

Canaan Valley Wastewater Public Meeting
January 11, 2006
Canaan Valley Fire Hall

Rob Stull called the meeting to order and welcomed the audience at 6:05pm. Rob encouraged everyone to sign in with their contact information so that they could receive information and updates about the project.

Rob stated that in 2000 Thrasher Engineering developed a feasibility plan for a centralized wastewater treatment facility in Canaan Valley. Hamrick PSD asked CVI to help them evaluate other options for treating wastewater in the Valley. Two years ago CVI contracted Lombardo and Associates to develop a feasibility plan for using the existing 17 wastewater treatment plants as another option for treating wastewater.

All but one has joined the current effort to figure out the best way to spend the \$2.8 million State and Tribal Assistance Grant (STAG) funding that has been awarded to implement an innovative decentralized wastewater treatment project in Canaan Valley. This grant will only cover 55% of whatever projects are chosen. CVI invited all existing plant owners to participate in developing the plans to spend the STAG resources.

Rob also went over the agenda.

Rob stated that the current project is not a DEP or CVI effort; it is an effort with the residents and landowners in the Valley to deal with wastewater treatment in Valley.

Rob introduced Pio Lombardo from Lombardo and Associates. Pio began his presentation with a list of components for his update on the project.

Pio noted that by and large all the existing plants need to be replaced. Most are at least 20 years old and the technology (extended aeration) is not the best for variable flows created by the Valley's large seasonal and weekend use.

Another component is an analysis of potential build-out of the Valley. Pio presented a map showing the southern part of the Valley with existing public land, existing sewer areas, existing developed areas with septic systems, and undeveloped parcels available for future development.

Pio presented the results of the analysis showing 456 developed parcels in sewer areas, 474 developed parcels in unsewered areas. In addition there are 356 undeveloped parcels within existing sewer areas and 473 undeveloped parcels in unsewered areas.

The facilities plan needs to be comprehensive and needs to identify how wastewater treatment will be dealt with on every parcel. They have not found any places where initially it seems that wastewater treatment is going to constrain development.

Pio explained how they came up with approximately 2500 acres that can likely be developed—by subtracting known wetland areas from undeveloped parcels. Based on a development density of 1 equivalent dwelling unit (EDU) per acre and using current zoning regulations the estimated build out population is 6,640. This maximum development will likely create an additional 465,000 gallons per day of wastewater. The total permitted wastewater output from the existing plants is also around 500,000.

One person asked if there were any plans to connect existing on-site septic tanks to package treatment systems. Pio responded that we have no reason to believe that there are many septic systems not functioning properly and that would be the main reason for on-site systems to connect to another treatment system, but right now with information from the county health officer and reported failure rates, there doesn't seem to be a problem with on-site systems.

Another person asked about how we are predicting systems that would be bad. Is that based on the size of the lot? Pio answered that if septic systems are sited and installed correctly, we don't expect them to be failing. Pio also noted that with the sensitive soils and bedrock in the Valley, ground water needs to be protected and that this can be done with existing septic system technology. He did note that because of the sensitive environment of the Valley, there is reason to monitor the on-site systems.

Another person asked about development density because Pio noted that 1 dwelling/acre was used to calculate build out and they live in a more dense development. Pio responded that the numbers being presented are estimates that should even out based on development through the Valley.

Pio also noted that this project focuses on existing development and not for future development. Developers are responsible for creating acceptable treatment solutions on new lots.

Pio discussed current treatment plant conditions. Pio clarified that I/I stands for inflow and infiltration which is the water that runs into collection systems from ground water and surface runoff. I/I problems are dealt with in 2 ways--treat the water or keep it from getting into the system. Pio identified areas that are probably on the side of needing to keep the I/I from going in to save costs in the size of treatment systems.

Pio also presented the age of the existing systems—noting that almost all are over 20 years old and that the treatment technology is not desirable for current applications. Other problems include rusting tanks and lack of instrumentation to monitor the systems.

Treatment alternatives for replacing plants are grouped in 2 types: Recirculating media filters and membrane bioreactor. Pio gave a brief description of how the technologies work. Recirculating systems filter wastewater multiple times through different types of filtering materials--from black beauty to synthetic fabrics. Membrane bioreactors use activated sludge inside a tank with bacteria digesting solids and suction pulling out clean water. These systems were originally designed for space travel!

One person asked if one type was more economical. Pio answered that membranes are good for producing high quality effluent (what comes out of the systems) with higher flows. Pio noted that the small flows of some existing systems are too small and that a membrane bioreactor requires a lot of maintenance. 100,000 gallon/day of flow are about the minimum of flow needed to make the membranes cost effective.

Pio noted that most of the systems don't have a way to measure wastewater flow. Pio showed that existing water use flow is well below the permitted flows for the plants. Water use does not show I/I.

Another person asked about how we know how much plants are actually discharging if we don't have data. Pio noted that monitoring is done by spot measurement and most don't have flow rates—Pio points out that without instruments it's hard to measure. CarolAnn Davis from EPA noted that the size of the discharge determines the type of measurements that dischargers have to collect and report.

Pio threw out the idea that new systems be designed to meet current water use rather than permitted flow.

Pio estimates that the new systems are going to cost on average \$10-12,000 per equivalent dwelling unit. Pio also presented estimates for annual operation and maintenance cost and an amount that should be set aside each year for future maintenance costs and that those amount to \$300-500 year. The capital costs can be paid for all at once, over time, or a combination of these.

Pio then presented a table showing capital costs for the systems and a life-time cost (factoring in how long systems are expected to last).

Pio pointed out that the numbers he is presenting are based on designing to the full permitted flow, not the current use. Pio noted that DEP would have to agree with this type of design and that we are talking with them about that.

Rob recapped by saying that plants that are now under their permitted flow and if they don't have intention to develop in the near future, they could save a lot of money by building for a smaller flow. This could be done with the current systems because they are easily expandable and regulations/rules exist to trigger expansion when flow gets close to the plant capacity. They would not be giving up the right to discharge the full permitted flow, but they would not have to spend the capital upfront to build to the full flow—they could expand the systems over time as increased flow is needed.

Rob asked Pio to explain how plants would handle spikes. Pio explained that the systems will have tanks up front that will provide a steady flow into the treatment systems and the size of the tank will be based on the spike flows. The tank holds the water and then blends it into the systems slowly.

Another person asked for clarification about what DEP needs to agree to on the size of the plants. Pio clarified that with small facilities usually DEP requires that the plants be built to the full permitted flow. With the idea we're discussing they would have to allow for small plants to be built with specific triggers for when they need to be expanded.

Another person asked about the collection systems and how their costs will be born by the users. Pio explained that the grant dollars are going to be used up by rebuilding the plants and that if the collection systems need to be upgraded that will be an additional cost and that the owner is responsible for checking on the condition of those systems and fixing them if need be and that cost is going to be paid for by users. Pio also noted that we don't really have any information on I/I conditions. Gathering information on I/I should be a priority for the next phase of this project.

Another person asked for clarification about what the numbers really cost—do they include the clean up/removal of existing systems. Pio stated that the cost estimates he is presenting should include enough for doing this. Pio noted that the existing systems are small and the cost for removing them is a small portion of the total cost to replace the plants.

Pio then presented different scenarios for grouping the plants. The first is leaving all the plants as is with their permitted flows. The second scenario groups North Point/Beaver Ridge and also Deerfield/CVNWR and the third scenario groups Black Bear with North Point and Beaver Ridge and adds Windwood with Deerfield and CVNWR. The rest are too far apart to consider consolidating.

Pio then moved on to management and legal issues. The legal issues involve the existing rules and regulations of homeowners association which are the actual owners of some of the plants. The management issue that there needs to be a public service district to take over the plants and their management. Either the existing PSD needs to take over or a new PSD must be formed.

A question was asked about current owner of plants—some are not homeowners associations. Pio clarified that whoever the owner is, they will have to agree to giving the plants up to the PSD.

Pio noted that deciding on the PSD is time critical because of the financial state of the government. Pio introduced John Forren from EPA. John noted that the money is targeted to Canaan Valley, but it is not secured and the longer it sits without being obligated to specific projects, the more interest it draws and the more likely it is to be taken back by the government to cover other expenses. John noted that \$900 million was taken back last year and that the STAG funding for Canaan is vulnerable. John emphasized that it is urgent for local residents to agree on a management entity and about how to spend the money.

One person asked what would happen if Timberline and Windwood petitioned to create their own PSD. She noted that most development have reserved the right to form a PSD

in their covenants. It was pointed out that the county commission and PSC would have to approve this.

One County Commissioner asked about the problem that if the existing PSD takes over the Canaan Valley systems, this could affect their existing customers. Pio noted that our expectation has always been that there would be a separate rate for new customers. The Commissioner noted that there are always legal issues around having separate rates.

Another person noted that systems always cost more than expected and that users are going to end up paying more for new systems. Rob noted that most of the plants have to respond to compliance orders if they don't put in new systems.

Another person noted that none of the members of the board of Hamrick PSD live in the Valley and it's unlikely that they would take on the Valley.

Pio noted that money has been allocated to wastewater improvements in the Valley and studies have been completed. There must be a PSD to adopt the plan and apply for the additional funds.

Another person asked what happens if the plant owners don't do anything. Mike Johnson from DEP noted that 10 plants have received orders to submit plans for improving treatment. DEP is not going to take any further action until the process is over. They are waiting to see who participates in the public process. Pio also noted that DEP is willing to provide a 40 year loan to the project at 0.5% interest rate for a publicly managed entity to cover costs that are over and above what can be covered by the grant funding. Pio and Mike also confirmed that this loan money can serve as all or part of the 45% match needed to use the STAG funds.

Another person asked what happens to users of systems they don't own a stake in if those owners chose not to participate. Pio noted that the cost estimates presented will generate a lot of interest. Pio noted that the turnout tonight is pretty good for a community of this size. He thinks that as the information goes out about the opportunities people will become interested. He also thinks that a small group of people can drive the decisions.

Kiena Smith noted that those people who get on board will have access to the grant and those that don't won't.

Another person noted that the PSD will be defined by boundaries and that people that are now on private systems will be obliged to join in a system. Someone noted that the Valley is already in the Hamrick PSD service area, but that we don't pay unless we get services.

Pio also noted that the community should decide what it wants and then go to the PSC to negotiate for getting that done—for example getting different rates for different developments.

Rich Pepino from EPA noted that if a big chunk of the economy is tourism, water quality is important to that.

Someone asked for clarification about if the DEP loan could be used for the 45% match needed for the STAG funding. Pio said yes the loan can be the match. Pio also noted that with the grant and the loan there could be a very small upfront cost.

Another person asked about drinking water quality from private wells. Pio noted that the PSD should be not only a sewer management entity but also a water quality manager and that some of the grant money could be used to upgrade on-site systems. CarolAnn Davis noted that EPA has seen the value of management of on-site systems to protect drinking water and that there is money available to help in the management and maintenance of these systems. She noted that we could start in a small area and grow to include other areas. Pio noted that the best scenario is the PSD monitoring on-site systems rather than forcing them to be sewer.

Rob noted that this might be an opportunity for education about septic systems and their maintenance. CarolAnn noted that the local citizens should decide how they want these on-site management they want. Pio noted that the karst and the well dependency is reason to start looking at on-site systems.

Another person asked what she needs to do to make things go forward. Pio suggested that she voice her feelings to the county commissioners and the owner of her existing system and that she talk with her neighbors about the project and encourage them to participate.

Another person asked about water supply and concern about supporting future development with existing waters. Pio noted that we will suggest reuse of treated water wherever possible.

The next public meeting will be on Wednesday February 15 at 6:00pm at the Canaan Valley Fire Hall.

The meeting was adjourned at 8:25pm.