**Swimming Pools Technical Advisory Committee – Errata/Glitch**

**8th Edition (2023) Florida Building Code, Building**

**CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE**

**SECTION 454 SWIMMING POOLS AND BATHING PLACES (PUBLIC AND PRIVATE)**

SW-FBC-B - Ch. 4 – Glitch #1

Michael Weinbaum

Mo-

Dallas and I have noticed a glitch in the 2023 Florida Codes relating to the restroom fixtures starting from our (attached) discussion we had last year.  Here is the change that is needed to fix the glitch:

 For question one, this is a conflict within the updated code.  The language in Building Code 454.1.6 is meant to be repeated in Plumbing Code 403.6, otherwise, a conflict exists.

For question two,
a) It is a glitch

b) It is specific to Florida only because this language is only used in Florida.  There is nothing unusual about how Floridians use restrooms compared to residents of other states.

c) If the glitch is not fixed, the implication is that all men's bathrooms at pools will have a urinal and both sexes will have a diaper change table even if the pool serves adults only.  Both of these create more costs and reduce flexibility for new pool projects.

d) Yes, it is reasonable for the code to establish a minimum number of restrooms, so people go when they have to go, and don't put it off due to a line.

e) Yes, similar but contradictory statements will confuse everyone.

f) It does not.

g) It does not.

# 454.1.6.1Sanitary facilities.

Restrooms shall include a water closet, a diaper change table, ~~a urinal~~ and a lavatory. Diaper changing tables are not required at restrooms where all pools served are restricted to adult use only. The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water’s edge of each pool served by the facilities.

That way it will match the companion statement in Plumbing code 403:

# 403.6Sanitary facilities for public swimming pools.

Restrooms shall include a water closet, a diaper change table and a lavatory. Diaper changing tables are not required at restrooms where all pools served are restricted to adult use only. The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water’s edge of each pool served by the facilities.

**TAC Recommendation**:

**Commission Action:**

SW-FBC-B - Ch. 4 – Glitch #2

Jim LePetrie

We have discovered an error in the proposed code for FBC454 that needs to be addressed.  Specifically, in Section 454.1.2.6(3) which reads as follows (relevant page attached also):

3. A sun shelf may be installed in pool areas with

no more than 4 feet (1219 mm) of water depth,

or less, except where the entire sun shelf transitions

to steps, where the depth at the bottom

of the steps can exceed 4 feet (1219 mm). A

sun shelf must have the same markings at the

edge as a bench. A sun shelf shall not protrude

into the diving bowl. A sun shelf must additionally

comply with Section 454.1.2.8.

The text highlighted in yellow is incorrect and needs to be struck.  I have attached a PDF with the code that was proposed following one of our TAC meetings where Bob Vincent (copied) suggested additional markings where a sun shelf transitions to steps and the depth at the bottom of the steps exceeds 5 feet.  Not sure what happened here.

This is an error someone made (is that a glitch or errata?) that I am trying to address.  Answers:

1. Whether the proposed code change falls within the glitch criteria stated above.  YES
2. Whether the proposed code change has a Florida specific need.  YES – code is incorrect
3. What the impact is on small businesses.  NONE
4. Whether the proposed code change has a reasonable and substantial connection with the health, safety, and welfare of the general public.  YES
5. Whether the proposed code change strengthens or improves the Florida Building Code.  YES
6. The proposed code change does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities.  CORRECT
7. The proposed code change does not degrade the effectiveness of the Florida Building Code.   CORRECT

**TAC Recommendation**:

**Commission Action:**

SW-FBC-B - Ch. 4 – Glitch #3

**Bob Vincent - DOH**

Florida Building Code 8th Edition Glitch issues, submitted by Bob Vincent, Environmental Administrator

For these revised FB code sections, the Florida Dept. of Health believes they meet glitch criteria.

454.1.2.3.5- 9. If the pool includes a sun shelf or a zero depth entry area, “DO NOT PLACE FURNITURE IN POOL.” Not required when all movable furniture on the deck or in the pool is entirely made from UV-resistant, inert plastic.

454.1.2.6- 4. Furniture that is non-corrosive, will not introduce contaminants into the pool water, and is acceptable to the health department access and cleaning plan may be placed only on sun shelf or zero depth entry in a pool. Means shall be taken to protect finish surfacing of the pool shell that is in contact with the furniture. Furniture shall never be placed upon or over nor obstruct the view or function of any safety markings, markers or treated water inlet returns.

FDOH suggested edits for proposed glitch change are provided above, but edits do not cure the conflict in code and inconsistency with law.

* The new FBC code is inconsistent with the Florida Statutes Section 514.021(1) & (2) Department Authorization, so this is a glitch.
* The new FBC code conflicts with the following current code sections, so this is a glitch (**bold** below is added for emphasis).

Current FBC Section 454.1.2.6: The **pool water area shall be unobstructed by any type structure unless justified by engineering design as a part of the recirculation system**. Engineering design and material specifications shall show that such **structures will not endanger the pool patron**, can be maintained in a sanitary condition and **will not create a problem for sanitary maintenance of any part of the pool**, pool water, or pool facilities. Structures in accord with the above shall not be located in a diving bowl area or within 15 feet of any pool wall. Exceptions: 1. ,2. ,3. ,4.

Current FBC Section 454.1.2.8.3 Access to sun shelf: For the purposes of Section 454.1.2.5, **a sun shelf area shall be considered an entrance to or exit from the pool.** …; thus the 8th edition furniture allowance revision for an entire sun shelf is a violation of FBC Section 454.1.2.5 Access: All pools shall have a means of access every 75 feet of pool perimeter with a minimum of two, located so as to serve both ends of the pool.

Current FBC ‘Building’ Section 202 Definitions: ACCESSIBLE MEANS OF EGRESS**.** A **continuous and unobstructed** way of egress travel from any *accessible* point in a *building* or *facility* to a *public way*.

1. The proponent must address as part of the rationale for the proposed code change the following:
2. Whether the proposed code change falls within the glitch criteria stated above. Does.
3. Whether the proposed code change has a Florida specific need. Does not.
4. What the impact is on small businesses. Slight impact is outweighed by safety/health improvement.
5. Whether the proposed code change has a reasonable and substantial connection with the health, safety, and welfare of the general public. It is 100 percent safety and health.
6. Whether the proposed code change strengthens or improves the Florida Building Code. Strengthens and improves FBC.
7. The proposed code change does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities. Does not.
8. The proposed code change does not degrade the effectiveness of the Florida Building Code. Does not.

**TAC Recommendation**:

**Commission Action:**

SW-FBC-B - Ch. 4 – Errata #1

**Bob Vincent - DOH**

**ERRATA FLORIDA BUILDING CODE CHANGES-2023**

The following are Florida Department of Health Errata suggestions to improve the 2023 draft of the FBC 8th edition code guidelines, specific to FBC Sections 454.1-12:

**454.1.2.3.5 – 10. Rules & regulations signage.** Rationale: Both phrases are no longer needed in code.

Delete StrikeThru: 10. ~~By January 1, 2022, all pools shall add:~~ “POOL MAXIMUM DEPTH: \_\_\_ FEET,” in 2-inch letters ~~with the previously listed pool rules~~.

**TAC Recommendation**:

**Commission Action:**

SW-FBC-B - Ch. 4 – Glitch #4

**Bob Vincent - DOH**

**GLITCH FLORIDA BUILDING CODE CHANGES-2023**

The following are Florida Department of Health Glitch suggestions to improve the 2023 draft of the FBC 8th edition code guidelines, specific to FBC Sections 454.1-12:

**454.1.2.3.5 – 8. Rules & regulations signage. Glitch criteria:** Conflicts within the updated code with the depth markings code and thus Equivalency of standards problem. Rationale: Signs also need the correct depth.

Add UnderLine: If the pool includes a sun shelf, “WARNING: DROP OFF AT SUN SHELF EDGE IS \_\_\_ FEET \_\_\_ INCHES DEEP” in 4-inch (102 mm) letters. Not required where sun shelves transition to steps.

**454.1.2.3.5 –10. Rules & regulations signage. Glitch criteria:** Conflicts within the updated code with the depth markings code and thus Equivalency of standards problem. Signs also need the correct depth.

Add UL: “POOL MAXIMUM DEPTH: \_\_\_ FEET \_\_\_ INCHES,”

The proponent must address as part of the rationale for the proposed code change the following:

1. Whether the proposed code change falls within the glitch criteria stated above. Does.
2. Whether the proposed code change has a Florida specific need. Does not.
3. What the impact is on small businesses. No impact.
4. Whether the proposed code change has a reasonable and substantial connection with the health, safety, and welfare of the general public. It is 100 percent safety and health.
5. Whether the proposed code change strengthens or improves the Florida Building Code. Strengthens and improves FBC.
6. The proposed code change does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities. Does not.
7. The proposed code change does not degrade the effectiveness of the Florida Building Code. Does not.

**TAC Recommendation**:

**Commission Action:**

SW-FBC-B - Ch. 4 – Glitch #5

**Bob Vincent - DOH**

**TABLE 454.1.6.1. Fixture Count Chart- Glitch criteria:** Conflicts within the updated code. Equivalency of standards.

Rationale: Chart should be in the same format as 7th edition FBC expanded for clarity and for ease of use to include additional fixtures as approved DBPR code revision notice posted online.

|  |
| --- |
| **TABLE 454.1.6.1** |
| **PUBLIC SWIMMING POOL—REQUIRED FIXTURE COUNT PER SQUARE FOOT OF POOL SURFACE** |
| **SIZE OF POOL (square feet)** | **MEN’S RESTROOM** | **WOMEN’S RESTROOM** |
| **For SI: 1 FT2 = 0.0929 m2.** | **Urinals** | **WC** | **Lavatory** | **WC** | **Lavatory** |
| 0 – 1,250 | 1 | 1 | 1 | 1 | 1 |
| 1,251 – 2,500 | 1 | 1 | 1 | 2 | 1 |
| 2501 – 3,750 | 2 | 1 | 1 | 3 | 1 |
| 3,751 – 5,000 | 2 | 1 | 1 | 4 | 1 |
| 5,001 – 6,250 | 2 | 2 | 2 | 5 | 2 |
| 6,251 – 7,500 | 2 | 2 | 2 | 6 | 2 |
| 7,501 – 8,750 | 3 | 2 | 2 | 7 | 2 |
| 8,751 – 10,000 | 3 | 2 | 2 | 8 | 2 |

Additional fixtures required for each additional 2,500 square feet (465 m²) over 10,000 square feet, or proportion thereof. (929 m²): Women’s - (1) WC

Additional fixtures required for each additional 5,000 square feet (465 m²) over 10,000 square feet, or proportion thereof. (929 m²): Men’s - (1) Urinal, (1) WC, Women’s - (2) WC

Additional fixtures required for each additional 10,000 square feet (465 m²) over 10,000 square feet, or proportion thereof. (929 m²): Men’s – (2) Urinal, (2) WC, (1) Lavatory Women’s – (4) WC, (1) Lavatory

The proponent must address as part of the rationale for the proposed code change the following:

1. Whether the proposed code change falls within the glitch criteria stated above. Does.
2. Whether the proposed code change has a Florida specific need. Does not.
3. What the impact is on small businesses. Clarity and ease of use improved.
4. Whether the proposed code change has a reasonable and substantial connection with the health, safety, and welfare of the general public. It is connected with health.
5. Whether the proposed code change strengthens or improves the Florida Building Code. Strengthens and improves FBC.
6. The proposed code change does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities. Does not.
7. The proposed code change does not degrade the effectiveness of the Florida Building Code. Does not.

**TAC Recommendation**:

**Commission Action:**

SW-FBC-B - Ch. 4 – Glitch #6

**Bob Vincent - DOH**

**454.1.9.6.5 Glitch criteria:** Conflicts within the updated code.

Additional inlets shall be provided in areas of less than 18 inches (457 mm) deep. The numbers and location shall be such as to ensure a 1-hour turnoverthis area.

**454.1.9.6.6 Glitch criteria:** Conflicts within the updated code. Equivalency of standards.

Rationale: To assure that the following two code sections are Equivalent and do not Conflict after the code revision in 454.1.9.6.5, the second one 454.1.9.6.6 needs the proposed edits to avoid conflict within updated code and confusion on the part of code user.

The recirculation-filtration system shall be of a minimum of one turnover every 2 hours in the area of the pool that is 18” (457 mm) to 3 feet (914 mm) deep ~~or less~~. In the remainder of the pool where the depth is greater than 3 feet (914 mm), the system shall have a maximum 6-hour turnover rate. The design plans submitted by the applicant shall provide the volume of water in the pool area of 0” to 18” (457 mm) depth, the volume of 18” (457mm) to 3 feet (914 mm) depth, ~~and less,~~ the volume of water in the pool area greater than 3 feet (914 mm) in depth and the total volume in the pool for determination of minimum circulation flow. The volume calculations shall provide verification that the correct volume of water is used to determine the minimum flow at the 1-hour, 2-hour and the 6-hour flow requirements.

1. The proponent must address as part of the rationale for the proposed code change the following:
2. Whether the proposed code change falls within the glitch criteria stated above. Does.
3. Whether the proposed code change has a Florida specific need. Does not.
4. What the impact is on small businesses. None.
5. Whether the proposed code change has a reasonable and substantial connection with the health, safety, and welfare of the general public. It is 100 percent safety and health.
6. Whether the proposed code change strengthens or improves the Florida Building Code. Strengthens and improves FBC.
7. The proposed code change does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities. Does not.
8. The proposed code change does not degrade the effectiveness of the Florida Building Code. Does not.

**TAC Recommendation**:

**Commission Action:**

SW-FBC-B - Ch. 4 – Glitch #7

**Bob Vincent - DOH**

**454.1 Definitions Glitch criteria:** Conflicts with Equivalency of standards

Add UnderLine below.

Rationale: In DOAH case #22-0529, Recommended Order paragraph 50, Administrative Law Judge deemed these float pools to not be special purpose pools because they are not supervised.

“Epsom salt float tanks” are special purpose pools leased by the public for a brief period of time to float quietly immersed in water with dissolved Epsom salt with or without supervision. Florida Building Code sections in 454.1 through 454.1.10 apply to these pools, and only the following code sections do not apply to these pools as these code requirements are not necessary for health or safety in these special purpose pools: 454.1.2.1 (a); 454.1.2.2.4, 454.1.3.1.2, 454.1.3.2, 454.1.4.2.2, 454.1.6.1, 454.1.6.5.10.5, 454.1.6.5.11, 454.1.6.5.14, 454.1.6.5.16.6(3), and 454.1.6.5.3.2.5.

The proponent must address as part of the rationale for the proposed code change the following:

1. Whether the proposed code change falls within the glitch criteria stated above. Does.
2. Whether the proposed code change has a Florida specific need. Does not.
3. What the impact is on small businesses. No impact.
4. Whether the proposed code change has a reasonable and substantial connection with the health, safety, and welfare of the general public. It is 100 percent safety and health.
5. Whether the proposed code change strengthens or improves the Florida Building Code. Strengthens and improves FBC.
6. The proposed code change does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities. Does not.
7. The proposed code change does not degrade the effectiveness of the Florida Building Code. Does not.

**TAC Recommendation**:

**Commission Action:**

SW-FBC-B - Ch. 4 – Glitch #8

**Bob Vincent - DOH**

**454.1.6.5.16.6 and 454.1.9.8.6.2 and 454.1**

**Glitch criteria:** Conflicts within the updated code. Equivalency of standards.

Conflict & equivalency correcting words are below with UL added and ~~ST~~ deleted.

Rationale: UV equipment certified for **supplemental** disinfection cannot be certified by NSF Standard 50 for use in Interactive Water Features**1** (aka Splashpads) which are a \*high-risk pool currently listed in 454.1.6.5.16.6-2. because this weaker equipment cannot adequately inactivate protozoan cysts (Cryptosporidium /Giardia); while **secondary** disinfection equipment and those validated by USEPA methods**2** provide for a 3-log (99.9%) inactivation of pathogens in a single pass. Only **secondary** disinfection units that are NSF certified or USEPA validated have readout instrument control panels necessary for equipment calibration, dose assurance and interlock testing**3**. Definitions for these two disinfection categories provided in NSF Standard 50 should be included in the FBC at 454.1. Note that onsite Ozone treatment is also defined by NSF 50 as secondary disinfection. NSF certification is not the only approval method the FBC should allow for UV devices; manufacturers’ cost and their customers’ cost for high flow UV equipment (>500 gpm) devices that are USEPA approved to disinfect drinking water at city water plants would be less if the USEPA validation method is accepted instead of the NSF certification.

**454.1.6.5.16.6** Ultraviolet (UV) light disinfectant equipment may be used subject to the conditions of this paragraph and manufacturer’s specifications. UV is encouraged to be used to eliminate or reduce chlorine-resistant pathogens, especially the protozoan cryptosporidium.

2. UV equipment shall meet UL standards and shall be electrically interlocked with recirculation pump(s) on all pools and with feature pumps(s) on an IWF such that when the UV equipment fails to produce the required dosage as measured by an automated sensor, the feature pump(s) are disabled so the water features do not operate.

3. UV equipment shall be certified for secondary or supplemential disinfection per NSF 50–2020.

4. UV equipment that is ~~not~~ certified for secondary disinfection per NSF 50–2020 shall be installed and configured to constantly produce a validated dosage of at least 40 mJ/ cm2 (millijoules per square centimeter) at the end of lamp life, ~~and~~ or conform with all other third party validation criteria in accordance with the USEPA *Ultraviolet Disinfectant Guidance Manual* dated November 2006, publication number EPA 815-R-06-007, whenever these devices are used in \*high-risk pools for secondary disinfection.

**454.1.9.8.6.1** All water discharged to the spray features must first be treated with UV disinfection as described in Section 454.1.6.5.16.6, with final treatment provided by disinfectant adjustment chemicals, before any of this treated water is piped to the spray features.

**454.1.9.8.6.2** All IWFs must comply with one of three options for filtration and disinfection systems as follows:

Option 1: A single pump may be used for water treatment and to supply the water features. Flow must be filtered, treated by a UV unit certified for ~~supplemental~~ secondary disinfection per NSF Standard 50, then treated with disinfectant adjustment chemicals prior to discharge to the spray features. Excess flow not required by the features must be directed back to the collector tank following UV treatment and must be treated with disinfectant and pH adjustment chemicals prior to discharge to the tank.

Option 2: Separate filter and feature pumps may be utilized. The filter flow must be filtered and treated with disinfectant and pH adjustment chemicals prior to discharge to the tank. All feature flow must be filtered, treated by a unit certified for ~~supplemental~~ secondary disinfection per NSF Standard 50, then treated with disinfectant adjustment chemicals prior to discharge to the spray features. UV flow capacity must meet the feature pump(s) flow capacity, and a rate of flow indicator complying with Section 454.1.6.5.13 shall be provided for each UV system.

Option 3: Separate filter and feature pumps may be utilized. The filter flow must be filtered and treated with disinfectant and pH adjustment chemicals prior to discharge to the tank. All feature flow must be treated by a UV disinfection certified for secondary disinfection per NSF Standard 50, then treated with disinfectant adjustment chemicals prior to discharge to the water features. UV flow capacity must meet the feature pump(s) flow capacity, and a rate of flow indicator complying with Section 454.1.6.5.13 shall be provided for each UV system.

Suggest adding these definitions for FBC 454.1 from NSF Standard 50-2020 citations 3.114 & 3.134:

454.1 “Secondary disinfection”: Units that demonstrate a 3 log (99.9%) or greater reduction or inactivation of *Cryptosporidium parvum* in a single pass when tested in accordance with NSF Standard 50-2020.

454.1 “Supplemental disinfection”: Units that demonstrate a 3 log (99.9%) or greater reduction of *Pseudomonas aeruginosa* and *Enterococcus faecium* when tested according to NSF Standard 50-2020.

The proponent must address as part of the rationale for the proposed code change the following:

1. Whether the proposed code change falls within the glitch criteria stated above. Does.
2. Whether the proposed code change has a Florida specific need. Does not.
3. What the impact is on small businesses. Slight cost impact offset by lowered illness risk.
4. Whether the proposed code change has a reasonable and substantial connection with the health, safety, and welfare of the general public. It is 100 percent safety and health.
5. Whether the proposed code change strengthens or improves the Florida Building Code. Strengthens and improves FBC.
6. The proposed code change does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities. Does not.
7. The proposed code change does not degrade the effectiveness of the Florida Building Code. It improves the level of effectiveness.

**Footnotes:**

**Important snipped sections of NSF Standard 50-2020 Chapter 15 Ultraviolet (UV) light process equipment (referenced in FBC 454.1)**

**1 15.18 UV *Cryptosporidium* inactivation and dose determination**Manufacturers of UV systems with a claim to inactivate cysts (such as *Cryptosporidium*, *Giardia*, etc.) shall demonstrate a minimum 3 log (99.9%) or greater inactivation of *C. parvum* in a single pass.

NOTE — **Operators of spray parks, spray pads, or interactive water features with no standing water should consider greater inactivation performance of 4 log (99.99%).** The local public health authority may select different levels of log inactivation or power delivery for different applications such as competition lap pools, spas, wave pools, wading pools, etc.

**2 15.8 Disinfection efficacy**Ultraviolet light process equipment designed for **supplemental** disinfection shall demonstrate a 3 log (99.9%) or greater inactivation of influent **bacteria** when tested according to Section N-8.1.

Ultraviolet light process equipment designed for **secondary** disinfection shall demonstrate a 3 log (99.9%) or greater inactivation of ***Cryptosporidium parvum***when tested and evaluated according to Section 15.18 and is exempt from Section N-8.1 testing if during secondary validation the lamp intensity (per Section 15.5) is equal to or greater than the lamp intensity after the unit has completed life testing. Section N-8.1 shall be required if the dose is less.

Ultraviolet light process equipment designed for **supplemental** disinfection shall carry the following information in the installation and use instructions and be noted in the official certification listings: *“This unit has demonstrated an ability to provide three log inactivation of <name organisms>.* ***This unit has not demonstrated an ability to provide three log kill or inactivation of <****name organisms if applicable>. This product is designed for supplementary disinfection and is intended for use with appropriate residual levels of EPA registered disinfecting chemicals. Specific residual levels of EPA registered disinfecting chemicals may be required by the regulatory agency having authority.”*

Ultraviolet light process equipment designed for **secondary** disinfection shall carry the following information in the installation and use instructions and be noted in the official certification listings: *“****This unit has been tested to confirm a minimum inactivation equivalent of 3 log (99.9%) C. parvum in accordance with NSF/ANSI/CAN 50 and the US EPA UV DGM.*** *This product has met the requirements of NSF/ANSI/CAN 50, Section N-8.1: Disinfection Efficacy, for the ≥ minimum of a 3 log (99.9%) reduction of Enterococcus faecium [ATCC #6569] and Pseudomonas aeruginosa [ATCC #27313]. This product is intended for secondary disinfection and is intended for use with appropriate residual levels of EPA registered disinfecting chemicals. Specific residual levels of EPA registered disinfecting chemicals may be required by the regulatory agency having authority.”*

**3 15.5 Performance indication**A **supplemental** UV system shall be provided with an **effective means to alert the user** when a component of this equipment is not operating.
A **secondary** UV system shall incorporate on the **control panel a constantly visible readout of the actual flow (in US GPM), the actual calculated dose (in mJ/cm2) and the actual lamp intensity (in w/m2)**. It is acceptable for the display to constantly cycle through the parameters. The cycle duration shall not take more than 15 s.

NSF International snip of web page showing one manufacturer’s certified UV disinfection equipment, acquired at 6:20pm, 10/31/2023 from:

<https://info.nsf.org/Certified/Pools/Listings.asp?TradeName=&ProductType=50U&PlantState=&PlantCountry=&PlantRegion=&submit1=Search>



**TAC Recommendation**:

**Commission Action:**

SW-FBC-B - Ch. 4 – Errata #2

**Staff**

Section 454.1.6.5.16.6, Item 3 – “supplemental” is misspelled.

**454.1.6.5.16.6** Ultraviolet (UV) light disinfectant equipment may be used subject to the conditions of this paragraph and manufacturer’s specifications. UV is encouraged to be used to eliminate or reduce chlorine-resistant pathogens, especially the protozoan cryptosporidium.

3. UV equipment shall be certified for secondary or ~~supplemential~~ supplemental disinfection per

NSF 50–2020.

**TAC Recommendation**:

**Commission Action:**

SW-FBC-B - Ch. 4 – Errata #3

**Staff**

Section 454.1.6.5.16.2 – last sentence.  Oxidizing is misspelled.

**454.1.6.5.16.2 Hypohalogenation and electrolytic chlorine generators. ….** The solution reservoirs shall be manufactured to accommodate corrosive and ~~oxidizering~~ oxidizing liquid chemicals.

**TAC Recommendation**:

**Commission Action:**