ALKALINITY TRENDS IN THE SOURCE WATERS

Niffy Saji
March 6, 2014
Importance of Alkalinity

• Changing alkalinity can affect water treatment process

• Can increase hardness of drinking water, which can cause pipe scaling and costly infrastructure problems
Data Sources

1. Town of Leesburg (2000 – 2013)
2. WSSC (1982 – 2013)
   - Potomac and Occoquan
   - Occoquan
Alkalinity Trend in the Potomac River (Leesburg data)
Alkalinity Trend in the Potomac River (WSSC Data)
Alkalinity Trend in the Potomac River (Fairfax Water Data)
Alkalinity Trend in the Occoquan Reservoir (Fairfax Water Data)
Alkalinity Trend in the Occoquan Reservoir (OWML Data)
Possible Causes of Increased Alkalinity

- Geology?
- Pollution?
- Impact of acid rain?
- Other?
Conclusion

• An increasing trend in alkalinity values was observed in the Potomac River and Occoquan Reservoir, based on data analyzed

• More information on rising alkalinity in rivers in up coming presentation by Dr. Sujay Kaushal