

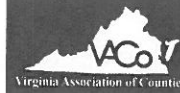
Recognizing the Best in County Government Programs!



# 2012 Achievement Awards

ATTN: 2012 Achievement Awards Program  
Virginia Association of Counties  
1207 East Main Street, Suite 300  
Richmond, Va. 23219-3627

## Call for Entries



## 2012 VACo Achievement Awards

Deadline: June 1, 2012

### Application Form

All applications must include the following information. Separate applications must be submitted for each eligible program. Deadline: June 1, 2012.

#### Program Information

Locality Wythe County, Virginia

Program Title New River Regional Water Authority

Program Category Regional

#### Contact Information

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Signature of county administrator or chief administrative officer

Name Stephen Bear

Title Assistant County Administrator

Signature\* Stephen D Bear

\*Entries without this signature will not be accepted.



Wythe County  
340 South Sixth Street  
Wytheville, Virginia  
2012 Virginia Association of Counties Award Application  
New River Regional Water Authority

Wythe County is submitting an application for the 2012 Virginia Association of Counties' Achievement Awards. The regional collaboration project the County is submitting for consideration is the New River Regional Water Authority. The Authority was formed after a 50 year projection study found communities surrounding the New River would be faced with high water demands in years to come. With growing populations, the study found current well systems would overload capacities before the end of the 50 years.

The solution to the problem was to form a regional water authority to oversee the construction of a collective water treatment plant in Austinville, Wythe County, Virginia. The water treatment plant was connected to existing and newly constructed waterlines throughout Wythe County, Carroll County, and the Town of Wytheville. Currently, new projects are under construction as each locality continues to grow its connections to the system.

The regional effort was a long-term solution to an overwhelming problem faced by several communities in the 50 year study. By working together, three communities were able to supply residents with a consistent water source. The intergovernmental operation promotes the idea of governments working together to provide a basic need for their communities. This system can be easily replicated by other governments through open minds and strong wills to provide for those they serve.



Wythe County  
340 South Sixth Street  
Wytheville, Virginia

2012 Virginia Association of Counties Award Application  
New River Regional Water Authority

## **Problem**

Adequate water supply is a necessary infrastructure for any community. Like many rural locations, Wythe County and surrounding areas found themselves with diminishing supplies and ever growing demands. Individual communities found themselves lacking resources to meet the needs of the residents they served. Through collaboration and commitment the communities worked together to create a regional solution to their expansive problem.

In 1999, the Mount Rogers Planning District Commission gathered local communities to conduct a study to find the most economical solution to a common problem. Supplying water to residents was becoming increasingly difficult as community water wells dwindled and populations grew. The study aimed to determine a solution for three counties, four towns and one city that populated the area. These include Carroll County, Grayson County, Wythe County, the Town of Hillsville, the Town of Independence, the Town of Fries, the Town of Wytheville, and the City of Galax. Among those included in the study Carroll County, Grayson County, Wythe County and the Town of Independence currently had groundwater sources supplying their communities.

The study examined demands in the communities from 2005 to 2055. Carroll County, which includes the Town of Hillsville, faced a demand of 0.986 mgd in 2005 and an increase to 3.144 mgd in 2055. Grayson County, which includes the towns of Independence and Fries, faced a demand of 0.316 mgd in 2005 and an increase to 0.689 mgd in 2055. Wythe County

faced a demand of 3.257 mgd in 2005 and an increase to 10.542 mgd in 2055. The city of Galax faced a demand of 2.360 mgd in 2005 and an increase to 3.882 mgd in 2055. In total, the demands in 2005 were 6.919 mgd. These demands nearly tripled during the fifty (50) year projection period to a total of 18.197 mgd.

In the end, the study found a regional solution to the water demand problem was necessary in order for each community to be well supplied. Researchers suggested the New River, central to nearly every community, was the most viable water source. A water treatment plant was suggested to be constructed in the Austinville community of Wythe County to draw water from the New River to service residents.

## **Solution**

Eventually communities found the wide spread nature of their locations was not conducive to one water system. The communities broke into two groups, the Virginia Carolina Regional Water Authority and the New River Regional Water Authority. The New River Regional Water Authority comprised itself of Carroll County, Wythe County, and the Town of Wytheville. With this group of communities, a new water demand projection was created. In total the 2005 demand was 4.243 mgd increasing to 13.686 mgd in 2055. This created a somewhat smaller problem to rectify; however, it was a huge undertaking even with the decreased scope.

In 2003, the New River Regional Water Authority was officially formed. The beginning purpose of the Authority was to designate services to be provided to the communities, determine number of board members, name initial board members, and create the initial authority costs and

rates. Public hearings were held to gather community input regarding the new authority and the creation of a new water system. Resolutions were passed by each governing body showing its commitment to the authority and the new water system.

The authority consists of seven board members including two from Carroll County, two to three from Wythe County, and two to three from the Town of Wytheville. There is a chairperson, vice chairperson, and secretary-treasurer who rotate between the three local governments. Representatives on the board include county administrators, Board of Supervisors' members, town managers, town council members, and county engineers. Each governing body contributes to the authority's debt service based on a percentage of ownership. Carroll County owns 24.4% of the Authority. Wythe County and the Town of Wytheville each individually own 37.8% of the Authority.

The Authority elected to take the suggestions from the fifty (50) year study and construct a new water source. As suggested, the new water source would draw from the New River and be located in the Wythe County community of Austinville. Austinville is an unincorporated community in southeast Wythe County. It is the birthplace of Stephen R. Austin, who is noted as the founder of the state of Texas. The community is known for its zinc and lead mining operations, which began during the Revolutionary War.

The scope of the water system project included creating the new water treatment plant in Austinville and creating outtake lines to pump stations that would take water to residents of the participating communities. The water treatment plant would have a incremental design with pre-oxidation. There would be independent treatment trains and a SCADA operational control

system. The authority set a timetable for the water treatment plant's beginning date occurring in May 2007 with the plant becoming operational in March 2009.

## **Results**

Today, the New River Regional Water Authority functions to ensure the connection of the communities to the operating water treatment plant. The plant currently employs six individuals. Because of the water treatment plant, all participating communities have extended water services to residents who would have been without public water had it not been for the creation of the Authority. For example, Wythe County has recently extended its public water service to areas of the County including Rural Retreat, Old School Road, and others. Future water extensions include areas of Barren Springs and Speedwell.

The New River Regional Water Authority has ensured that not only is the demand met for the next fifty (50) years but growth can occur in the communities it serves. One underlying problem solved by the creation of the Authority and its water treatment plant was industrial development taking place in Wythe County. During the time of the Authorities creation, Wythe County was undertaking a project to attract large industry to the area. However, it faced the serious problem of water demand. With the current functioning well system, large industry demand would have pushed the supply beyond capacity. With the existence of the Austinville treatment plant and the subsequent water extensions, the Progress Park Industrial Development Project is adequately supplied with water for incoming tenants.

## **Criteria**

The New River Valley Regional Water Authority was created to address a serious problem faced by numerous communities. By coming together as one entity, the group of governing bodies created a solution often overlooked when facing such a problem, collaboration. The intergovernmental operation promotes the idea of governments working together to provide a basic need for their communities. This system can be easily replicated by other governments through open minds and strong determination to provide for those they serve.

## Raw Water Intake



## Bridge Crossing

24" Finished Waterline





# High Service and Backwash Pumps



# Instrumentation



# Flocculation Basins



# Sedimentation Basins

