your facility; it may be part of another outbreak (attributed to something else). The Health Authority may be missing valuable information that this person may have; their information may help resolve the outbreak. Also, the health authority is likely better equipped to answer their questions and there is never punitive action related to receiving complaints about a facility. HRC Health Department will report back any valuable information to your facility that we gather.*

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**The following table is an example of a fecal accident policy plan for a limited use pool/spa:**

<b>Actions for well-formed stools &amp; vomit:</b>	<b>Actions for liquid accidents like diarrhea or liquid vomit:</b> <i>- Non-Cryptosporidium Accident -</i>
<ol style="list-style-type: none"><li>1. Clear the pool.</li><li>2. Close the pool for at least one hour.</li><li>3. Check for adequate disinfectant in the area.</li><li>4. Remove as much of the material as possible using a net or scoop. Vacuuming is not recommended unless it discharges to waste. (If the material is sent back to the filter, we may only be spreading the problem.)</li><li>5. Add additional disinfectant as necessary.</li><li>6. Reopen Pool.</li></ol>	<ol style="list-style-type: none"><li>1. Clear the pool.</li><li>2. Close the pool for at least one hour.</li><li>3. Add chlorine to raise the pool to 5 ppm, or equivalent using other disinfectants.</li><li>4. Remove any chunks or pieces.</li><li>5. Allow some time for the disinfectant to spread and work on the extra organic material. In addition we need to avoid "hot" spots of disinfectant that swimmers may swim through.</li><li>6. Recheck for adequate chlorine.</li><li>7. Allow at least one complete water filtration cycle (time for all of your water to pass through your filter).</li><li>8. Reopen pool.</li></ol>

**Who is in charge of implementing the fecal accident policy plan? Are they available during all pool-operating hours?**

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**Additional Notes:**

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## Monitoring Water Quality:

In order to have properly balanced and sanitized water, it is necessary to test for different chemical factors or parameters to verify that proper ranges are maintained. Appropriate test procedures must be followed in order to obtain accurate results.

**Who is responsible for monitoring water quality in your facility during all hours of operation?**

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## Swimming Pool Water Quality Criteria:

Parameters	Min.	Ideal	Max.
<p><b>Free chlorine</b></p> <p>For outdoor pools using non-stabilized Cl test every hour</p> <p>For outdoor pools using Stabilized Cl (with at least 30 ppm of Cyanuric acid) test every 4 hours</p> <p>For indoor pools test every 4 hours</p>	0.8 ppm	1.0 - 3.0 ppm	5.0 ppm
<p><b>Combined chlorine</b></p> <p>Test daily</p>	-	0	0.5 ppm
<p><b>Bromine</b></p> <p>Outdoor pools test hourly</p> <p>Indoor pools test every 4 hours</p>	3.0 ppm	3.0 - 5.0 ppm	8.0 ppm
<p><b>pH</b></p> <p>Test Daily</p>	7.2	7.4 - 7.6	7.6
<p><b>Total alkalinity</b> (CaCO<sub>3</sub>)</p> <p>Test Weekly</p>	80 ppm	100 - 125 ppm	200 ppm
<p><b>Calcium hardness</b></p> <p>Test Weekly (Recommended)</p>	175 ppm (Recommended)	-	300 ppm (Recommended)
<p><b>Cyanuric acid</b></p> <p>(Stabilized Chlorine – For outdoor use only!)</p> <p>If used, test weekly</p>	0 ppm	30 ppm	150 ppm

## Spa Water Quality Criteria:

<b>Parameters</b>	<b>Min.</b>	<b>Ideal</b>	<b>Max.</b>
<p><b>Free chlorine</b></p> <p>For outdoor spas using non-stabilized Chlorine: Test every hour</p> <p>All other spas: Test every 2 hours</p>	1.5 ppm	3 ppm	5.0 ppm
<p><b>Combined chlorine</b></p> <p>Test daily</p>	-	0	0.5 ppm
<p><b>Bromine</b></p> <p>Test every hr</p>	3.0 ppm	3.0-5.0 ppm	8.0 ppm
<p><b>pH</b></p> <p>Test every 2 hrs</p>	7.2	7.4 - 7.6	7.6
<p><b>Total alkalinity</b> (CaCO<sub>3</sub>)</p> <p>Test Daily</p>	80 ppm	80-125 ppm <i>(for plaster &amp; tile spas)</i> 125 - 150 ppm <i>(for vinyl, painted, or fiberglass finishes)</i>	180 ppm (Recommended)
<p><b>Calcium hardness</b></p> <p>Test weekly (recommended)</p>	175 ppm (Recommended)	-	300 ppm (Recommended)
<p><b>Cyanuric acid</b></p> <p><i>(Stabilized Chlorine – For outdoor use only!)</i></p> <p>If used, test weekly</p>	0 ppm	30 ppm	150 ppm
<p><b>Water temperature</b></p> <p>Test often enough to maintain</p>	-	-	104 ° F

Forms developed by Hood River County Health Department for recording water quality are available online at:

Hood River County Web-Page: <http://www.co.hood-river.or.us/>

**Click the following links:**

'Health Department' → 'Environmental Health' → 'Food, Pools and Lodging Facility Health & Safety' → 'Pool & Spa Licensing' → see documents at the bottom of the page.

Or: [http://www.co.hood-river.or.us/index.asp?Type=B\\_BASIC&SEC={B5BA82AC-C31A-4484-88A7-AD84B2E9BE58}](http://www.co.hood-river.or.us/index.asp?Type=B_BASIC&SEC={B5BA82AC-C31A-4484-88A7-AD84B2E9BE58})

## The Langelier Index: 2010 Pool Operator Training Manual - Oregon Health Authority – page 15:

<http://public.health.oregon.gov/HealthyEnvironments/Recreation/Pool/Lodging/Documents/pooltrainingbook09.pdf>

The purpose of performing this calculation is to protect your pool equipment from the damaging effects of scaling or corrosive water. The Langelier index is one of several methods of calculating calcium saturation in your pool. This index is the one that the Hood River County Environmental Health Department will most often use. All the indexes use the pH, total alkalinity, calcium hardness, temperature and total dissolved solid levels in your pool. The relation of these allows us to determine the calcium saturation.

The calculation uses the pH of the water as is, and adds factors off the table below for total alkalinity, calcium hardness and temperature. Total dissolved solids do not change the calculation much, and are often used as a constant of (-12.1). If the TDS is over 1000 ppm the constant can be changed to (-12.2).

The formula for calculating the calcium saturations is:

$$\text{Saturation Index} = \text{pH} + \text{TF} + \text{CF} + \text{AF} - 12.1$$

Temperature °F = TF	Calcium Hardness ppm = CF	Total Alkalinity ppm = AF
32	0	5
37	0.1	25
46	0.2	50
53	0.3	75
60	0.4	100
66	0.5	150
76	0.6	200
84	0.7	300
94	0.8	400
105	0.9	800
Too	Hot!	1000

**Values between +0.5 and (-0.5) are considered balanced**

**Negative values are corrosive**

**Positive values are scale forming**

**The following is an example of a calculation done on a ‘limited-use’ pool:**

pH = 7.2; Temperature = 80°F; Calcium Hardness = 100ppm; Total Alkalinity = 80ppm

$$\text{Saturation Index} = (\text{pH}) \mathbf{7.2} + (\text{TF}) \mathbf{0.65} + (\text{CF}) \mathbf{1.6} + (\text{AF}) \mathbf{1.9} - 12.1 = \mathbf{(-0.75)}$$

This pool is corrosive; the equipment will be damaged. Since the pH, the Total Alkalinity, and the Calcium Hardness are low, you could use Sodium Bicarbonate to raise Total Alkalinity, and/or you could use Soda Ash to raise the level of the pH, and/or you could add calcium chloride dehydrate to raise the Calcium Hardness.

**Who is the person responsible for monitoring calcium saturation in your facility? When is it done?**

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## Recommended Further Reading:

1. Oregon State Statute: ORS: 448.005 – 448.090. <http://www.leg.state.or.us/ors/448.html>
2. Oregon Spa Rules. OAR: 333-060-0000. <http://public.health.oregon.gov/HealthyEnvironments/Recreation/PoolLodging/Documents/sparules.pdf>
3. Oregon Pool Rules. OAR: 333-061-0000. <http://public.health.oregon.gov/HealthyEnvironments/Recreation/PoolLodging/Documents/poolrules.pdf>
4. Oregon Public Health Authority, Public Pool and Tourist Facility Program. 2008 Pool Operator <http://public.health.oregon.gov/HealthyEnvironments/Recreation/PoolLodging/Documents/pooltrainingbook09.pdf>
5. Oregon Public Health Authority, Public Pool and Tourist Facility Program. <http://public.health.oregon.gov/PHD/OEPH/FPLHSS/POOLSLODGING/Pages/index.aspx>
6. Taylor Technologies, Inc. Pool & Spa Water Chemistry: A testing & treatment guide. 2009.
7. Center For Disease Control (CDC) – Healthy Swimming Website: [http://www.cdc.gov/healthyswimming/fact\\_sheets.htm](http://www.cdc.gov/healthyswimming/fact_sheets.htm)
8. Griffiths, T. 2003. The Complete Swimming Pool Reference: 2<sup>nd</sup> edition. Sagamore Publishing, Champaign, IL.
9. Hood River County Health Department, Spa/Pool web-site: [http://www.co.hood-river.or.us/index.asp?Type=B\\_BASIC&SEC={B5BA82AC-C31A-4484-88A7-AD84B2E9BE58}](http://www.co.hood-river.or.us/index.asp?Type=B_BASIC&SEC={B5BA82AC-C31A-4484-88A7-AD84B2E9BE58})
10. Local Geo Hazards & Interactive Viewers: [http://www.co.hood-river.or.us/index.asp?Type=B\\_BASIC&SEC={D5AFD824-985C-4BD3-A07E-1C14D8A186FB}&DE={5C2C25CE-81E4-42A6-8BDA-04253C44B238}](http://www.co.hood-river.or.us/index.asp?Type=B_BASIC&SEC={D5AFD824-985C-4BD3-A07E-1C14D8A186FB}&DE={5C2C25CE-81E4-42A6-8BDA-04253C44B238})



**Hood River County**  
OREGON

Welcome

Events | Helpful Links | Adopt-a-Dog | Windmaster Sewer District

SEARCH

**County Departments**

- Agenda and Minutes
- Job Openings
- Elections
- County Charter
- County Maps
- Library
- The History Museum

**In County Departments:**

- Board of Commissioners
- Administration
- Budget & Finance
- Commission on Children & Family
- Community Justice
- District Attorney
- Elections
- Emergency Management
- Forestry
- Health Department
- NONDISCRIMINATION NOTICE

**Pool & Spa Licensing:**

Pool/Spa facilities receive two semi-annual, 'complete' inspections each calendar year (excluding seasonal facilities). When a Pool/Spa is closed for significant violations, they must remain closed for 24 hours and until they have passed a pre-opening re-check inspection. After the Pool/Spa is re-opened another re-check inspection will occur at any time to verify that the operator maintains conditions in compliance with rule.

If a facility requires more than two 're-check' inspections during a license year, they are subject to additional inspection fees.



Hood River Aquatic Center 10/20/11

**New ADA (Americans with Disabilities Act) rules.** [ADA web-site.](#)

- Oregon State Pool Rules - OAR: 333-060
- Oregon State Spa Rules - OAR: 333-062
- Oregon State Health Authority - Public Pool and Tourist Facilities Program
- Oregon Health Authority - Public Pool & Spa Training Opportunities
- CDC - Healthy Swimming/Recreational Water Web-Site
- Limited Use Public Swimming Pool Weekly Water Quality Parameters Monitoring Sheet
- Limited Use Public Spa Pool Weekly Water Quality Parameters Monitoring Sheet
- Slides from the 3/15/12 'Pool Operators Training Course' - By Ian Stromquist, REHS \* This is a fairly large file.
- [Hyperchlorination to kill Cryptosporidium](#) Cryptosporidium (or 'Crypto') is a chlorine resistant parasite, so even well-maintained pools, water parks, and interactive fountains can spread Crypto among swimmers.
- [Emergency & Operations Action Plan Work Sheet](#) For Limited-Use Pools & Spas
- [ADA - Swimming Pool Compliance Guide](#) Promotional Material from SR Smith