

NEWSLETTER

Issue No. 7

Occoquan Watershed Coalition July 1996

A Pause in the Road Wars

The Road Wars have not gone away; rather we are caught in a period of extended calm — a pause! What's at stake for all of us is the possibility of a connector road from the Prince William County (PWC) Parkway to the Fairfax County (FFC) Parkway bringing some 60,000 commuters daily through Fairfax Station and Clifton, resulting in gridlock on our new Parkway. We must — **all of us** — remain alert for the challenge of such a road remains with us.

The last meeting of the Joint Subcommittee, composed of 3 supervisors each from PWC and FFC was on March 1, 1995. The next meeting of the subcommittee is scheduled at 4PM, July 30 at the PWC Gov't Center. **We will be there!**

So, what has the OWC been about in the interim?

- ▶ The OWC participated in a Citizens Working Group directed by the FFC Board of Supervisors. The working group included citizens from Mt. Vernon, Springfield, and Sully Districts who collectively developed Principles, Strategies, and Measures of Effectiveness on potential crossings of the Occoquan (Apr-Jul '95).
- ▶ Briefed individually members of the FFC Board of Supervisors (Summer/Fall '95).

- ▶ Briefed two newly elected PWC Supervisors, who will sit on the Joint Subcommittee, in Dec '95, and the holdover PWC Supervisor in Feb '96.

- ▶ Presented OWC recommendations on improvements to major roads in the Region to the Commonwealth Transportation Board (CTB), chaired by VA Secretary of Transportation Martinez (Mar '96)

- ▶ Visited with Delegate Jay O'Brien in Richmond during the recent General Assembly session. (Mar '96)

- ▶ Persuaded Mike Thompson, now chairman of the Springfield District council (180 Associations) to become the Chairman of the OWC Oversight Cmte which focuses on the well being of the Occoquan Reservoir, its contiguous parkland, and the sanctity of our drinking water. (Apr '96)

- ▶ Represented individual members and OWC associations at a state sponsored Deer Management Symposium at the FFC Gov't Center. (May '96)

- ▶ Conducted 3 OWC Board Meetings and 3 General Membership Meetings.

- ▶ Attended meetings inside and outside OWC, coupled with extensive correspondence by Fax and letter.

■ Well, the OWC has been in a "consolidation mode" — busy

listening, learning, meeting, coordinating, corresponding and preparing. Each of us, as individual members or as members of the 61 Assns which comprise the OWC, must be alert and remain informed as discussions continue by the Joint Subcommittee, VDOT, FFC Office of Transportation, and others involved with transportation in this region. All of us must continue to work together, for united we will prevail.

Protecting & Safeguarding our Water

The following two articles are companion pieces, as they address the importance of protecting and safeguarding all sources of our Nation's drinking water. This is not a casual matter. Fairfax County downzoned the watershed in 1982 to protect the Occoquan Reservoir and its precious drinking water. This was a wise move and we all benefit from this responsible decision by the FFC Board of Supervisors. No region in Virginia or elsewhere in the United States can fail to protect its drinking water, as more rural areas become suburban and suburban areas become urban with the influx of people and businesses — growth has its price.

Protecting The Occoquan, An Irreplaceable Resource

By Burton Jay Rubin¹

The tragic 1993 deaths from water borne illnesses in Milwaukee serve to underscore the importance of protecting drinking water sources from contamination.

Last August, I was able to take a day's leave from work to participate in an American Water Works Association satellite teleconference entitled "Source Water Protection: An Ounce of Prevention."

This conference, also attended by members of the Fairfax County Water Authority (FCWA) staff and technical personnel from other area water utilities evidences the growing awareness that **watershed protection has an important role in protecting the public health** by helping to assure a sanitary public drinking water supply.

The half million people served by FCWA from its Occoquan source, either as direct, retail customers or through their own local water utilities, can be completely confident that their drinking water is the safest and most healthful available anywhere. Under the stewardship of your neighbors and fellow citizens who serve on the FCWA **it will remain so, with your help.** There are, however, many benefits to be realized from source water protection, even though modern water treatment

processes are able to remove most impurities. The plain fact is that the less polluted water is before it reaches the treatment plant, the less extensive and expensive are the efforts necessary to provide high quality drinking water.

Source water protection means preventing the pollution of rivers, streams and reservoirs such as the Occoquan. Management of the land around a reservoir is a key aspect of source water protection. Other elements include delineating source water protection areas; identifying sources of contamination that may impact on those areas; adopting measures to eliminate, reduce, and manage pollution sources; and planning for the future.

Virginia has a long history of recognizing the importance of source water protection dating back to Governor Gage's 1610 proclamation of Jamestown, which declared:

There shall be no man or woman dare to wash any unclean linen, wash clothes, ... nor rinse or make clean any kettle, pot, or pan, or any suchlike vessel within twenty feet of the old well or new pump. Nor shall anyone aforesaid, within less than a quarter mile of the fort, dare to do the necessities of nature, since by these unmanly, slothful, and loathsome immodesties, the whole fort may be choked and poisoned.

Some of the purely economic costs alone of failure to protect our Occoquan source water would be staggering beyond imagination. Drinking water sources are rarely expendable or replaceable and that is certainly true of the Occoquan, supplying a heavily populated metropolitan

area. Businesses will not locate or remain in areas that are not served by dependable water supplies. No community that jeopardizes its drinking water supply can expect to prosper.

Other economic costs can be more readily quantified. The expense of water treatment, including chemicals and facilities increases directly with the decline in source water quality. The costs following the crypto sporidium contamination of Milwaukee's river water supply included \$89 million in required system improvements in addition to millions more in immediate costs.

The cost to the public health of failing to protect source water is, of course incalculable. Certain contaminants such as crypto sporidium, are extremely difficult to remove from water supplies with conventional treatment methods. Fortunately, most people who are exposed to this particular biological contaminant do not become ill. For others, it can result in gastrointestinal symptoms which are usually self-limiting, resolving themselves in a couple of weeks. For individuals whose immune system is compromised by AIDS or other illnesses or conditions, however, the disease can be chronic and life threatening. No Food and Drug Administration approved drugs are known to be currently available to treat infection in such people, although some promising clinical trials are believed to be in progress.

¹The views expressed are solely those of the author and are not necessarily to be attributed to the Fairfax County Water Authority.

Source water that is maintained at the highest possible quality will require less treatment and therefore contain lower levels of disinfection residual byproducts, which is desirable for everyone's health.

The history of the use of the Occoquan as a drinking water source, itself persuasively makes the case for source water protection. Use of the Occoquan basin as a public water supply source for Northern Virginia began in 1950 when the Alexandria Water Company constructed a low dam and reservoir near the town of Occoquan. A high dam was added in 1957. FCWA acquired ownership of these facilities in 1967.

The basin upstream of the Reservoir extends for some 30 miles in a north-south direction and for about 34 miles in an east-west direction. It drains approximately 374,000 acres lying within portions of Fairfax, Prince William, Fauquier, and Loudoun Counties and all of the cities of Manassas and Manassas Park.

The early 1960's saw urban growth in the region of unprecedented proportions. With this growth came the construction of additional sewage treatment facilities, and expansion of existing facilities discharging to the river. By the mid 60's the water quality of the Occoquan Reservoir had degraded significantly, resulting in massive algae blooms, and periodic fish kills, as well as taste and odor problems in the finished, treated water reaching the public. This unsatisfactory state of affairs led to authorization of a study of the

Reservoir and subsequent adoption of A Policy for Waste Treatment and Water Quality Management in the Occoquan Watershed ("Occoquan Policy"). Steps implemented under the Occoquan Policy included creation of a regional sewage treatment plant operated by a regional authority with strict effluent standards; the Occoquan Watershed Monitoring Program and the Occoquan Watershed Monitoring Subcommittee to oversee and evaluate the Reservoir's water quality; and establishment of the Occoquan Watershed Monitoring Laboratory, an independent facility that conducts the required testing and surveillance of the Reservoir. These measures have been highly successful in eliminating point source pollution, which is the type caused by discharge of inadequately treated waste water from sewage plants and industrial effluents.

Additional steps taken to reduce non-point source pollution such as storm water runoff have included development density restrictions in the watershed and use of Best Management Practices (BMPs), measures to reduce the uncontrolled release of drain off from developed areas. These actions have brought the Occoquan back to being a source of high quality water for Northern Virginia. In the process, it has also become perhaps the best studied drinking water source anywhere.

Source water protection can never be just a concern of water purveyors. Public water providers throughout the Country recognize that community

awareness and involvement is essential to any successful source water protection program. This is particularly true now in the case of the Occoquan as it faces new challenges as a drinking water source.

Our success in bringing the Occoquan back to serve as a high quality water source must never be taken for granted. As with every system in nature, what can be healed can also be hurt. Even as the Occoquan has been brought back, it is, and will always remain, vulnerable. As government, in particular, shifts its attention to other pressing issues such as jobs and the economy and transportation and infrastructure, we must always retain an appropriate sense of perspective. **That perspective requires a recognition of the primary importance of clean drinking water to the well being of every community. With it, solutions to all other problems are possible. Without it, little else can matter.** *"MR. BURTON JAY RUBIN is a ten year member of the Fairfax County Water Authority, who has been recently reappointed for an additional three year term. MR. RUBIN is an attorney in Private Practice."*

Reflections on Protection

By Dr. David W. Schnare

Much of our public health culture is rooted in an 1849 event in London. Dr. John Snow documented the spread of cholera through the water supply served by the Broad Street Pump. Apocryphal, the legend has it he stopped the epidemic by removing the pump handle and thus closing the well. As Mr.

Rubin discusses in his article, we will never be free of the risk of water borne diseases. Unlike the Broad Street pump, however, we can't just close the water supply. Our protection must be perpetual vigilance and intelligent engineering.

Threats to the Occoquan water supply come exclusively from within the watershed, that area of land draining into Bull Run and the Occoquan. We have several threats on the watershed, only some of which have been adequately addressed. Most obvious to the traditional sanitarian is the waste water treatment plant on the upper part of the watershed. The County has applied the most sophisticated engineering available to ensure the discharge water is safe. Nevertheless, a breakdown in that plant could have catastrophic results, demanding constant vigilance on the part of County staff — a job they have done well, to date.

As Mr. Rubin points out, the potential for microbiological contamination of water supply is real. There is no way, nor any desire to sanitize the wildlife preserves surrounding the reservoir. Nevertheless, the beaver and deer are potential carriers of "bugs" like those found in Milwaukee. Protection from that threat must be applied at the water treatment plant.

Another "natural" threat to the supply is the construction of the reservoir itself. An artificial lake, the Occoquan Reservoir is merely the flooded land above the dam. These trees were cut, but the stumps and other snags were left in place when the lake was formed. Now the siltation normal

to a lake is significantly reducing the amount of water stored behind the dam. Normal solutions to this problem generally involve dredging the lake, something not possible when old stumps and large-scale debris cover the bottom— another example of the need for intelligent preventive engineering. This threat to the reservoir is not a "possibility" but a certainty, one that will arise in the foreseeable future.

There are two other threats to the watershed that can only be controlled by intelligent engineering and planning. One is the "non-point" source of chemical contamination. Runoffs from the rapidly multiplying parking lots and lawns now bordering the southern side of the reservoir are a serious concern. The catch basins intended to hold runoff water during storms are frequently called "best management practices," somehow suggesting they are the best means to protect sensitive water supplies. Actually, the **best** practice is the one applied by Fairfax County — restricted land use. All across the nation, reservoirs like the Occoquan are carefully protected by not allowing development within about half a mile of the water. I heartily recommend this approach for the remaining acres surrounding the water supply.

The second threats are the two roads that cross the reservoir. Most problematic is Yates Ford Road. Despite the best efforts of the State Highway Department to warn trucks away from this narrow rural road, trucks carrying tons of toxic and hazardous cargoes pound over a bridge that straddles the reservoir. Only

through rerouting of trucks and reduction of traffic over the clearly defined Occoquan Reservoir will this major threat to public health receive adequate attention. Of all the threats to the water supply, none goes so unaddressed as the threat from these roads. *"DR. DAVID W. SCHNARE is Special Assistant to the Director of Compliance at the EPA by day; at night he attends George Mason School of Law. He is the author of more than 40 major articles and books, and his EPA specialty has been the development of regulations pertaining to and overseeing clean water issues. He is currently a member of the Environmental Quality Advisory Council for Fairfax County."*

Information on Deer Control Management Meeting

State and local officials are serious about the overpopulation of deer in Virginia. Meetings are presently underway in the state to consider how best to manage the size of deer herds and the damage they cause. On May 8 OWC attended a meeting at FFC Gov't Cntr where various means of managing the deer population were discussed. Local, state, regional, and federal park officials, representatives of Dpt of Game & Inland Fisheries and state and county agencies are working together to solve this state wide problem.

More Later!!