



WATER CONSERVATION: AN OVERLOOKED SOURCE WATER PROTECTION TOOL

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INTRODUCTION

There are many measures or “tools” that water systems can utilize to protect their sources of drinking water. They range from regulatory methods like overlay zoning to non-regulatory measures such as public education. However, an overlooked source water protection tool that can be effective is water conservation. In this article, I will illustrate some ways that reducing water use can directly impact the continued sustainability of drinking water sources.

IMPROVED WATER RESOURCE AVAILABILITY

If long-term water conservation efforts such as a leak detection and repair program and encouragement of best management practices available through programs such as EPA’s WaterSense program are successfully implemented, water withdrawals will be reduced. This will undoubtedly result in cost savings from decreased energy and chemical use. However, it also will improve long-term aquifer and surface water sustainability and replenishment. With improved water availability, the system will be better equipped to handle emergencies such as drought, mechanical failures, or contamination. Personally, I know of systems that have been so successful with water conservation practices that they have been able to take some less efficient sources off-line. With improved water resource availability, the future need for new water sources is sometimes not necessary or at the very least can be reduced in scale.

OTHER IMPACTS OF REDUCED WITHDRAWALS

With diminished pumping, the area that has the potential to contribute water to the drinking water source will decrease and the time of travel will increase (the distance a particle will move through an aquifer and/or surface water body in a specified amount of time). The result may be a reduced number of potential contaminant sources and correspondingly, fewer risks of contamination that must be addressed in a source water protection plan.

Reduced withdrawal rates can also be beneficial in that they would reduce the threat of drawing in water of objectionable quality either from a naturally occurring or contaminant source. For example, wells near a surface water body would be less

likely to under the direct influence of surface water. For surface water sources, smaller withdrawals would result in improved in-stream flows.

CONCLUSIONS

Maintaining the sustainability of surface and/or groundwater sources through water conservation can be an important element of a successful source water protection plan. Water conservation has very tangible benefits both financially and from a preservation standpoint. New York Rural Water Association’s staff can help your system with water conservation efforts. I would be glad to assist you with these efforts in combination with preparing and implementing a source water protection plan. I can be reached at 1-888-NYRURAL, ext. 170 or by email winkley@nyruralwater.org. 💧💧