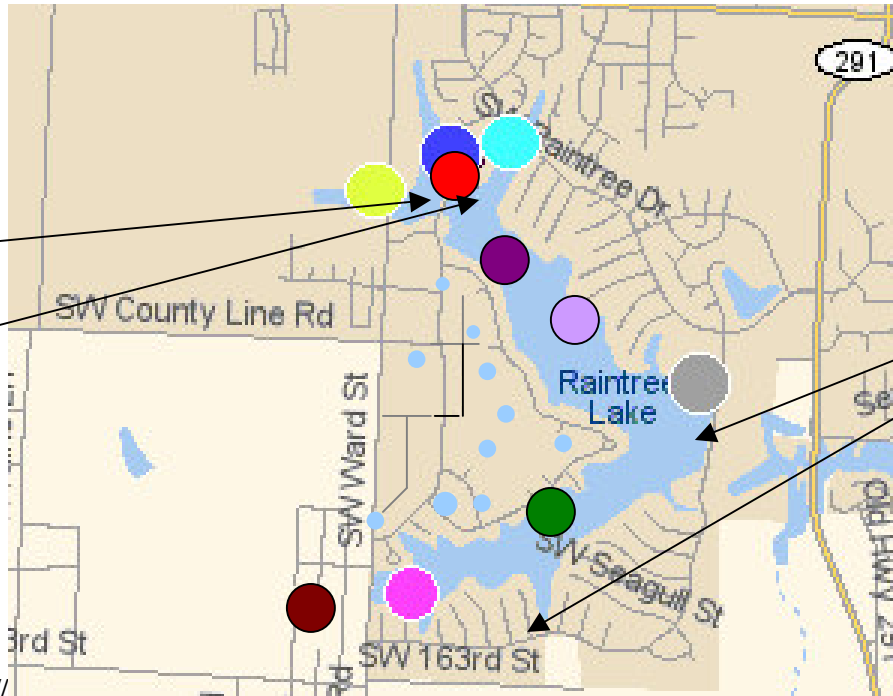


# Raintree Lake Water Quality 2005



Check the flags on the Raintree Drive overpasses by the Clubhouse for color; blue = safe; yellow = reduced speed; red = limit exposure

Check the flags on Raintree Parkway for color; blue = safe; yellow = reduced speed; red = limit exposure

*Check the flags before you swim or boat!*

**Blue** = safe; **Yellow** = reduced speed; **Red** = limit exposure (bacteria)

## 2005 RLPOA Fecal Coliform (fc) and Enterococcus (e)

**Green** = desirable

**Orange** = permitted in certain cases

**Red** = avoid exposure

Area	Clubhouse		Party Cove/RT CT/ RT Circle		Sunset Cove		Hidden Cove		North Boat Ramp		Aviero		Main Lake North		Main Lake South		Ward Road - Yellow Dot		Mullendyke		Rainfall inches/prior week	
	fc	e	fc	e	fc	e	fc	e	fc	e	fc	e	fc	e	fc	e	fc	e	fc	e		
5/23	10	5	15	10	45	30	25	5	<5	<5											0	
6/6	450	1180	510	1830			1110	1260	170	1010	330	970									1.89	
6/14	92	1910	460	1790	1650	+++	2400	+++	270	1060											2.04	
6/20	20	<20	<20	<20	20	20	60	20	<20	<20											0	
6/27	10	15	25	10	20	75	75	35	5	5											0	
7/6	5	45	5	545	55	30	55	30	10	25											1.64	
7/12	30	105	5	25	30	50	10	20			5	160									0	
7/20	300	5	355	15	395	55	+++	220			345	10									0.29	
7/25	20	10	175	175	25	50	35	115			5	5									0	
8/1	5	<5	85	60	25	<5	20	20			10	<5			75	15					0	
8/8	<5	15	10	20	25	170	545	40			5	<5			10	5					0.02	
8/17					630	1390								10	40	80	30	600	610	40	580	4.42
8/24	60	5000	105	160	+++	445							60	225	135	930					3.84	
8/29	365	295	185	415	185	525							140	850	135	1150					2.60	
9/6	10	110	10	1105	85	35							<5	542	20	45					0.30	
9/12	30	20	5	365	25	30							<5	55	10	40					0	
9/19	45	40	70	10	125	35							15	<5	15	<5					0.35	
9/26	95	30	15	<5	140	170							50	<5	10	<5	375	130			2.39	

# Generally Accepted Water Quality Standards

## **Blue Valley Laboratory (the firm conducting our tests) 30-day level recommendations for body contact:**

Fecal Coliform < 200 desirable;  
Fecal Coliform < 1,000 permitted;  
Enterococci < 60 permitted

## **EPA Standards**

Federal Register: November 16, 2004 (Volume 69, Number 220)  
40 CFR Part 131

Enterococci:	designated beach	61CFU/100ml
	moderate full contact	78CFU/100ml
	light full contact	107CFU/100ml
	infrequent contact	151CFU/100ml

Old Standard: Fecal coliform            200CFU/100ml

<http://www.epa.gov/fedrgstr/EPA-WATER/2004/November/Day-16/w25303.htm>

## Why Testing Is Important

### Fecal coliforms

Fecal coliforms are a sub-group of a large family of bacteria known as total coliforms. These bacteria are conservative indicators of the possible presence of fecal contamination and human waste which may contain pathogens. Fecal coliform bacteria live in the intestines of warm-blooded animals and are used as an indicator of fecal pollution. Wildlife, pets and livestock, in addition to humans are all potential sources of fecal coliform bacteria, which diminish the efficacy of using these bacteria as indicators of human sewage pollution. Most fecal coliform bacteria do not cause disease, but co-exist with in intestines with disease-carrying pathogens that pose a public health risk. The higher the fecal bacteria counts, the higher the probability of pathenogenic bacteria pollution. While this group includes some species that can have a non-fecal origin, fecal coliforms are widely used to test recreational waters. Fecal coliforms die in the presence of sunlight.

### Enterococcus

Enterococcus is another group of bacteria found primarily in the intestinal tract of warm-blooded animals. *Enterococcus* bacteria are a non-pathogenic subgroup of fecal *Streptococcus* and are measured as an indicator of the presence of human fecal material. Epidemiological studies have determined a correlation between *Enterococcus* concentrations in water and increased probabilities of illness in swimmers, although *Enterococcus* are not usually the cause illness.

<http://dnr.metrokc.gov/wlr/waterres/streams/statefedcrit.htm>

### Environmental Impact:

The presence of fecal coliform bacteria in aquatic environments indicates that the water has been contaminated with the fecal material of man or other animals. Fecal coliform bacteria can enter rivers through direct discharge of waste from mammals and birds, from agricultural and storm runoff, and from untreated human sewage. Individual home septic tanks can become overloaded during the rainy season and allow untreated human wastes to flow into drainage ditches and nearby waters. Agricultural practices such as allowing animal wastes to wash into nearby streams during the rainy season, spreading manure and fertilizer on fields during rainy periods, and allowing livestock watering in streams can all contribute fecal coliform contamination.

### Will I get sick?

Whether you get sick from the water depends on many factors; the strength of your immune system, how bad the contamination is, whether you have an open cut or wound which would serve as a possible point of bacterial infection, etc. Studies have found the percentage of illness among swimmers increased as levels rose above 400 FC/*E.Coli*. The Santa Monica study found an 88% increase in skin rash when the FC/*E.Coli* standard was exceeded. When the *Enterococcus* standard was exceeded a 300% increase in diarrhea & a 40% increase in vomiting & fever was observed. This study also reported increased respiratory & gastrointestinal illnesses in swimmers that were in waters within 400 m of a storm drain.

<http://www.surfridersanmateoco.org/protocol.php>

**RLPOA has performed DNA testing of the bacteria in the water and no traces of human contamination have been detected. This testing is more extensive than what many municipalities conduct. RLPOA conducts weekly water testing of general water quality and this exceeds State and Federal standards and recommendations.**