December 8, 2020 2pm zoom meeting

Participants:
Jack Locey, Brelje & Race Consulting Engineers
Justin Witt, Brelje & Race Consulting Engineers, environmental specialist
Chris Watt, groundwater engineer with North Coast Regional Water Quality Control Board
Paul Nelson, hydrogeologist Project Geologist, North Coast Regional Water Quality Control Board
Valerie Hanelt, Kathleen McKenna, Joy Andrews AVCSD
Yoriko Kishimoto, 12330 Anderson Valley Way

Goal of meeting: to bring people together in one "room" to see if proposed water supply project has chance of affecting (a) the contamination plume of elementary school and (b) the currently excellent quality and quantity of water Yoriko Kishimoto (neighbor) gets already from well next door. The plume would also obviously affect the school children and staff.

Chris Watt reviewed Richard Slade report from 2017. Desktop study, no field work. Is there design level report planned? no

Regulatory framework:

- Point Source Control & Groundwater Protection Division Clean-Up Unit - Paul Nelson and Chris Watt. Their job is regulating discharge of waste into watershed.
- Drinking water division ofState Water Board: will they requires some source test? Jack: yes, pumping tests on some wells and drinking water source assessments on them all.
- Paul: Drinking water standards can be less stringent for some constituents than requirements for discharge clean-up requirements
- Any current restrictions on use of school well used for drinking water supply? No. But well is 200 feet from plume. Note: actual distance is about 380 feet based on groundwater cleanup documents.

Plume of contamination: "significant data gaps". more monitoring wells are proposed to be added. (when asked if more monitoring well were proposed between plume and well, Paul said they wanted to add one, but ran into "site issue".)

* The contamination is "low threat closure", but category 5 (???is cat 5 a 'high' 'low threat'?)
* One question is "what is influence of the water withdrawal to plume"? what would be prudent steps to take?
* Paul said based on his experience as a hydrogeologist for 18 years he would recommend a 72 hour pump test, and capture zone analysis Not necessarily true that drawing water from south side would have bigger impact on plume than the domestic school well, which is on north side. Unknown what or where the "cone of depression" or sphere of influence of the domestic well is.
* State staff seemed to recommend conducting a pump test and commissioning a "design" report, not just desktop report. Pump test to be at least 24 hours, not just one or two hours recovery test.
* Objective would be to better understand draw down cone, cone of depression, how and if groundwater might reverse gradient. The desktop study is very high level, and static. No field data.

Jack and Justin said there are years of data to show "current pattern of pumping". Also, it's in district's self-interest not to over-use the well and trigger cross-contamination. Jack recommended not putting any associated well use conditions into school contract. Suggested that a better document for inclusion of well use conditions would be the in the environmental documents.

Jack made the point that pumping from the AVES domestic well would be more likely to pull contaminants towards, rather than away, from the school well. He said that the AVES is currently on a water quality monitoring schedule and that a drinking water source assessment would have been done before the well was put into service.

Justin said that the amount of draw at the site would be unchanged.

Should district be concerned with how the well is utilized? Yes.

Paul said there are other contamination sites downtown including MTBE - very susceptible to migration and spreading. He hoped district was looking at that carefully. He mentioned Jeff's Chevron which was across Haehl street from the fire department

Preliminary take-aways:

- Jack Locey prefers not to attach well use conditions in the acquisition contract with school ( The purpose of that document is to specify terms for acquisition of assets and conditions under which AVES will receive public water service)
- Paul Nelson recommended more pumping and other studies, hinting at looking at downtown too
- Q: why not build holding tank for fire suppression purposes at elementary school? Probably less expensive than bringing drinking system all the way out to school? (How many gallons recommended for that?) A tank at the school site would be very large in order to provide the same volume of water as will be available from the public water system and a dedicated high capacity pump station would be needed to supply the water at the proper pressure for fire suppression.
- Follow-up - Jack will bring a couple options to board. One - to conduct a study that includes a pump test of the domestic school well to identify what well production rate would be safe (get field data, not paper study), Two - to include well operational conditions/mitigations into the EIR document that limits well production to some rate and annual withdrawal amount similar to current operations.

ANDERSON VALLEY COMMUNITY SERVICES DISTRICT WATER PROJECTS COMMITTEE
REGULAR MEETING HELD ON THE FIRST THURDAY OF EVERY MONTH AT 10:30AM VIA ZOOM
CONTACT: JOY ANDREWS, GENERAL MANAGER (707) 895-2075 (T/W/TH)
water.avcsd@gmail.com

Transcription of the 12/3/20 Zoom Panel for the Boonville Clean Water Project.
Presenters:
Francine Fua, Division of Financial Assistance, State Water Resources Control Board. Boonville Clean Water Project Manager
Dave Coleman, Senior Engineer Brelje and Race
Jesse Davis, Planner, Mendocino County
Roy O'Connell, North Coast Region (Dist 1) Water Quality Control Board (Groundwater Permitting)
Charles Reed, North Coast Region (Dist 1) Water Quality Control Board (Groundwater Permitting)
Valerie Hanelt, Chair Anderson Valley Community Services Director (moderator)

Val: Thank you so much, everyone, for attending. I would like to introduce our Zoom panelists.
Val: We have with us today Francine Fua, our Project Manager. She's at the State Water Board, division of Financing. Whenever we talk about this project and costs, and our grant, we are referring to the fact that we are working with the State to pay for the costs of the infrastructure.
We have Dave Coleman. Dave is our senior engineer with the company, Brelje and Race, who we have contracted with us to plan our Waste project. Dave has been working with us for 5 years.
We have our Regional Water Quality Control board represented; Roy O'Connor, and Charles Reed.
We have a representative from the Mendocino Building and Planning: Jesse Davis, who also has been working with us for many years and is very familiar with the project.
The first question is directed at Dave Coleman.
<u>What is the proposed "MBR" system? Why are these being used worldwide instead of old-fashioned sewage treatment facilities?</u>
Dave Coleman: An MBR is a Membrane BioReactor, and it is really simply a form of activated sludge technology. Activated sludge is the biological process that just about every treatment plant in the country, if not the world, uses for wastewater treatment to achieve secondary treatment results. The MBR is an advance that has been made over the last two to three decades to simplify the process and make it more reliable and more robust in how it performs. The biological process requires the biology that is performing the treatment of the organics in the wastewater to be re-circulated in the tanks and normally that had been done previously by using clarifiers to settle those organisms down and then put them back into the aeration basins. MBR is simply a way of doing that without the clarifier, and instead use membranes to filter the water through so that the biology stays in the reactor, in the aeration basin. In effect, you are getting filtration of the water so you are getting a near tertiary effluent from the system. It is more reliable and it requires less operator attention to make it be reliable and function. It's commonly used now for small and medium size wastewater treatment plants.
Val: We need to know a little more about the noise and smell factor.
Dave: The noise from an MBR is no different from any other activated sludge secondary treatment plant in that the noise would come from the aeration blowers. These are the machines that force the air into the wastewater. In small plants like this, we are able to house those blowers in a building so as to minimize the noise going off-site. That is planned for this project; to house those blowers in the same building that we are housing the treatment tanks. That building will also help keep any odors from the process contained and potentially even treated before being ventilated outside the building. An MBR, because it is a more reliable process, is less prone to any kind of upset that might result in objectionable odors. It doesn't have septic smells, even immediately near it, because it is an aerobic process.

Val: What happens to the solids and the effluent? It comes in together from a sewage pipe and then what happens?
Dave: In a secondary treatment plant like this, where we are not employing primary treatment, so we are not settling the solids as they come in, the biology of the system digests those solids. The solids that result from this process are really the organisms that are expended in that process. These are called "bio-solids". Those have to be removed from the system because they do accumulate. In this size plant we would remove them as a liquid and have them trucked away from the facility rather than processing them on site. Processing bio-solids presents another element of exposure that can form smells, so instead, we will truck them away to another facility to be processed.
What is being injected into the ground is clarified and stabilized effluent that is near tertiary levels and is suitable for underground disposal and/or it could be used for agriculture landscape and turf irrigation, which is what we have been proposing at the various sites we have been considering.
Val: What are some of the other places that MBRs inject water? Do they inject them into spaces that the public has access to?
Dave: Yes, disposal can be done under places where other activities are occurring above ground. Obviously we don't want any permanent facilities over the drain fields in case we need to access those components, but you can have ball fields, or parking, or campsites over top of the disposal fields.
Roy: The three MBRs that I worked on quite a bit are the MBR facility in Smith River, CA and that's with the Tolowa nation. There's another MBR facility with Cher-Ae Heights Trinidad Rancheria, which is a casino in Humboldt County. There's a new MBR facility being installed under this grant program in Lewiston. The two MBRs facilities that would be similar to this one, one in Humboldt and one in Del Norte, both of them very benign as far as odors, in fact there really aren't strong odors from those two facilities. When you are inside there is some machinery noise, but outside the building you can't hear it.
Val: We are wondering if it affects the usability of their casino areas because they have an injection field?
Roy: It depends how the leach field is constructed. If it is constructed for use above it, sure, in Smith River their leach field for their treated effluent is used for ag operations on top – for shallow depth ag operation. In Humboldt Co at Cher-Ae Heights, they have it on a hillside, it's not fenced off, it's an open hillside where they dispose, and people do walk up there. It is a grassy hillside.
Val: Are you aware of any MBRs in small cities that have the injection field under softball fields or playground areas?
Roy: I'm not because I haven't been involved in a project that has proposed that. What is somewhat similar with a lesser technology, a much lower quality wastewater, their disposal field is potentially a soccer field. That wastewater is of a much lower quality.
Val: <u>Why is that State, through whatever funds it can gather, including not even charging connection fees, picking up all the costs for this $16 Million project?</u>
Francine: Right now, Boonville would be eligible for $8 Million from the Small Community Grant program. This is the Clean Water State Revolving Fund. We would have to subtract the Planning Grant, which is 500K so that would be $7.5 Million available. Anderson Valley right now is considered a Severely Disadvantaged Community because the MHI (Mean Household Income) is below 60% of the statewide MHI so right now Anderson Valley is eligible for 100% grant for $8 million and the cost per connection would be $75,000. Another program that Anderson Valley would be eligible for is the Prop 1 Groundwater Grant. That amount is also $8 Million. This one is eligible because the ground water is affecting drinking water sources.

**Table 1. Limits on Grant Amounts for Approvals by the Deputy Director of the DFA**

| | Planning | Implementation | Implementation (Drinking Water Treatment Projects Benefiting a DAC/EDA) | Implementation (Septic-to-Sewer Projects Benefiting a DAC/EDA) |
|---|---|---|---|---|
| **Minimum*** | $100,000 | $500,000 | N/A | N/A |
| **Maximum** | $2,000,000** | $50,000,000** | $5,000,000*** | $8,000,000*** |

* The Deputy Director of the DFA on a case-by-case basis may approve funding of projects below the minimum amounts for good cause.
** When funding a groundwater cleanup program, with multiple projects funded under a single agreement, the maximum grant limit will be applied on a per-project basis.
*** Groundwater grant amounts may be in addition to grants or principal forgiveness awarded through the DWSRF or CWSRF Programs.

APPENDIX G: SCG Construction Grant Eligibility Criteria for Septic to Sewer and Regional Projects

| Eligible Applicants: | Public agencies, 501(c)(3) non-profit organizations, federally recognized tribes and state tribes on Native American Commission consult list | | | | |
|---|---|---|---|---|---|
| Eligible Project Type | CWSRF-eligible wastewater projects[43] | | | | |
| Affordability Criteria | | | Grant Amount | | |
| Population[42] | Community MHI[43] | Wastewater Rates as a Percentage of MHI[44] | Percentage of Total Eligible Project Cost | Maximum Grant Amount Per Project[45,46,47,48] | Maximum Cost Per Household / Project |
| <20,000 | MHI ≤100% Statewide MHI | ≥4% | 50% | $8 million | $75,000 |
| | DAC <60% of Statewide MHI | ≥1.5% | 75%[49] | | |
| | SDAC <60% of Statewide MHI | NA | 100% | | |

Val: We are at the limit of the funding that is available to us. We are wondering if the State is including paying for private hook ups to homes?
Francine: The connection fees would be eligible under the grants. Usually we put in the agreement that you have to hook up in a certain amount of time, maybe a year. Does that answer your question?
Val: Well, we have been advised that due to health reasons, everyone who lives within the boundaries of this project would be required to hook up. That might not be a question to direct to you. But we were wondering what is the procedure on that. It would mean that we would have to have access to their parcels. I don't know if we would be involved with you on this or the North Coast Region folks.
Francine: What I've seen in the past, is they have easements for the parcels and they incorporate the connection fees into the construction costs.
Val: So when they talk about connections, Dave or anyone else on the panel, does this go right into the house?
Dave: Like Francine said, the public granted component goes up to the property line. In some cases, if the owner of the facility, the District in this case, secures an easement to go into the private property, they could then construct the lateral that serves the building or house. At the most, that would be done

up to 5 ft. from the house. The homeowner then would be responsible for getting a plumber to connect their line to the house. In a project we just completed in Anderson Springs, in Lake County, we installed grinder pumps just like we are proposing here. Those grinder pumps were part of the public project. We secured easements and put those grinder pumps on the properties and extended 4" pipe from the grinder pump station. The homeowner connected to that. The grinder pump was situated in a place that was convenient for the homeowner to connect. It was just a matter of a few feet of pipe that the homeowner had to put in.
Val: What happens to their existing septic system?
Dave: It would be abandoned. Normally, the jurisdiction, the County in this case, would require the proper abandonment of the septic system, and the most important part of that is to abandon the septic tank correctly by making sure it doesn't become a hazard in the future. Normally the top is broken out and a hole is punched through the bottom and filled up with gravel or some other material that won't settle, and then covered up.
Val: And whose responsibility is that?
Dave: I'm not sure if our cost estimates included the abandonment costs. I think it did. That could be part of the project. I think that is more of a question for Francine.
Francine: It would be an eligible cost. I'm just making sure – you're not sure if you put it in the original costs, Dave?
Dave: I can check real quickly here.
Val: We're going to go on while Dave looks up who picks up the cost for the abandonment of the septic tanks.
Dave returns: So Francine, I did check, and our cost estimates include "existing septic tanks decommission".
Val: "Why installing a municipal Drinking Water system alone does not solve our contamination and health issues". In other words, if we do the Drinking Water system, why is in also important, for health reasons, to do the Waste.
Charles Reed: To start out, and I think it is really important, it's a really good move, to install a Municipal Drinking Water system from a Public Health perspective. Your drinking water is potentially compromised. That doesn't address potentially failing existing septic systems. They are substandard, probably fairly old, not sited particularly well, and the soil matrix is not providing adequate treatment for the domestic septic waste that enters it before this waste could potentially enter ground water. This inadequately treated waste potentially contaminates your source drinking water. Contaminating the ground water aquifer and potentially migrating to surface water and even potentially contaminating your new Drinking Water sources. So you really do need to address those failing septic systems. Also, failing septic systems are required to be corrected, both by the Statewide onsite system policy and by Mendocino County's local agency management program which implements the onsite system policy. Failure to correct a failing septic system invalidates the conditional waiver that all septic systems enjoy in California. Background for that is all waste discharges in California are regulated by the Regional Board and are required to have a permit or a waiver. All septic systems if they comply with the policy are given a conditional waiver of waste discharge requirements. They don't have to be permitted directly; they can be permitted and overseen by the local agency, in this case Mendocino County Health Department. One of the reasons why these septic systems are challenging is because the site constraints are immense in some of these smaller parcels, ground water may be pretty shallow, the soil may be poor, so even if you were able to upgrade the system to some more modern onsite system it still may not provide adequate treatment and still may potentially contaminate ground water.
Dave: I can offer one other point. If a public drinking water system was implemented in Boonville, there may still be some likely use of private water wells in the town for landscaping and irrigation. And this continued use of septic systems could, and more likely would, contaminate those (private) wells than the other sited public water supply wells. That water would remain contaminated and the

use of that water could pose a public health hazard as well as being lower quality for the intended use of irrigation.
Roy O'Connor (Regional Board): Just a little perspective, it's a good question: Why not just put in Drinking Water and call it good. Many of our communities did that in the years and decades upon decades ago when there were funds available. The community that is so similar to Boonville is Willow Creek up in Humboldt County. Willow Creek did go ahead and put in municipal drinking water a couple decades ago. They tried for both. They couldn't get funding. But they did go ahead with Drinking Water. That certainly is a plus and helped some. What it did not help is the very small lots that couldn't rebuild, that couldn't develop, the restaurants that couldn't come in. The things that the community wanted to do just to have some infrastructure there, the Drinking Water didn't get them there. You can't fault them, because Willow Creek started in 1974 trying to get money for wastewater. They sent letters to Gov Ronald Reagan and Richard Nixon in the White House to get wastewater funding. It took them 45 years for their wastewater funding to come along. But in that time, the Drinking Water aspect certainly did help, but it didn't help the blight in the downtown. The little buildings that burned down through the years, they are still vacant waiting for wastewater service. And they still have the surfacing effluent problems from the septic tanks and the lack of restaurants or anything else coming in and building on those little lots.
Val: <u>"Why does rebuilding our burned buildings and dealing with our blight require wastewater hook ups?</u> Why does our "downtown" blight require wastewater hookups?"
Charles: As I thought about this question, I thought it's fine to rebuild your buildings and do the infill you think you might want to do, but what that is going to result is an increased wastewater flow because you are going to draw more people in, more tourists, and that is going to increase the wastewater flow and potentially cause cumulative impacts from this greater flow all going to a subsurface disposal from individual onsite systems. So you are going to again result in further degradation of ground water quality.
Roy: What I've seen in communities similar to Boonville is, quite simply, when a little hotel burns down, in an area with no services, it's not even possible to rebuild on the limited surface area they have for wastewater disposal and with the poor soils and high ground water. There wasn't even a possibility to rebuild those lots. It wasn't even possible. In theory, it would be possible if you bought another lot. The Counties can make exceptions of merging of two lots and coming up with more disposal area. But that's not really possible in downtown centers like Boonville. You can't just buy a lot next door and try to build a leach field there.
Also, it really becomes a cost factor to bring a building back. If it's an alternative septic system, it can require another $20-60K, sometimes $100K if they have to do some sort of additional treatment to it. That's why, these types of grants we try to work so hard on. Boonville is one of those communities, and we only have a handful in our whole region in California, that probably should have had some services decades ago when it was easier and cheaper. Boonville is similar to Laytonville or Orick or Willow Creek. Other communities had wastewater put in. For whatever reason, that didn't happen in Boonville. That being said, that's why the State is here now. And if we can help, we certainly will help.
Val: We are going now to Jesse Davis. Jesse is going to be talking about why a wastewater municipal system allows you to develop your parcel to allow more housing density.
Jesse: I actually want to start by building off on some of the conversations we just had. You are absolutely right; the standards for wastewater treatment systems still exist even if the parcel is non-conforming and they <u>can</u> reestablish that previous residence or previous business. I would say that merging parcels while an option is something that the county would discourage, partly because it begins to really limit the value of the existing land and also reduces our ability to facilitate new housing or additional commercial development in the future. Once you start to restrict those individual lots, you really begin to run out of options.

I also want to say that the County, as part of its general plan, has long standing goals and I would refer anyone to our General Plan to take a look at the Action Items, and the Policies and Goals that we have particular to Anderson Valley and particular to Boonville with the development of a water and a sanitary sewer system. Those are goals that can be found in the Community Profile section. That's in the Anderson Valley part of our General Plan. That encourages us to support you as you develop wastewater services and community fire fighting as well.

To get to your point about why a wastewater system in particular is important for density. When a water supply system and a wastewater system are provided, the restrictive lot design and configuration requirements are reduced, thereby allowing a property to realize maximum potential for development. So when you have a sewer system as well as a drinking water system, lot sizes that had a zoning for commercial or ("RC") Rural Community lots can get down to 6,000 sf. in lot size. That means you open up a realm of additional housing options including guest cottages, Accessory Dwelling Units and even multi-family, which are presently prohibited without having this infrastructure provided to these parcels.

Another consideration to think about is that you begin to make more land available for residential or commercial development on your property. When you have an onsite septic system and an onsite drinking water system on your property you have additional set backs that are applied by the Environmental Health Department. You also have replacement areas and fields that further limit and constrain the development that can occur on your property. So by having a sanitary sewer system you now can develop parts of your property with an Accessory Dwelling. As many of you are aware, the State has made a lot of updates to its Accessory Dwelling Laws that supersede past County laws. As a result, set backs have been reduced, designs have been provided. Some of the regulations really do encourage us to focus and centralize our development in town centers like Boonville. Infrastructure provisions really allows for economic development, and more importantly, resiliency. Not only resiliency to natural disasters by having this infrastructure provided at your disposal when something does happen, but also when it comes to rebuilding or further enhancing your community. It allows you to establish those restaurants, establish those businesses. Develop in a way that is more sustainable in terms of vehicle miles traveled. Focusing development in areas where it is appropriate, not allowing us to continue to sprawl, and indeed, to do things that really enhance the cost for all of us at the end of the day.

A sanitary sewer system allows us to use our parcels more effectively. It reduces some of the onsite requirements that otherwise limit you from developing your property the way you see fit with additional accessory dwellings and additional commercial developments. And right now, without that infrastructure, a lot of lots in downtown Boonville are under-sized or non-conforming are prohibited from that development. These infrastructure provisions would really open a door for individuals to facilitate additional development, create resiliency for their property, and ultimately address the health concerns that we are going to be talking about moving forward and have expressed previously.

Val: With the new Accessory Dwelling Unity regulations, some which came out in Sept of this year, can we have an Amnesty program so we can help people convert the non-permitted, perhaps illegal housing, which is necessary in our town? You know, people are living in sketchy situations… is there any way we help them come out into the open…have an amnesty with no penalties, no fines, we'll just get you legal…

Jesse: Yes, that's actually one of the things the new State law encourages. They encourage us to adaptively reuse existing structures on the property, such as garages. One of the things the State law did was reduce the requirements to allow people to convert existing garages that might already be functioning as accessory dwelling units. As a planner here for the last four years one of the things I realized after the Redwood Valley fires, were how many Accessory Dwelling Units, and guest cottages, and other Accessory residential structures are really out there. We recognized that as families become more multi-generational and as we need additional housing opportunities, these accessory units, maybe

they were built illegally or maybe they were converted over time, or maybe there is a new need for that family to develop that property over time.
The State law encourages us to use those structures. The County has facilitated very similar applications throughout our Inland Zoning Commission. At Redwood Valley and other communities affected by disaster in particular as they start to rebuild and legalize some of these past developments. So the answer is, most definitely, we want to facilitate safe and legal spaces for people, especially if they can be done so in areas where infrastructure is provided.
Val: We do want to point out that we have a limitation and maybe Francine can answer a question for us: What does the 10% refer to when it says we can only provide existing structure need plus 10%. Would the hook-ups that go into these high-density inhabited parcels be part of the extra development or would that just be considered part of the existing development.
Francine: I think the 10% you are referring to is on the Drinking Water side not the Clean Water side. I don't think there is a cap for Clean Water but we can't size a Drinking Water System more than 10% of average daily demand.
Val: We'll leave that for a Drinking Water discussion. So Jesse, it doesn't look like you are handicapped by providing wastewater within the town itself.
Jesse: That is really important, because to the point of reestablishing some of the structures that have burned, even though a non-conforming allowance exists, those septic systems that are replaced have to still meet the satisfaction of the County Environmental Health Division. While they can be accommodated, those costs can get pretty high pretty quickly for individual property owners. Which is, again, part of this idea about community resiliency – having infrastructure that is shared, so that those costs, when something does go wrong, or a desire to change a property occurs, the costs aren't just borne by that individual, but are borne by the community as a whole. With the sewer system in particular, it's an important consideration when you consider how much it costs to reestablish some of these very unique, small systems, that aren't scalable.
Val: "Why is a Wastewater municipal system the easiest way to deal with increasing regulation of septic systems and leach fields in the future."
Charles: If your parcel had enough room to put in an upgraded treatment system, you would have to have some sort of supplemental treatment to meet groundwater quality objectives, and these higher performing systems are technically challenging to operate, they are expensive to install, and they need to be operated and monitored and maintained in some fashion. You know, I'm an engineer and I wouldn't want to have to do that on my own. From a user perspective, it is much preferable to send your waste to a centralized area where there is an operator who can treat it properly and dispose of it in accordance with local and state regulations. And from a regulatory perspective, for individuals to upgrade their existing onsite treatment system to a high performing system would probably require permitting, either by us or the local agency, Mendocino Co in this case, and that is a regulatory burden most people don't want to have to do. In the alternative, in a municipal system, we would be regulating the municipal entity, under a permit. So it is much easier for us to work with an individual entity than 100-200 individual people with individual permits. From a regulatory perspective, we have a strong preference for a municipal system as opposed to small individual systems that need a high level of oversight.
Val: If we do NOT do our Waste System, what would trigger having an individual's system, which may be very old, regulated?
Charles: To date, we and the County haven't taken a forceful position on enforcing. The Statewide Onsite System Policy requires that failing systems be corrected through an enforcement action by us, or in this case, probably by Mendocino County Department of Environmental Health. And that requirement to upgrade your system is going to require some sort of change, and I think the worst possible outcome would be to abandon the process the community is on now in pursuing a centralized

wastewater system. If you do, we are ultimately going to come back to the same place that we are in right now. The solution, at least as far as I can tell, is a centralized treatment and disposal system.
Val: We are a little nervous because Sonoma County's program for the Russian River watershed in Camp Meeker and Guerneville seems to be regulating individual septic systems to avoid contamination in the river. It seems that there are large regulatory programs that are starting.
Charles: That's an option and the people in the lower Russian River area are certainly interested in trying to upgrade their systems where they can, but there are a lot of parcels down there that are as small or even smaller than downtown Boonville that simply cannot accommodate an individual upgrade. There's going to have to be a cluster system or small community system option for them. And the more people that decide to take their own option it makes the cost feasibility of a community system less likely because there are fewer people connecting to it. That's why community options are the best for people and I would encourage you to think of yourselves as a community and do what is best for the community.
Val: We looked into the "cluster" idea after we got back our dismal well quality results. You know we had high contamination in 23 out of 24 wells that we did a blind study on. So we were looking into the cluster but the State felt our cluster was our downtown community. We already are a cluster with 150 parcels.
Charles: The clusters in the Russian River area are typically for 4-15 small systems. Technically it could work, but try to think about working with 5, 10,15 neighbors if something happens to your system.
Val: Jesse, would you respond to the idea of 2 or 3 parcels going in together to fix their problems?
Jesse: I may not be the most appropriate person because I work primarily on the planning side, but from an environmental health perspective, while it may be feasible, there are a lot of legal implications and shared cost and responsibilities that do come up when you share septic systems in particular. As a result, the County tends to shy away from that, especially when developing new parcels or new properties. So when we have a subdivision, for example, we don't facilitate shared septic and wastewater systems. It's preferable from a Planning perspective, to have all those activities on one legal property. Not that it is not doable, but it is something that adds complications. Also, downstream, from a valuation perspective, if you are selling that home, or transferring that property to someone, it also creates complications in the transfer of real property.
Roy: In my years working with Mendocino, Trinity, Siskyou, Modoc, Del Norte, Humboldt it's the same answer as Jesse just provided. "To shy away from it" is an understatement. In the 30 years that I have been working with them, I can name off probably on one hand times that was done. There have been proposals to group, and to try to have a cluster of houses in one leach field area and none of them were successful for all the legal reasons Jesse talked about. I am not aware of any grant proposal that has clustered.
Jesse: I would have to echo that comment. There is only one subdivision that I am aware of in Mendocino County that really features the shared septic system and that is Surfwood residential community along the coast. They are systems we don't really want to prioritize. In the case of Boonville, it's even more complicated because it has a mixture of commercial and residential uses occurring. They are harder to separate as compared to a stand alone residential community such as Surfwood.
Roy: One thing we have learned is that wastewater is a very complex. Septic effluent isn't just digested food, and wastewater. Nowadays what we are dealing with a very complex soup of industrial chemicals. We used to just look at the solids, removed out of the septic tank, then there would be an effluent with bacteria that would be treated in the soil column. But now what's being regulated in ground water goes far beyond that. We're working with nitrogen, nitrates, medicines, pharmaceuticals, chemotherapy drugs, birth control medication, oven cleaners, caffeine, pesticides. The things that are going down septic tanks these days, especially in commercial districts, not everybody realizes what

goes down septic systems with very, very, little treatment for all those chemicals I just talked about… that is essentially going in your ground water. The positive aspects of centralized treatment, is if it is connected and sent to a central location with an MBR treatment facility, it is easier to sample that effluent, that industrial soup, and easier to determine if there are things in there that need extra treatment.
Val: As technology improves, would we be able to remove more and more by using a centralized MBR system?
Roy: That is what we are seeing. If the community has a municipal treatment plant, the option of accessing grant funds is easier. Let's say 10 years from now we are realizing that flushed birth control medications are really having an effect on the ecosystem of the streams going through Boonville. What's great is to access grant money, like Francine Fua's program, to help solve a community issue. That's where I have been involved – to get those grant funds. And instead of the individual landowner shouldering a bunch of regulations for their septic tanks because it is a commercial facility, it's handled by a district, and more often than not, monies that are spent for that additional treatment are funded through grants rather than paid for by the rate payers.
Val: We are going to start talking about the site that we are hoping to use and that is the Fairgrounds. Before we start, we can't be specific about financial remuneration here because it is open to negotiation, except to say that Ted Williams, our Supervisor, will propose and recommend that the State funds that be paid to a dedicated County fund to be used as a pass-through account for Fair refurbishment.
Val: <u>What would be the benefits to the Fairgrounds to site the project?</u>
Roy: I have a couple of points, while primarily water quality related, are also related to a long, long time spent working with small communities, and actually, interactions with their fairgrounds. For me, I grew up 'small town', I grew up in Healdsburg, and Fairgrounds are such a rallying point for us. When all is coming, when the fire is coming, when pandemics come, the fairgrounds was always a place to go. By having access to wastewater, restrooms, showers, things like that, I've seen over the last 8 years, the communities that have been burned through, the rallying points were the fairgrounds. For me, being small town, fairgrounds are near and dear to me.
With this particular parcel, I believe like most of the fairgrounds I've worked on, there are maybe 7-8 existing leach field areas. All the other fairgrounds I've ever worked on, the leach fields always worked good until the fair or something is happening, and then they usually surface. So there would definitely be a benefit to have a connection for wastewater served by the wastewater plant. It would greatly increase capacity. It saves the hauling in and out of wastewater, sewage and this and that in times of emergency. I see that as a big deal. Specifically for fire fighting, small communities needed a larger water supply to direct fire fighting and the infrastructure to house the logistical support for the fire fighting crews - showers, toilets. Sure they can bring in trailers for it. All this stuff can be trailered in and trailered out, you can send it down the road to Ukiah or Cloverdale – all those trucks on the road. But I think it ultimately helps having those central services there.
Val: Francine, because the Fair is a non-profit, are we providing connections out to all of the buildings – we are talking about a lot of buildings – a lot of bathrooms – throughout the site?
Francine: Yes, all non-profits are eligible.
Val: Dave, can you respond to what would be visible and what would be invisible and how it would impact the functioning of the fair.
Dave: What would be visible would be the building that would house the treatment facility and any fencing or any access roads that we use to support that building. Everything else would be underground. The disposal, which is the biggest part of the area, would be underground and not readily viewable. We are talking about a building that is roughly 50'x100' in footprint, maybe slightly larger. Normally, pre-engineered, metal type building would be installed. Different types of architectural features could be incorporated – there's really no limitation other than funding to facilitate that.

Val: Is there anyone else who wants to comment on what are the specific benefits to the Fair, besides the obvious financial benefit?
Roy: I think I saw, one of the site maps, that there are probably already 7 or 8 leach fields on the property?
Dave: Yes, the Fairgrounds consists of, I believe, 8 different septic field systems. Each group of buildings, or area, or bathrooms, has separate piping to a septic tank and a leach field. So each of those is subject to a certain design life and a certain potential of failure so eventually those leach fields will get clogged with waste that is going into them and then could fail and result in sewage coming to the surface. That's most likely to occur during a period of high use, say during the Fair.
Val: Is it fair to say that the replacement of their existing septic systems and leach fields would be on their dime if we don't do the waste program?
Dave: Certainly, they are responsible for their own septic systems. The Fair Board, or the County, or whoever is underwriting that property, would be responsible for maintaining and operating those systems. Obviously, there is also the periodic ongoing expense of removing solids.
Val: Would they be able to use the current leach fields for other purposes if they use our municipal system?
Dave: I'm not sure what they would use them for. The land above them is currently being used for the fairgrounds itself. There are lawn areas, parking areas. It would obviously be unencumbered more if those septic tanks and fields were abandoned.
Val: How would the injection of the 'almost' tertiary water affect the little creek that goes through the Fairgrounds as well as Fairground wells?
Dave: If we are collecting all the wastewater from the Boonville area and bringing it to the Fairgrounds site, we are talking about 50-60,000 gallons per day of average flow. Discharging there at the Fairgrounds would bolster the local groundwater level and could only help their onsite wells in producing water which they are using for the irrigation the lawns and ball fields and other fields in the facility. That's kind of drought proof – you're always going to have wastewater occurring whether it is a wet year or a dry year. That could be very beneficial to the Fairgrounds if they are in a drought year where they normally have limited water for their irrigation. That just wouldn't happen if they had the injection field because any ground water flows would be held up with the lens of water from the disposal.
Roy: I just wanted to point out – we have the Brelje and Race design here and obviously it is adjacent to a creek. We would prohibit any discharge of pollutants to the creek. We would also require in the planning documents and proposal that they demonstrate that there shall be no discharge of pollutants to the creek. And there would also be ground water monitoring between the disposal field and the creek to demonstrate that ground water isn't affected or impacted above our regulatory levels in ground water. In our minds it is clear that there can be no pollutants discharged into the creek.
Jesse: Another thing I think is important to add about the fairgrounds, coming from my perspective as a planner, is the zoning designation that they are in. Looking at properties around the Boonville community, a lot of those zoning districts are either 'agricultural' or 'rangeland'. To facilitate a septic system on those properties is not as conducive as it is for properties designated 'public facilities', which is the zoning designation of the Fairgrounds. The PF zoning designation is intended for public purposes or for specified public utility purposes. A wastewater treatment facility would obviously fit in that designation. From a planning perspective, in particular, a PF zoning designation is a very appropriate location for accommodating infrastructure such as this.
Val: One of these things that we were concerned about is the private road to the back of the fairgrounds, now called Grey Fox road – off of Lambert. The county is not interested in maintaining that road. So we want to site the building on the 128 side to avoid using that road for maintenance. If you are not familiar with the Fairgrounds, there is a bridge that goes to the back parking. So if we use back parking for part of our injection field then there would be a limited construction time, but then

once the project is done, we would be using a truck from Hwy 128 to collect the liquid sludge and make the trucking of the sludge as low impact as possible. How often would the truck pick up the sludge, Dave?
Dave: That depends on the size of the facility and how big the sludge holding tank we would have. But normally, that transport would be no more than every two to four weeks.
Val: One of the things I wanted you to talk about, Dave, is size of the equalization tank. How you have designed it and why is it so big?
Dave: Well, the Fairgrounds itself is a unique user of the system in that during these three or four peak events it has per year, it generates a significant amount of wastewater in a short time of two to four days. Since the system can't be designed to treat all that flow on top of all the other flow from Boonville all at the same time, we would need an equalization tank to absorb that flow during the peak event and then slowly reintroduce it back into the treatment system during that time. So we needed an equalization tank to do that. Because the peak flow from the fair is almost equivalent to a daily flow of the rest of the town by itself. It basically doubles the flow during that weekend. The current plan we have is that equalization basin would be included in the same building with the treatment plant for the convenience of mechanical and electrical utilities and if it is sited at the fairgrounds then that becomes a little simpler because the transfer of that wastewater during the peak flows would be closer to the equalization tank.
Val: We set up a tour to look at the MBR at Silver Oak Winery in Geyserville, which is bigger than our system, but it is comparable in that it is the same kind of MBR and building. Howver, it doesn't process human waste. The other is the MBR at Francis Ford Coppola which does process human waste. The engineers tell us it is cobbled together a bit and it's not as high tech as ours. Would you say that is true, Dave?
Dave: It is going to appear differently. The actual tankage itself is kind of unique system that has been welded together kind of a custom made. The principal of the system is the same, though. It is a MBR system, it's just not going to look the same as your system would look, exactly. The system that we would specify, the ones that are normally commercially available, are rectangular tanks that have a fairly standard appearance. The one at Coppola is some circular and square tanks welded together, a little bit less common.
Val: Maybe Yoriko (Kashimoto) would like to give us a report about her impression about what it was like to go to the Francis Ford Coppola MBR.
Yoriko: I wanted to get a feel for what a MBR looked like and on our way back my husband and I stopped at Francis Ford Coppola and Pete Peterson, the plant operator there was very nice and he walked us around there. My impression there was, yes, there was really no smell whatsoever. Very little noise at all. We didn't have to raise our voices talking to each other. The sanitary plant services everyone who works there. It's a pretty big operation. Also includes the restaurant, which must not be operating now. It handles up to 20,000 gallons a day, there's maybe a little higher peak at times. Boonville is 60-80,000 a day? So it is smaller. It goes to a 200 thousand gallon effluent storage tank next to it. Then it goes ultimately to a drip irrigation system, which waters 2 ½ acres of vineyard and 3 acres of undeveloped oak area. They do sign it off and post it so members of the public at least know about it. I'm not sure if they are allowed to walk in that area. We saw the aeration there, and walked on top of it, walked all around it, and we didn't detect any smells.
Val: So, we had set up the tour to the two MBRs in Geyserville in one morning on a Saturday in fall. But we had to wait until after harvest, then the fires hit and the Silver Oak neighboring winery completely burned down, and now Covid. But that is still our plan to invite people to go. At Silver Oak they will see the building that will look like ours, but bigger, then they will go over to Coppola because they process human waste. I want to reassure everyone that both of those sites have been very welcoming. Yoriko went through the procedure of being introduced. We want to set this tour up again

for a group. When we get a post Covid we can invite people and go see both of those on one day. Thanks so much, Yoriko.
More questions that came up before or during presentation:
Joy: What happens if a property owner shares a water supply and septic system with their neighbor?
Val: Jesse, would this be a situation where you would encourage the parcels to take advantage of the opportunity to divide?
Jesse: Yes, this would be a situation in which in many respects you would want to recognize the legal implications of a shared system. If both systems would exist, I imagine that they would be encouraged or mandated to connect to the available infrastructure.
Joy: What actions would the regulatory agencies such as the State Waterboard invoke regarding the leaky septic system and coliform contamination problems in Boonville if the AVCSD is unable to find a suitable site for a wastewater treatment plant and/or the wastewater project does not go forward?
Charles: Failing systems need to be corrected under the statewide onsite system policy and under County requirements, so someone would have to take some enforcement action to have those systems corrected. And, as we have already discussed, there are limited options for some of those small parcels.
Joy: It is a benefit to the Fair as a user, but how is it a benefit to host the wastewater facility and what other sites are possible?
Jesse: I'll speak to the zoning, and as I said earlier, I think when you look from a planning perspective and the designation of the Fairgrounds in particular as a Public Facility (PF), that is for an institutional or public use. When you look at other sites, I imagine that they were reviewed, but the implication being is that the zoning designation would require additional review and potentially secondary effects in terms of locating that facility elsewhere. From a zoning perspective, I think the Fairgrounds makes the most sense because of its central location as well as its PF designation. But I'll let the team respond to you about the other locations that were reviewed.
Dave: So, in concert with the district we looked at 8 or 9 different sites in the area. Obviously it can't be too far from the collection system area because of the cost of piping wastewater. We did go pretty far from the downtown area looking for suitable areas and in each case we encountered either the landowner was not willing to host the site for consideration, or the soil type was not conducive to underground disposal and would require more land for spray irrigation which does require a storage pond for seasonal irrigation patterns. Those features of the system met with landowner and community opposition as well. We tried finding sites that could have beneficial reuse of the effluent for agricultural purposes, but we couldn't find a landowner willing to entertain that as well. So we are left with the Fairgrounds which number one, is located in a nice area in that it is not too far away from most of the wastewater generation, but is far enough away so that the disposal is not next to a main residential area. And the soil types are conducive for underground disposal so that we didn't have to have above ground spray irrigation system and a pond. And, as Jesse indicated, it is zoned for Public Use so it seems like it is an appropriate place for centralized wastewater disposal site.
Val: Dave, are you fairly confident that the ground will be suitable? We have not perc-ed it.
Dave: We used established soil mapping and used very conservative factors for application rates and feel pretty confident that yes, it is going to perc. One thing we did do which is a bit of an empirical analysis is I personally went there during the Music Festival a couple of years ago to observe how that generation of high flows was received by all the different septic systems there, and I did not find any areas where soils didn't allow the perc to occur. I walked the creek bed, could not find any places where wastewater was seeping through the banks of the creek. So the water had to go somewhere so it definitely was perc-ing into the ground. The soil does seem to be a suitable type, based on a casual observation of it. Then, underneath the soil is a alluvial geology that definitely will transport the wastewater.
Roy: To be clear, on the Regional Water Board side, we will require much more information than that for us to permit the disposal field. We'll need 'depth to ground water', soil type, and quite a bit of

information for us to bring before our board for the project. Quite simply, for a project of this cost factor to move ahead, there is information that really should be gathered specifically from the parcel with some confidence that the money being spent for the project is going to result in an adequate disposal of wastewater that is protective of the ground water and the creeks around, as well as public health.
Joy: How will semi-tertiary water affect nearby wells for drinking, not irrigation?
Charles: This is one of the things that we consider when we issue permits. I think that is one of the advantages of having a treatment system like a MBR that treats domestic wastewater to such a high level because your options for disposal are greater and the threats to contamination of ground water are less because the treated water being applied of much higher quality. So I think that the threat is low and we'll make sure we have setbacks and permit conditions that keep the threats very low to non-existent.
Joy: How is the wastewater plant being sized?
Dave: The wastewater plant was sized by considering the number of households and commercial institutions that are going to be connected in the planning area and using established estimates of flow rate to that that have been coordinated with the parallel drinking water project, estimates of water demand. And then we conservatively used that information and then added the 10% to that to come up with the size. We also had to do a good bit of research into the Fairgrounds use to make sure we had a good handle on what the wastewater peak flows and average flows would be from that parcel as well.
Val: Are there any more any more questions, Joy?
Joy: There was a question about the airport and the school zoning, but I am going to send them a map.
Joy: Will the amount of money that we are offering the Fairgrounds affect ratepayers?
Val: Francine, can you respond to whether or not, or how the negotiation with the parcel that sites the waste, how does that affect future rate-payers.
Francine: I think it will depend on how much the Fairgrounds is asking? Is it going to be a lease? Or do you know?
Val: To be honest, Francine, we are trying to set this up so that the financial remuneration occurs out of our construction grant, so there is no carry over to the monthly bills.
Francine: We can buy land, but not sure if we can have an agreement for a lease for 30 years.
Val: I think that's a bigger conversation for you and the County because the County does own the property. There might be some restrictions on that land. We want to be sure we follow legal counsel on how this whole thing is structured.
Val: We are looking forward to having a dialogue with the Fair Board next at their next meeting and hopefully we can all do a tour of the MBR facilities in Geyserville. Nothing replaces actually walking into that building and smelling…. nothing. Except maybe just a little humousy smell like you are turning over soil in your garden.
Our plan is to engage with the Fair Board. We will make sure they have all the information that we have just presented, answer any questions that they have, and hopefully they'll go on a tour. I'm sure a lot of what they are concerned about is their relationship with the County for how this will work.
We're done folks. I want to thank all the panel members for giving us so much time. As soon as we get this typed up, we will provide it to you. I think it will be helpful for other communities going forward, Roy, to hear what Boonville has been doing.
Thank you so much. We are going to sign off…

Water Report 12/18/20

Clean Water: A report about the Fairgrounds Meeting on Dec 14th was given. The Engineer Dave Coleman answered many questions; some specific to the Fairgrounds site and some about the project more generally. The compensation figure of $70K per acre was given so that they were aware of the potential amount the State would pay to the County for the site. The Fair Board voted (all ayes – except two abstentions by Eva Johnson and Derek Wyant as their property was still on the EIR list until the Board picks a preferred site): "To not accept the project with the information we have at this time."

The Zoom transcript from the Waste panel discussion on 12/3/20 was discussed. The ADU program was discussed including the County's offer of pre-designed and engineered ADU plans.

Director Christen shared a Power Point presentation that will help us organize our approach when doing presentations going forward. Supervisor Ted Williams suggested interacting with individual Supervisors so that they understood what our project was about as well as getting on the March agenda to do a presentation. However, we need to know if we will be pursuing the Fairgrounds site as the County is not involved unless we have the Fairgrounds as our preferred site.

Drinking Water: Jack Locey is still working on all the easement documents. Phil Williams is reviewing them.

Planning Grants are both running very low on available funds. We have started talking to USDA about funding short falls. The USDA is primarily a loan program, which we are not interested in. However, they can fund $30K to each project for specific items such as soil studies, separating the CEQAs, rate study, etc. Quinn Donovan from USDA and the engineers are exploring this and we will bring this up as an agenda item next month if we are applying for USDA funds. We are also talking with the State about amending the Planning Grants to increase funds.