

November/December 2005

Environmental Update



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Water: It's definitely in the news!

Who **hasn't** heard the phrases “when it rains, it pours”, or “you can't have too much of a good thing”? Many areas of the US would agree with the first phrase and strongly disagree with the second phrase! Large rain events have occurred in several regions. One common question is “how often do storms like this happen?” Well, that question has been the subject of a recent National Weather Service study. The results can be found at:

http://hdsc.nws.noaa.gov/hdsc/pfds/orb/nc_pfds.html

The table below is for Jacksonville, NC. The top row is rainfall duration in minutes, hours, and days. The left column gives the “average recurrence interval”; in other words, how often you might expect a storm of that length and intensity to occur. The table itself gives the

amount of rain that falls during the event.

Three examples are highlighted in the table:

- 1) A 2.45 inch rainfall can be expected to occur within 2 hours every 2 years. This would be known as a 2-yr, 2-hr storm event.
- 2) A 20.02 inch rainfall can be expected to occur over a 45 day period every 10 years. This would be known as a 10-yr, 45-day storm event.
- 3) A 8.45 inch rainfall can be expected to occur over 12 hours every 50 years. Following the format of the other two examples, this would be known as a 50-yr, 12-hr storm event.

These “events” are often used for stormwater design purposes. Swine lagoons are a good example. In addition to 1 foot of freeboard, swine lagoons are designed with reserve storage for two 25-yr, 24-hr storm events.

Jacksonville NC precipitation frequency estimates, in inches, from NWS:

	Rainfall Duration															
	Minutes					Hours					Days					
ARI* (yrs)	5	10	15	30	60	2	6	12	24	48	4	7	10	20	30	45
2	0.58	0.92	1.16	1.60	2.01	2.45	3.20	3.78	4.30	4.98	5.59	6.50	7.28	9.71	11.92	14.85
5	0.68	1.08	1.37	1.95	2.50	3.12	4.11	4.88	5.56	6.40	7.10	8.16	9.03	11.82	14.33	17.70
10	0.75	1.20	1.52	2.21	2.87	3.67	4.89	5.82	6.64	7.62	8.36	9.55	10.47	13.55	16.27	20.02
25	0.85	1.36	1.72	2.55	3.40	4.46	6.03	7.23	8.26	9.46	10.22	11.55	12.55	16.02	18.94	23.27
50	0.93	1.48	1.87	2.81	3.81	5.12	7.00	8.45	9.68	11.08	11.81	13.23	14.29	18.04	21.09	25.90
100	1.00	1.59	2.01	3.08	4.25	5.82	8.09	9.82	11.26	12.88	13.53	15.04	16.15	20.17	23.28	28.61
200	1.08	1.71	2.16	3.36	4.71	6.58	9.29	11.35	13.02	14.91	15.43	17.00	18.15	22.43	25.55	31.43
500	1.18	1.86	2.34	3.73	5.35	7.68	11.08	13.66	15.70	17.99	18.42	19.85	21.03	25.62	28.67	35.33

* Average Recurrence Interval

Triclosan: good or bad?

There are many personal care products – soaps, creams, lotions, cosmetics, even toothpastes – that contain triclosan as an antimicrobial agent. Recent studies have indicated that sunlight can cause triclosan to form dioxin (a potential carcinogen). Another study showed that triclosan forms chloroform (another potential carcinogen) in the presence of chlorine.

Some European countries have removed triclosan-containing products from stores. This past April, the Chlorine Chemistry Council issued a notice that they felt the risks were overstated. Here are two excerpts from their statement:

- “The dioxin compound that formed when triclosan degraded in sunlight in the study *was not a dioxin of public health concern*.... Of the 210 dioxin and furan family compounds, only 17 are considered to be of public health concern.”
- The experiments...likely overstate the potential for chloroform formation from typical household uses of products containing triclosan. The reported levels of chloroform formation were reached only after two hours of triclosan and chlorinated water interaction...

(http://c3.org/chlorine_issues/understanding_dioxin/triclosan.html)

The *Environmental Science & Technology Online* website has an article entitled “*When chlorine + antimicrobials = unintended consequences*”. The article states that “Since 2000, the American Medical Association has been urging the U.S. Food and Drug Administration to closely monitor and possibly regulate the home

use of antimicrobials such as triclosan.

What does it all mean? Plain old soap and hot water work quite well. Don't panic, but do keep this safety debate in mind. Currently, it is up to you to decide which products you will use.

Not Extinct!!!!

Have you heard the news? It seems that the Ivory-billed Woodpecker is **NOT** extinct after all! The October 16 episode of *60 Minutes* aired a segment on the 2004 sighting and subsequent events. Information about the majestic bird is located on the Cornell website:

<http://www.birds.cornell.edu/ivory/>

It is very exciting, since the bird has been presumed extinct for the past 60 years. It also makes one wonder... what else is out there?

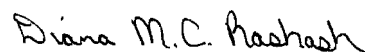
BugFest South

On Saturday, November 5th from 9:00 a.m. to 3:00 p.m., the NC Museum of Natural Sciences will present **BugFest South** at the NC Museum of Forestry in Whiteville. FREE! This is the first time that it is being held in this part of the state. For more information, contact:

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Sincerely,

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