



United States Environmental Protection Agency - Kansas City, Kansas

Putting Water Quality Information into the Hands of the Public

KCWaters' New Mobile Apps



Jeffery Robichaud - Deputy Director Environmental Services Division



United States Environmental Protection Agency - Kansas City, Kansas



KCwaters.org - Windows Internet Explorer
http://www.kcwaters.org/

Urban Monitoring Network | Metro Area Map | Partners | Events & News | Contact

Kansas City may be known as the City of Fountains, but the resource that makes this possible is the area's bountiful waters. From the confluence of the Kansas and Missouri Rivers, over 200 years ago, Lewis and Clark remarked how impressive the areas waters were and how well they supported the bountiful species. Today these rivers and streams are just as important, helping to support both the well-being of people as well as plants and animals. It is important that we understand and support the continued health of these waters so that they may continue to serve as a treasured resource into the future.

Kcwaters.org seeks to promote greater awareness about the quality of water in the Greater Kansas City area, provide a venue to share data, connect partners to help protect and restore waterbodies, and allow all of us to take an active role in protecting this precious resource.

News & Events

Project Blue River Rescue

The Friends of Lakeside Nature Center's Blue River Stream Team #175 invites you to join us in our Blue River Clean-up, the largest one-day

Newest Additions



- Oak Ridge National Laboratories
- Added 1999 Biological Data (Fish) from Coffee, and Wolf Creeks
- Legacy Storet
- Added Legacy Storet (EPA Pre-1999) d
- Army Corps of Engineers
- Added Army Corps of Engineers Legac
- Lakes of MO Volunteer Program

KCwaters.org - KC Metro Area Map - Windows Internet Explorer
http://www.kcwaters.org/map.html

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Map | Satellite | Terrain

- Draw Remove Click for more information
- [KCUrban Stream Monitors](#)
- [STORET](#)
- [USGS Sites](#)
- [Volunteer Sites](#)
- [Government Partner Sites](#)
- [NHD Plus Flowlines](#)
- [Watershed Boundaries](#)
- [NHD Catchments](#)

**Google Maps restricts the number of features visible at any given zoom level.





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STREAM RECEIVES COMBINED SEWER OVERFLOWS
AVOID CONTACT DURING & 72 HOURS AFTER RAIN STORM!
For more information, call 816-513-0124

LA CORRIENTE RECIBE DESBORDAMIENTOS
COMBINADOS DE LAS ALCANTARILLAS
EVITA EL CONTACTO DURANTE Y 72 HORAS DESPUES DE LA TORMENTA DE LLUVIA!

PARA MAS INFORMACION,
LLAME 816-513-0124

 Kansas City, Missouri Water Services Department
New Weather SafeSign Program
www.kcmo.org/newweather 816-513-0124 



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 Kansas City, Missouri Water Services Department
Hot Weather SafeCare Program
www.kcmo.org/waterutility 816-513-0124 



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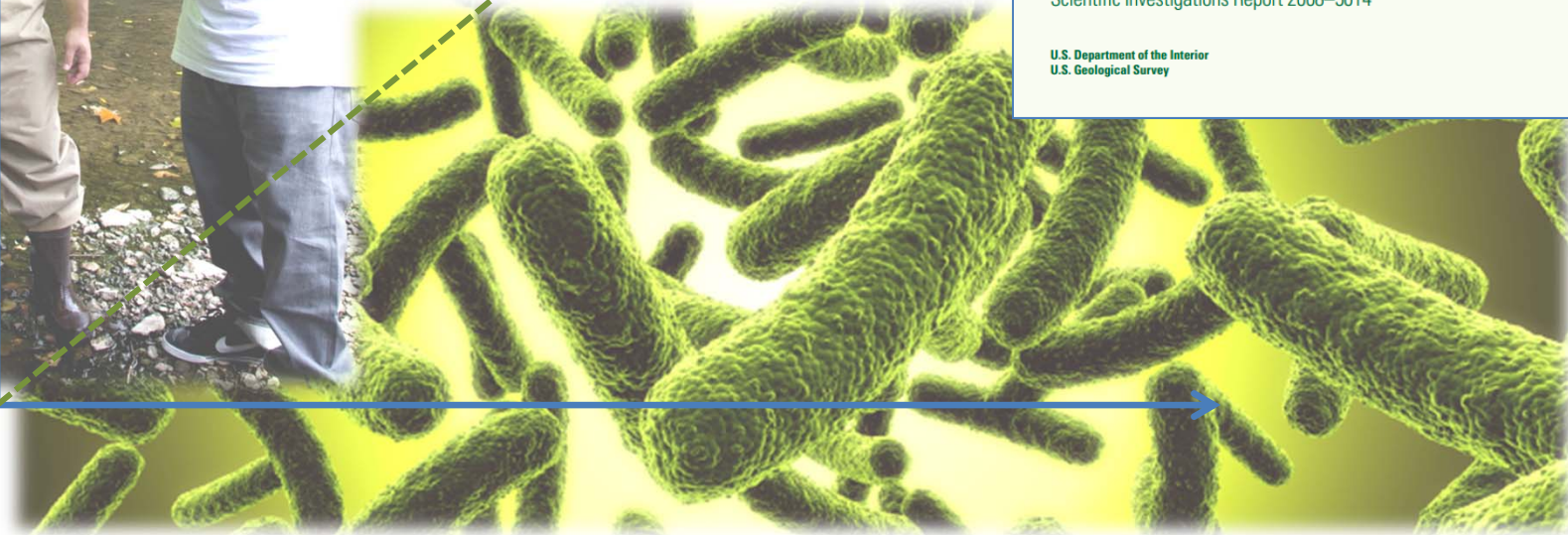
Prepared in cooperation with the
JOHNSON COUNTY STORMWATER MANAGEMENT PROGRAM

Estimation of Constituent Concentrations, Loads, and Yields in Streams of Johnson County, Northeast Kansas, Using Continuous Water-Quality Monitoring and Regression Models, October 2002 through December 2006



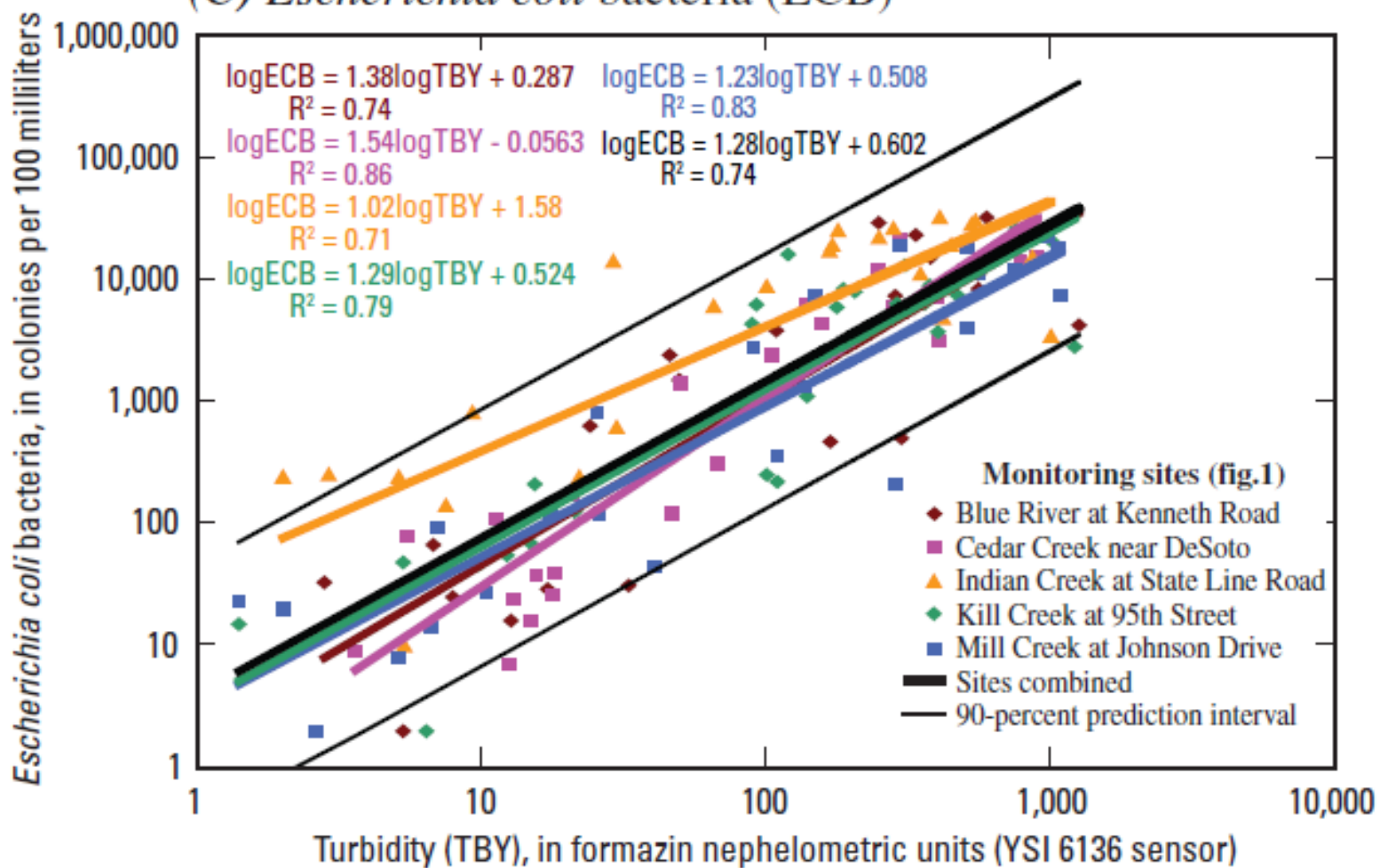
Scientific Investigations Report 2008-5014

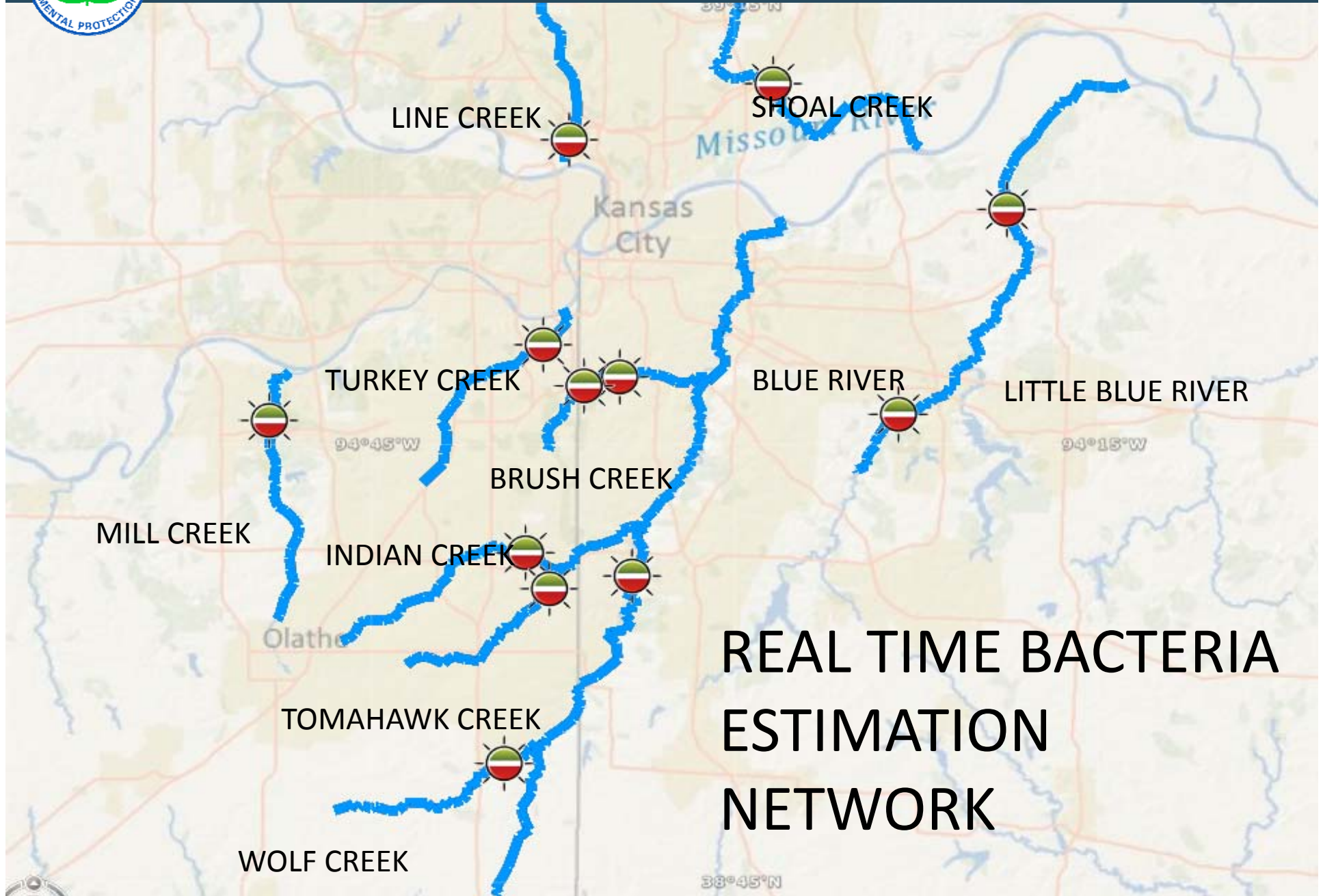
U.S. Department of the Interior
U.S. Geological Survey





(C) *Escherichia coli* bacteria (ECB)







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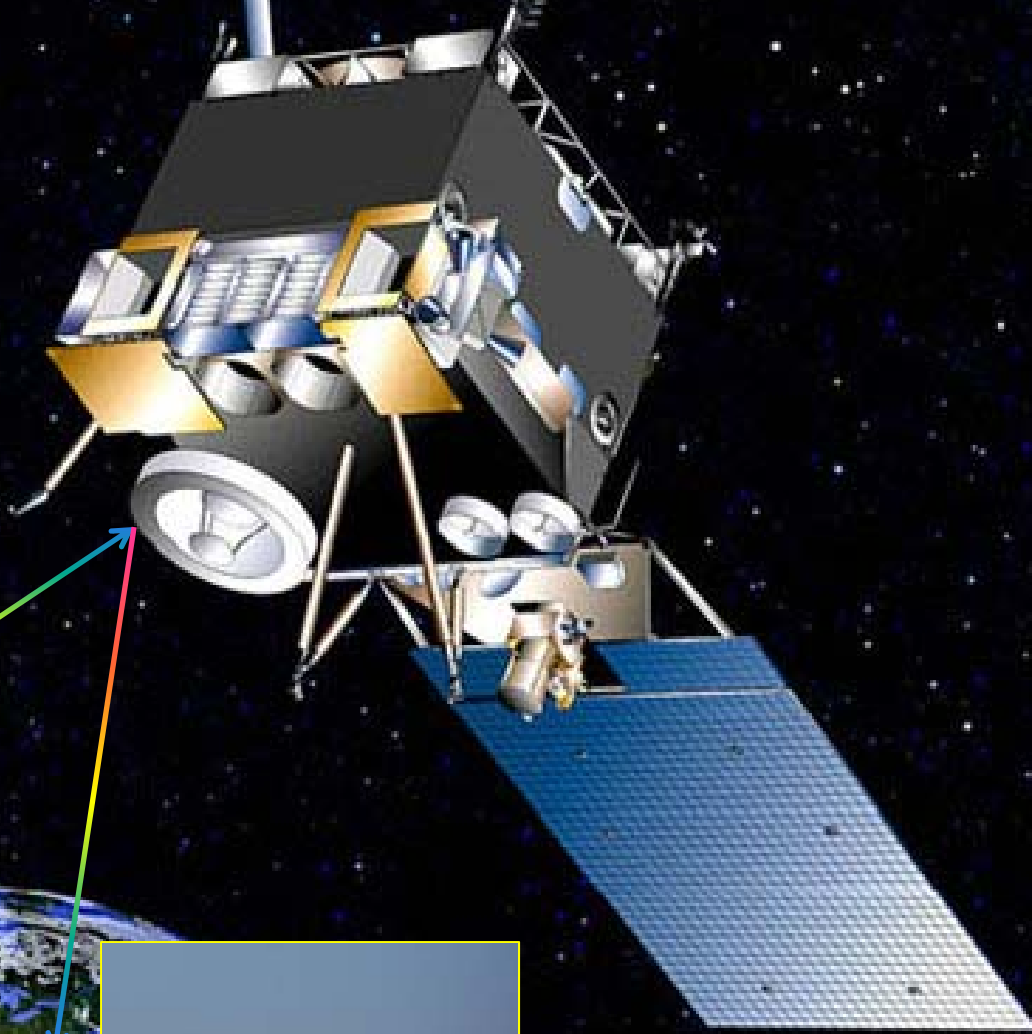


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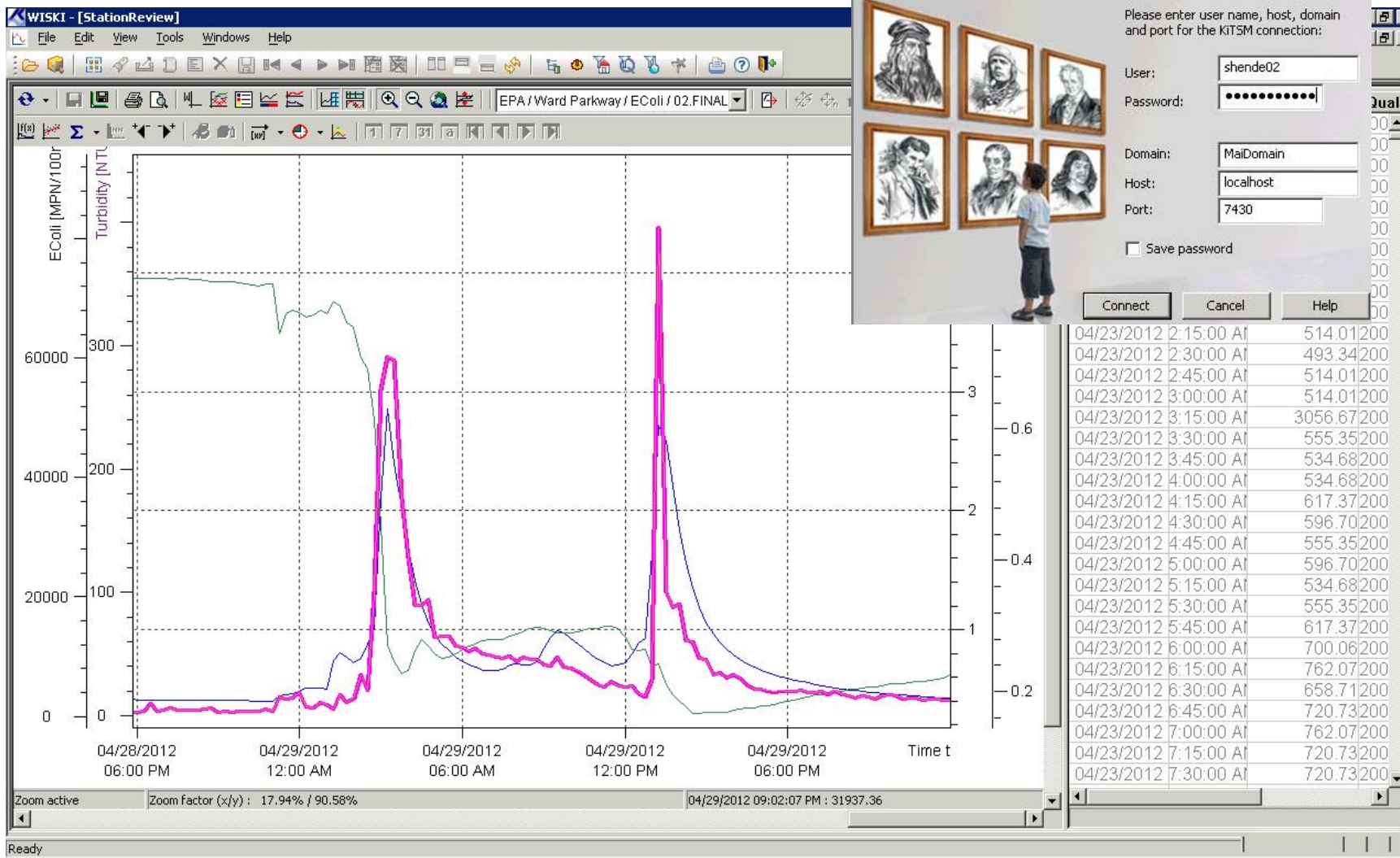


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“Is it safe?”





SEPTEMBER 2011

How People Learn About Their Local Community

Citizens' media habits are surprisingly varied as newspapers, TV, the internet, newsletters, and old-fashioned word-of-mouth compete for attention. Different platforms serve different audience needs.

The Top Sources for Local News and Information Vary by Age

Percentage of adults in each age group who rely on source for each topic

| | Weather | Restaurants/ Clubs | Politics | Community Events | Schools |
|------------------|--------------------------------|-------------------------------|---|-----------------------------------|---|
| Age 18-39 | Television 44% Internet 41% | Internet 41% | Internet 26% Television 19% Newspaper 16% | Internet 19% Word of mouth 17% | Internet 24% Newspaper 12% |
| Age 40+ | Television 67% Internet 26% | Newspaper 22% Internet 21% | Newspaper 34% Television 34% Internet 12% | Newspaper 32% | Newspaper 27% Internet 15% Television 12% |

Source: Pew Research Center's Project for Excellence in Journalism and Internet & American Life Project in partnership with the Knight Foundation, January 12-25, 2011 Local Information Survey. N=2,251 adults age 18 and older. Conducted in English and Spanish and included 750 cell phone interviews.



Smartphone penetration 2009

Q3 2009, U.S. Mobile Insights, National

● FEATURE PHONE ● SMARTPHONE ● FEMALES ● MALES



#1 Device= Motorola Razr V3

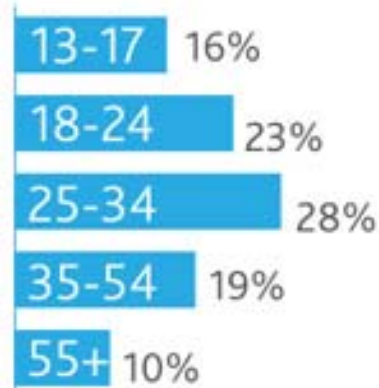
Smartphone penetration 2011

Aug - Oct, 2011, U.S. Mobile Insights, National



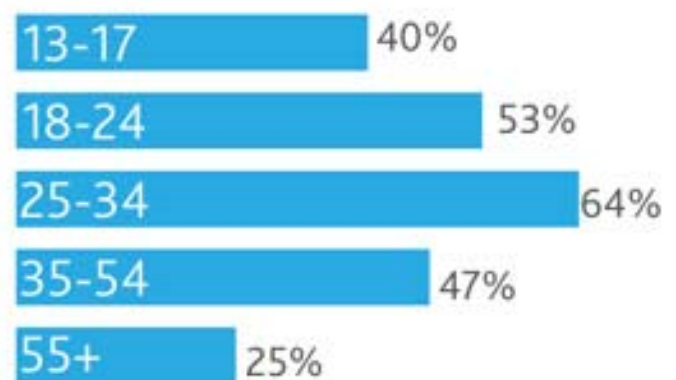
#1 Device = Apple iPhone4

PENETRATION BY AGE



Those 25-34 and 18-24 have always been the leading age groups in smartphone penetration

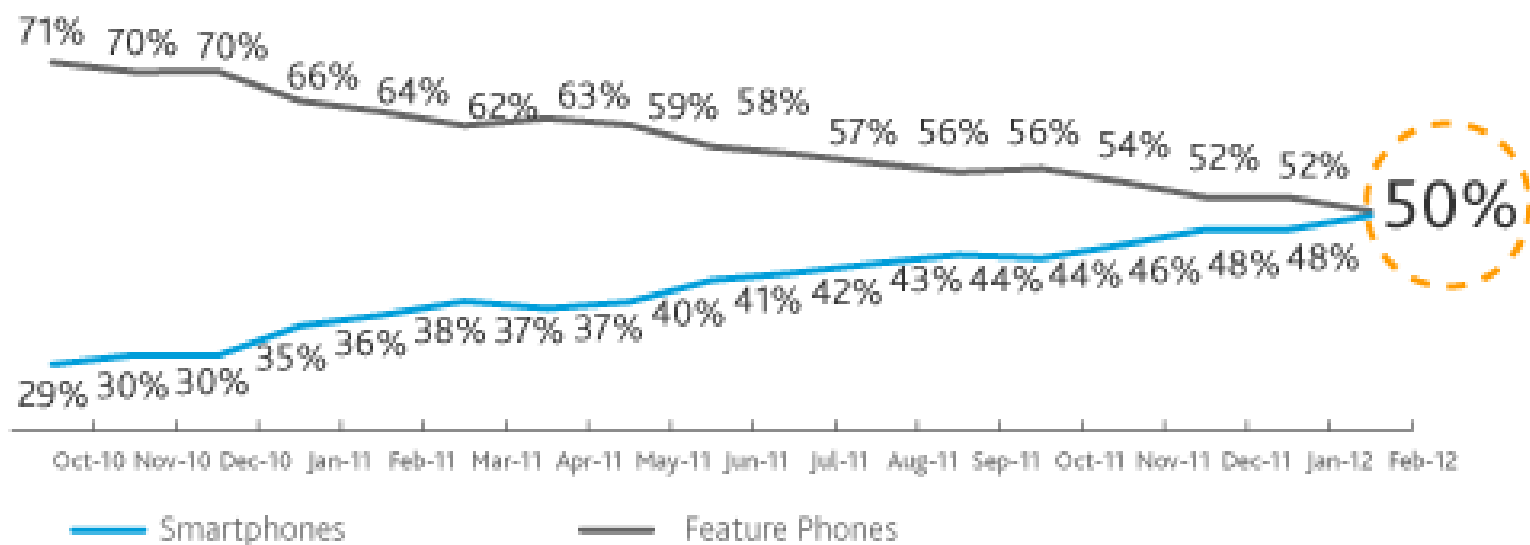
PENETRATION BY AGE





U.S. Smartphone Penetration

February 2012, Nielsen Mobile Insights



Read as: During February 2012, 50 percent of US mobile subscribers owned a smartphone

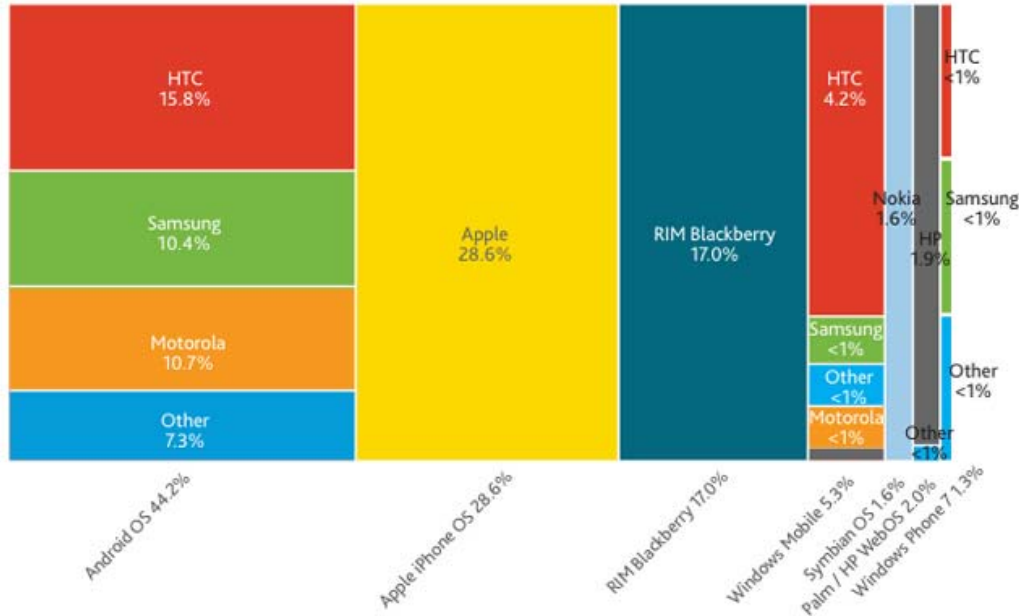
Source: Nielsen





Manufacturer operating system share-smartphones

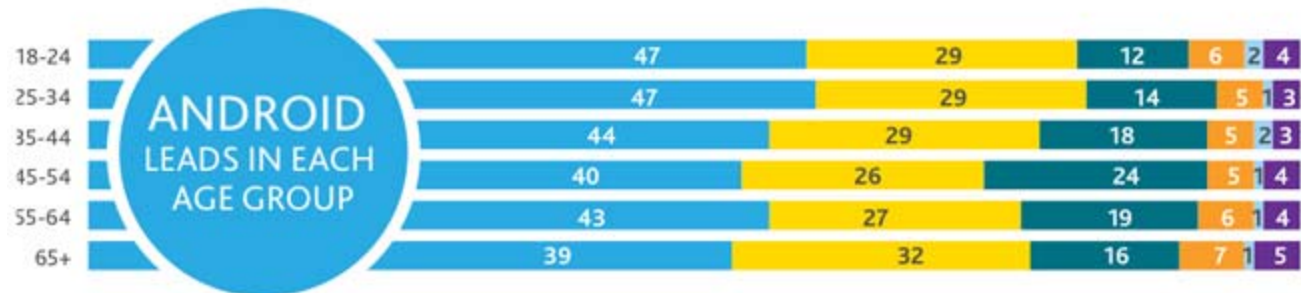
Aug-Oct 2011, U.S. Mobile Insights, postpaid mobile subscribers



Smartphone OS penetration by age group

Aug-Oct 2011, U.S. Mobile Insights, National

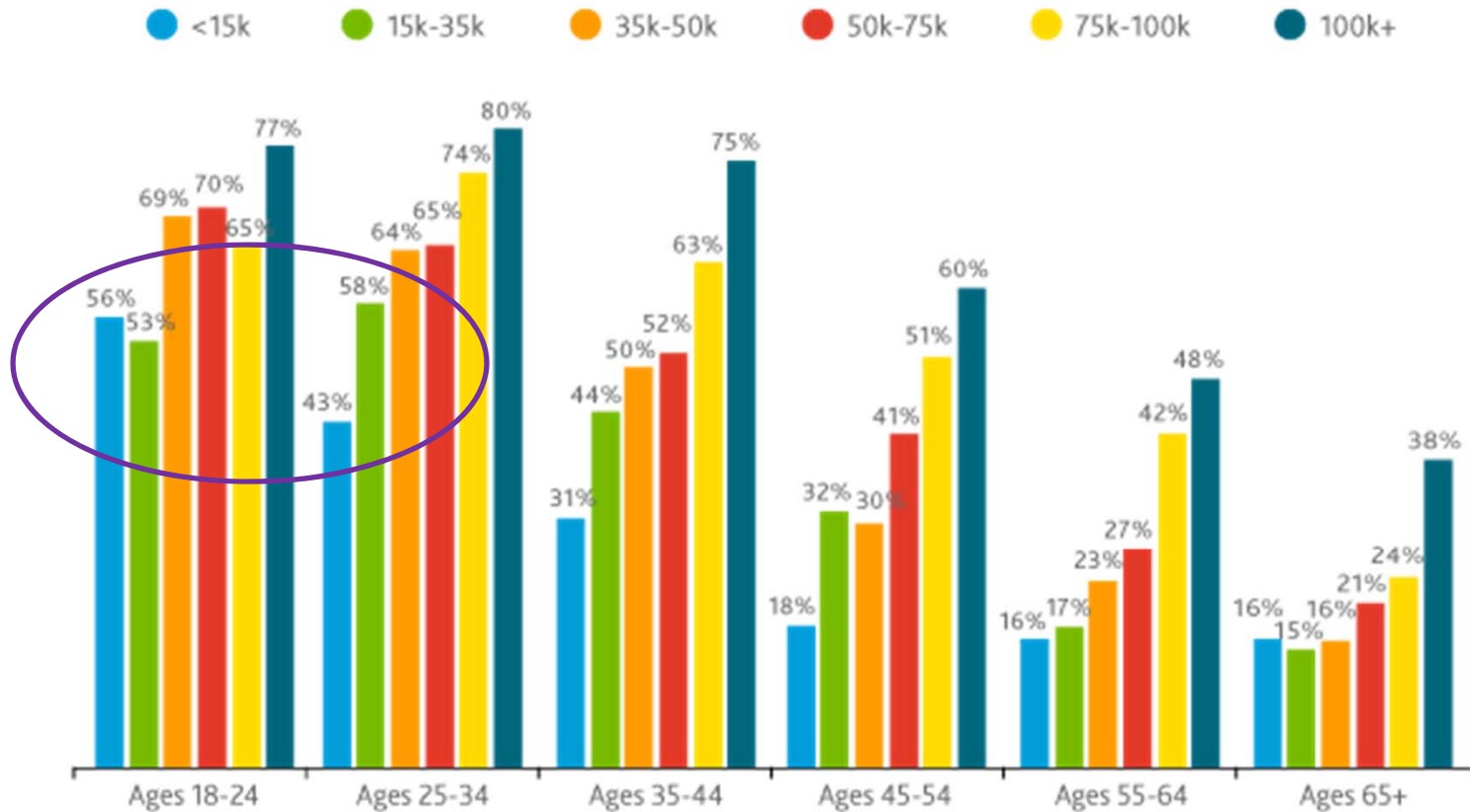
● ANDROID ● APPLE IOS ● RIM BLACKBERRY ● WINDOWS MOBILE ● WINDOWS 7 ● OTHER





Smartphone Penetration by Age and Income

January '11

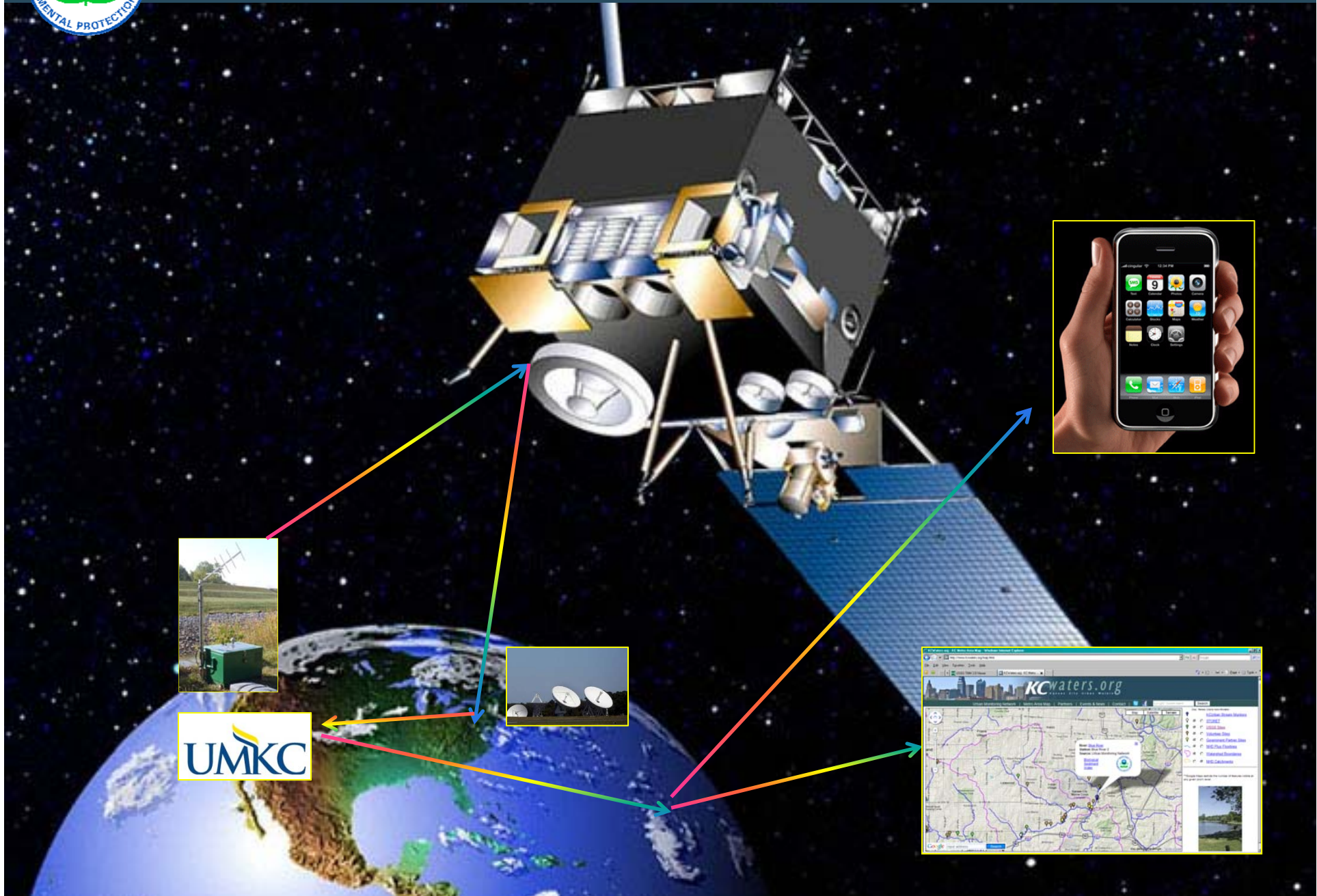


Source: Nielsen





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Store Mac iPod iPhone iPad **iTunes** Support

iTunes Preview


What's New What is iTunes What's on iTunes iTunes Charts How To



iTunes is the world's easiest way to organize and add to your digital media collection.

We are unable to find iTunes on your computer. To download the free app KCWaterBug 1.0 by KCWaters.org, get iTunes now.

Already have iTunes? Click I Have iTunes to open it now. [I Have iTunes](#)


 **iTunes 10**
For Mac + PC

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KCWaterBug 1.0

By **KCWaters.org**

Open iTunes to buy and download apps. [View More By This Developer](#)



[View In iTunes](#)

Free
Category: Utilities
Released: Apr 25, 2012
Version: 1.0
Size: 1.0 MB
Language: English
Seller: Jeffery Robichaud
© KCWaters.org
Rated 4+



Description

KCWaterBug is an application developed by KCWaters.org, which provides hourly updates of water quality at numerous streams throughout the Kansas City metropolitan area. The application provides a color coded alert based on an estimate of the amount of bacteria that may be found in a particular stream using known relationships between

[KCWaterBug 1.0 Support](#) [...More](#)

iPhone Screenshots

[Back](#) **Icon Legend**

-  Appropriate for all forms of recreation including swimming.
-  Appropriate for wading/splashing.

FAQ

- How is water quality being measured?
- How often is this information updated?
- Where does bacteria in water come from?



AIR QUALITY INDEX

| Air Quality Index (AQI) Values | Levels of Health Concern |
|--------------------------------|--------------------------------|
| 0 to 50 | Good |
| 51-100 | Moderate |
| 101-150 | Unhealthy for Sensitive Groups |
| 151-200 | Unhealthy |
| 201-300 | Very Unhealthy |
| 301 to 500 | Hazardous |

$$I = \frac{I_{high} - I_{low}}{C_{high} - C_{low}}(C - C_{low}) + I_{low}$$

is used, where:

I = the (Air Quality) index,

C = the pollutant concentration,

C_{low} = the concentration breakpoint that is $\leq C$,

C_{high} = the concentration breakpoint that is $\geq C$,

I_{low} = the index breakpoint corresponding to C_{low} ,

I_{high} = the index breakpoint corresponding to C_{high} .



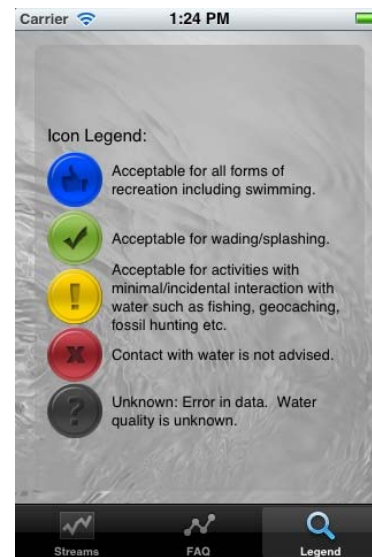
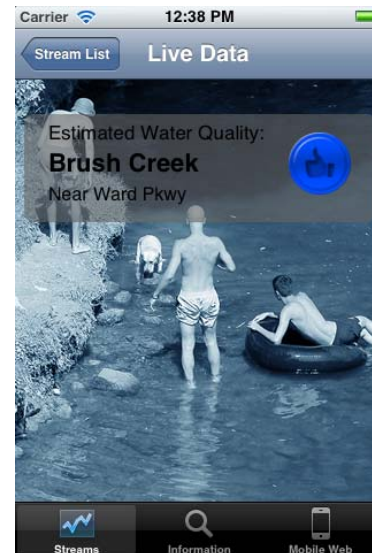
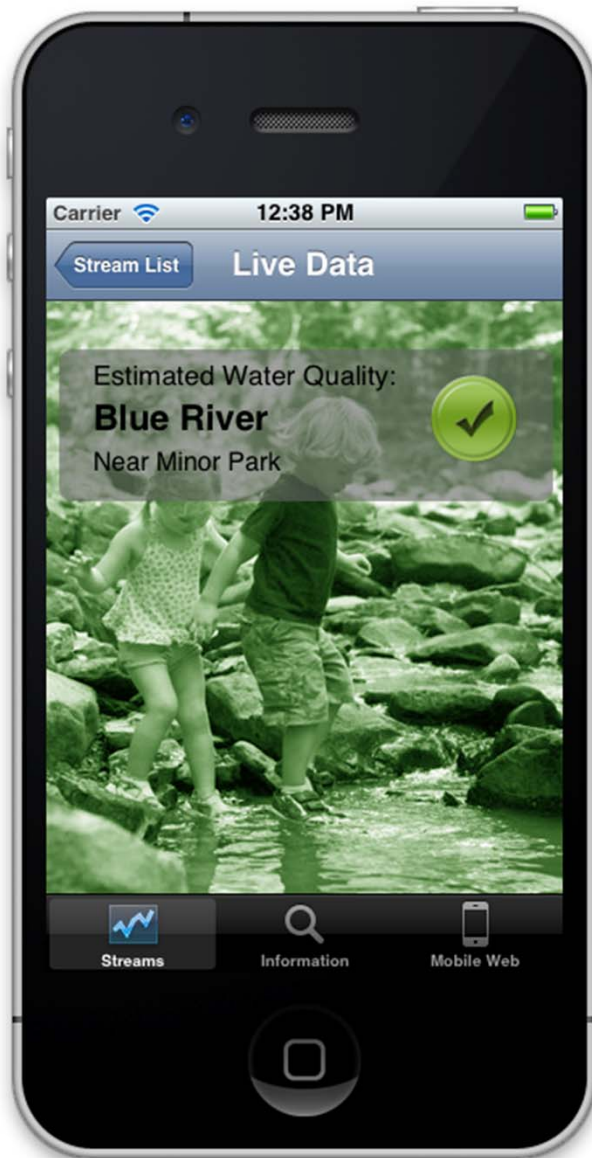
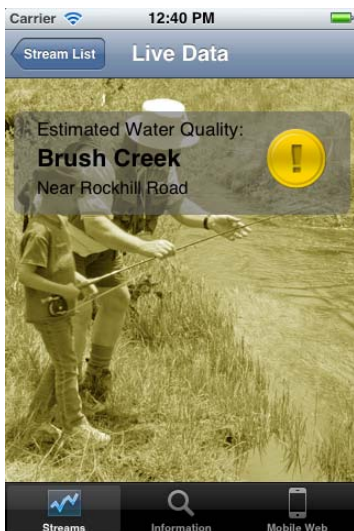
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“Is it safe?”





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Kansas City Waters - KC Water Bug iPhone App

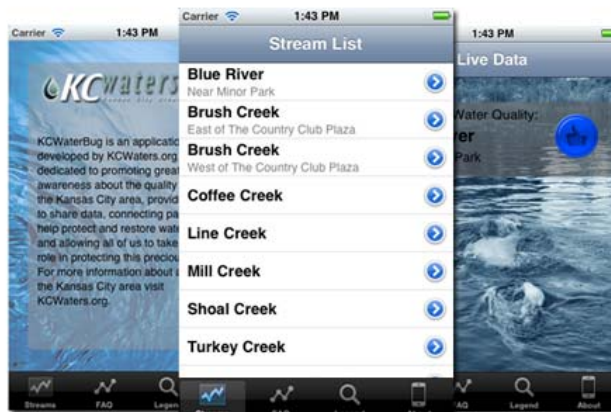


Building upon the Kansas City Urban Stream Network, EPA worked with the USGS and local partners to establish a real-time monitoring network in the Kansas City area to provide real-time water quality data. The United States Geological Survey has pioneered an innovative approach for estimating bacteria concentrations based on basic water quality parameters. An example of this information can be found for Indian Creek at State Line Road [here](#).

As part of this project, EPA collected paired e-coli and turbidity samples over the course of 2011, to develop a dataset sufficient to establish the necessary relationship. The results of these samples will be available by clicking on any one of the KC Urban Stream Monitor locations on the [metro area map](#), and then clicking on the link called 2010 Bacteria Sampling. Note these results were in most instances taken at another location on the stream itself, at the potential locations of the future real-time sites.

KCWaters.org has deployed an application for iphones and itouches which provides hourly updates of stream quality. You can obtain this through the Apple Store.

Screenshots of KCWater Bug



For More Information

To learn more about bacteria click [here](#). For the results of bacteria sampling conducted during 2010 and 2011 click on one of the following streams: [Line Creek](#), [Shoal Creek](#), [Blue River](#), [Tomahawk Creek](#), [Little Blue River](#), [Coffee Creek](#), [Mill Creek](#), [Brush Creek](#), and [Turkey Creek](#).

In Kansas, the Kansas Department of Health and Environment is responsible for establishing and enforcing water quality criteria, including bacteria, for streams in the state. These criteria vary, depending on the type of stream and its uses. KDHE has a nice white paper describing bacteria and water quality [here](#).

In Missouri, the Missouri Department of Natural Resources establishes water quality criteria, for bacteria again based on the type of stream. This criteria is found in their Code of State Regulations found [here](#).

Bacteria results from previous years (once per year) may be found by accessing the [metro area map](#), click on the monitoring station and then clicking on water.

For more information about KCWaterBug or KCWaters contact: infokcwaters@gmail.com.



United States Environmental Protection Agency - Kansas City, Kansas



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