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W.A.T.E.R.
WE ADVOCATE THOROUGH ENVIRONMENTAL REVIEW

January 8, 2016

Kristen Maze
City Planner
City of Mt. Shasta
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kmaze@mtshastaca.gov

Dear Ms. Maze:

We Advocate Thorough Environmental Review (W.A.T.E.R.) is a California 501c3 non-profit corporation incorporated to promote quality local and regional planning, land use and development, as well as to preserve a healthy human and natural environment within the Siskiyou County area.

We are responding to a request for public comment on the "Proposed Mitigated Negative Declaration and Initial Study: State-Mandated Wastewater Treatment and Outfall Improvement Project, Mt. Shasta CA, November 2015," a 99 page document prepared by ENPLAN, a subcontractor for the City's engineering firm, PACE Engineering (for the remainder of this document, we will refer to the ENPLAN document as MND/IS). The MND/IS refers to a second document entitled, "Draft Preliminary Engineering Report and Feasibility Study for the City of Mt. Shasta State Mandated Wastewater Treatment and Disposal Improvement Project," (referred to here as "PER") prepared by PACE Engineering which we have also referred to in our analysis of the WWTP project.

We herein refer to several other documents that are either City documents or newspaper articles that are easily available to the readers of this document. In addition, we include two documents referred to in this letter as email attachments since they may not be as easily accessed (see email attachments "Harris email," and "CG application to RWQCB_9-25-15").

We thank you for the opportunity to provide input on this very important project for the Mt. Shasta Community. We request a written response to all comments/questions/concerns and please provide an estimate of when we will receive your response.

I. General Comments

A). Foreseeable consequences: California Environmental Quality Act (CEQA) requires that the MND/IS must take into account all *reasonably foreseeable consequences* of improvements to the WWTP. There are glaring deficiencies in this document in this regard because Crystal Geyser beverage bottling plant (CG), the development of property between Interstate 5 and Old Stage Road north of Hatchery Lane, and the proposed development of The Landing are not evaluated as major consequences that might be enabled by the expanded WWTP.

Crystal Geyser: Clearly Crystal Geyser will be hooking up to the city sewer system and cannot do so without the WWTP improvements. There are multiple sources of evidence in the public record (paragraphs below) that confirm CG will be hooking up to the City Sewer. CG's delay in submitting to the City an application to connect does NOT constitute uncertainty that CG will connect.

Evidence showing that CG will hookup to the City sewer system is:

(1). The City's original EDA grant application was for a waste water interceptor line that would allow Crystal Geyser to hook up to the City Sewer system. The grant application documents CG's need for the City sewer services, clearly lists CG as the primary beneficiary of the project, and clearly states that CG is committed to the project, with signatures from CG representatives. The fact that the dollars were not granted for the interceptor line does NOT negate CG's needs for the City sewer connection.

(2). The revised application to the EDA clearly states that CG is still the primary beneficiary of the upgrades to the WWTP. The "Preliminary Engineering Report for the EDA-Funded Wastewater Treatment Plant Improvements" explicitly states in section 3 that "The project beneficiaries are unchanged from the original Form ED-900". Attachments to that document clearly identify Crystal Geyser as the primary beneficiary, and states that Crystal Geyser is committed to the project.

(3) CG requested from the City an application form for permit to hook up to the sewer system, which the city then spent thousands of dollars creating (on June 23, 2015, a check # 36203, for

$14,198.50 was written to Pioneer Law Group, LLP for "Crystal Geyser Ind. User Permit" as reported in the City Council Agenda Packet dated 7-13-2015, page 15). Now CG withholds submission of the application. Again, CG's delay in submitting an application does NOT constitute uncertainty that CG will connect.

(4). CG has requested of Siskiyou County a building permit that will house equipment to neutralize the pH of wastewater that will go into the City sewer system. Jill Harris, a representative from CG, has circulated information via email, December 7, 2015 (see attachment: Harris email.docx), explicitly stating:

> "... The Neutralization system is being installed to ensure that all discharge going to the City Wastewater Treatment Plant has been effectively neutralized to a customary and treatable level..."
> "We will not proceed with wastewater discharges from the Neutralization system to the City sewer until we have obtained a City Wastewater Permit. We understand that this permit is discretionary and will require environmental review..."
> "Only water as approved by the RWQCB will be discharged to the leachfield. All other discharge will be sent to the City Wastewater Treatment facility with the appropriate permit...."

(5). RWQCB documents (see attachment: CG application to RWQCB_9-25-15.pdf): In CG's revised application to the RWQCB it is stated:

> **"**Crystal Geyser has decided to send all wastewater from the flavored water production line and associated CIP activities to the City sanitary sewer system to be treated at the City's wastewater treatment plant. This wastewater will not go to the leach field. Therefore we did not include the MSDS for the flavoring chemicals and the food grade sanitizing chemicals used in the CIP process." (CG application to RWQCB_9-25-15.pdf, pdf page 4)
>
> "This wastewater will be directed to the floor drains where it will be centralized and directed through a pH neutralization system before discharging to the City sanitary sewer." (CG application to RWQCB_9-25-15.pdf, pdf page 8)

Note that the first statement is not one just of intent but of commitment, since this commitment allowed CG's application to be approved without data that would otherwise have been required by the RWQCB (MSDS for flavoring chemicals and food grade sanitizing chemicals).

(6). The MND/IS itself documents that CG operations are a foreseeable consequence of the WWTP upgrades. On page 8, 4th paragraph: "With respect to Crystal Geyser, the scope of this Initial Study is limited to addressing the potential full-buildout volume of wastewater that could be generated by existing and foreseeable growth, i.e., 1.05 MGD." The fact that Crystal Geyser is mentioned but not excluded from "the scope of this Initial Study..." implies that a reasonably foreseeable consequence of this project is CG operations.

Additionally, the document acknowledges the inevitability that CG will hook up to the sewer system:

Page 7--"A secondary consideration is the possibility that Crystal Geyser may apply for additional capacity in order to expand its bottling operation."

Page 8--Nearly a full page of "Anticipated Crystal Geyser Treatment and Disposal Requirements" are discussed.

Page 10, last paragraph--"Further expansion of the treatment and disposal system to accommodate addition of 0.15 MGD from Crystal Geyser would be possible in the future..."

Page 17--"If an additional 0.15 MGD capacity were to be provided to accommodate Crystal Geyser, additional permits and approvals would be required."

Page 25--"Operational emissions are based on full buildout of the proposed project, including the potential Crystal Geyser contribution (0.15 MGD)".

Pages 40-41--Here the greenhouse gas emissions include a calculation for the extra 0.15MGD of wastewater that CG is expected to contribute.

Page 51--Here we see a paragraph that explain how Crystal Geyser is expected to hook up to the WWTP. "A new industrial user, Crystal Geyser, plans to expand its bottling operations at the former Coca-Cola facility just outside of the city limits of Mt. Shasta on Ski Village Drive. according to Crystal Geyser, additional flows during the first 5 years of its operation would be approximately 0.05 MGD. It is anticipated that the existing lagoon system can handle this additional flow while the proposed improvements are constructed. At full build-out, after at least five years of operation, Crystal Geyser has indicated it would contribute up to 0.15 MGD to the City's wastewater system. If Crystal Geyser is allowed to connect to the City's wastewater system, the treatment capacity of the WWTP would be modified to accommodate an ADWF of 1.05 MGD in order to serve both the full build-out of Crystal Geyser and the projected population growth. However, as stated in Section I.B.2, under "Project Need and Objectives," improvements to increase the capacity to accommodate Crystal Geyser would be made following separate CEQA approval for connection of Crystal Geyser to the City's wastewater system and receipt of financial assurance from Crystal Geyser that they would cover the cost of the expansion." This implies that at least one CG production line - at 0.05 MGD - would be

accommodated by the existing lagoon system. Does that mean that the City plans no CEQA approval requirements to allow CG to hook up "before improvements to increase the capacity"?

Page 59--"The effects of increased wastewater generation by a potentially foreseeable project, Crystal Geyser, are also addressed."

(7). In a letter written by CG's Judy Yee and Jill Harris to the editor of the Siskiyou Daily (December 22, 2015) it is stated, "Mt. Shasta City officials have been fully briefed about our plans to submit an application for an industrial wastewater connection to the City sewer."

In the Mt. Shasta City Council meeting on December 14, 2015, when asked about including Crystal Geyser in an EIR, ENPLAN scientist Don Burk said

> "We don't have a project definition at this point. We don't know what's going to be in the wastewater. Right now, there's a lot of rumor about what may happen, but without an application in front of you, there is no project," (as reported in the Mt Shasta Herald article by Dec 16, 2015 by Lauren Steinheimer).

We challenge Mr. Burk's statement. Clearly the above documented evidence is far more than "rumor." Mr. Burk may not have what he needs to include CG in the plan details of the MND/IS. However he does NOT have the authority to declare that "there is no project." It is the City's responsibility to mandate that CG be included (not ENPLAN's). Mr. Burk's opinion does NOT mean the City is without recourse for mandating that full CG operations be included in this MND/IS.

Other Anticipated Development: The MND/IS must include the undeveloped property North of Hatchery Lane and West of the highway. Signage on that property clearly states the intent to hook up to the City sewer system ("Water and Sewer! City Limits - Highway Commercial"). Development of this property is clearly a reasonably foreseeable consequence of improvements to the WWTP, yet there is no mention of it in the MND/IS. There appears to be significant wetland areas on this property that would need to be environmentally reviewed to meet CEQA requirements.

Photo 1. Poster at Hatchery Lane development advertises "water and sewer".

The City also appears to be actively pursuing development of The Landing on the south side of town. The implications for development here also need to be addressed in the MND/IS.

Photo 2. Poster at The landing development advertises "electrical, water, sewer".

B). Capacity Enhancement or Not??

At the December 14, 2015 City Council meeting, PACE Engineering gave a presentation on the WWTP in which they talked about the EDA-Funded part of the project, stating that they would obtain a "CEQA Class 2 categorical exclusion." That exclusion appears to be inappropriate.

This is what CEQA says about that exclusion:

> **"15302. Replacement or Reconstruction**
>
> Class 2 consists of replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced, including but not limited to:
>
> (a) Replacement or reconstruction of existing schools and hospitals to provide earthquake resistant structures which do not increase capacity more than 50 percent.
>
> (b) Replacement of a commercial structure with a new structure of substantially the same size, purpose, and capacity.
>
> (c) Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.
>
> (d) Conversion of overhead electric utility distribution system facilities to underground including connection to existing overhead electric utility distribution lines where the surface is restored to the condition existing prior to the undergrounding.
>
> **Note:** Authority cited: Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code. "
>
> (http://resources.ca.gov/ceqa/guidelines/art19.html)

Note that this exclusion is only valid when there is "negligible or no expansion of capacity" (the yellow highlights above are ours).

However, the MND/IS for the WWTP clearly states that one of the two purposes for the WWTP improvements is to increase capacity.

> "Improvements to the WWTP and Sacramento River outfall are needed to: (1) meet new Central Valley RWQCB treatment and discharge requirements and (2) increase the treatment capacity of the facility." (Page 6).

How can it be claimed in one breath that there is no expansion and in another that half the reasons for the improvements is expansion? Moreover, on page 7, specifically in reference to the filtration system, the MND/IS says, "these facilities were designed for smaller, summertime flows, and thus, there is inadequate capacity to treat the higher flows that occur during the winter." In other words, the document specifically states that the **capacity of the filtration system must be increased**. Given the definition of a Class 2 CEQA Category exemption and the indisputably documented intent to expand capacity of the WWTP, it appears that there is no basis for such an exemption and to request one would be in violation of CEQA.

In addition, clearly the filtration system and UV treatment components of the WWTP improvements are part of the whole WWTP project and they will be adequate to accommodate the increased capacity described in the MND/IS. Separating out the filtration and UV components, declaring they are not for expansion of capacity in order to obtain CEQA exemption (when in fact they will allow expansion), clearly represents "piecemealing" that is in violation of CEQA.

C). Estimate of Increased Capacity Needs

"The principal factor driving the need for expansion is anticipated population growth within the WWTP service area. A secondary consideration is the possibility that Crystal Geyser may apply for additional capacity in order to expand its bottling operation." (page 7).

The estimates for increased capacity needs due to population growth are poorly researched and argued. The analysis assumes a need to accommodate growth for a 20 year period, which is fine, but it assumes a 1% growth rate based on estimates from the City's General Plan of 2006 (page 7, footnote 2; "Growth rates are based on data provided in Table 1-1 of the 2006 City of Mt. Shasta General Plan"). This data is 10 years old! More recent population trends show a decrease in population: US Census data show that from 2000 to 2014 the population of Mt. Shasta City has dropped by 8% (http://www.california-demographics.com/mount-shasta-demographics). The population of Siskiyou County also has been decreasing: between 2010 and 2014 the population dropped by 2.8% (www.census.gov/quickfacts/table/PST045215/06093,00). A real assessment of the need for increased capacity needs to be performed based on these negative population growth figures.

The estimates of WWTP capacity also need to take into account the implications of failing infrastructure in the waste water collection system. On page 1, in paragraph 1 it is stated, "The WWTP serves approximately 1,777 connections, consisting mainly of single-family residential and commercial uses." Yet on in paragraph 2 it states: "The WWTP currently manages an ADWF of 0.7 MGD. This wastewater flow is equal to approximately 2,700 equivalent dwelling units (EDUs)." Why does the amount going into the WWTP appear to be so much higher than what comes out of the connections? We understand that EDU is an estimate, but there should not be that much of a discrepancy (approximately 30%). The document gives no further consideration to this discrepancy. However, it brings up several questions that need to be addressed to determine what the actual capacity needs are for the WWTP. Are there leaks in the collection system that allow infiltration of ground water (Mt. Shasta City is located in a relatively

marshy area such that there could be seepage even in dry weather)? Does this explain why the wet weather capacity is so much higher (3.56 MGD)? Is there a problem that needs to be fixed first, before the WWTP upgrade is designed? What effect is the drought having on all of the above?

The Document referred to in the MND/IS, "Draft Preliminary Engineering Report and Feasibility Study For City Of Mt. Shasta State Mandated Wastewater Treatment And Disposal Improvement Project" contains data of the annual total WWTP discharge and precipitation (figure 5, page 28)

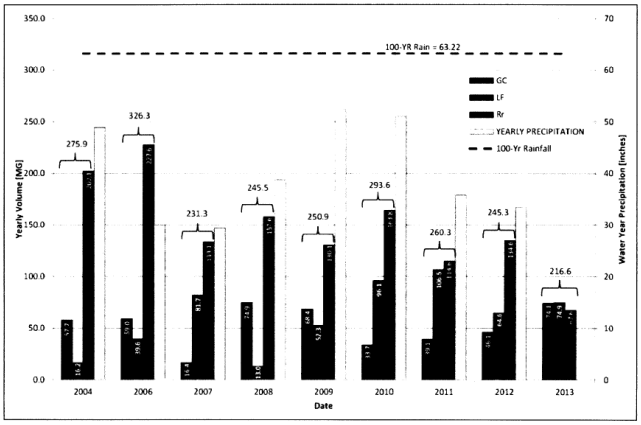
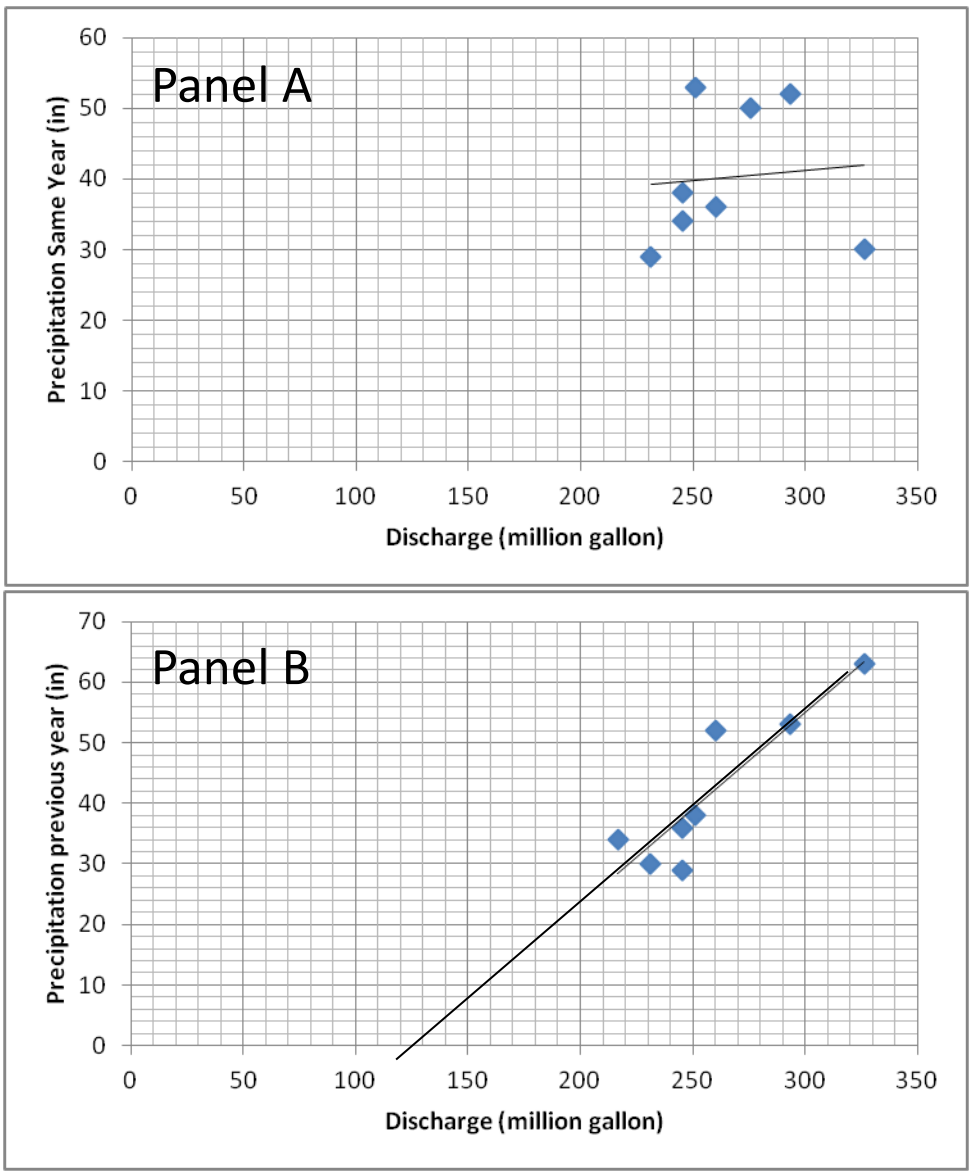


Figure 5 – Historic Effluent Disposal Volumes

This data can be plotted as a line graph of precipitation vs discharge as seen below: Panel A is with discharge and precipitation for the same year. Panel B shows the discharge data plotted with precipitation from the previous year.



Panel A shows no apparent relationship between WWTP discharge and current year precipitation. In contrast, Panel B shows a strong linear relationship between WWTP discharge and precipitation from the PREVIOUS year. There are two significant implications from this data: 1). When the line of the best linear fit to the data is extended it intercepts the x-axis at about 125 million gallons, implying that if there were no precipitation, the WWTP would only need to processes approximately 125,000,000 gallons per year, 1/2 to 1/3 of the historical need over the past 10 years. 2). The fact that there is a strong relationship between annual discharge and precipitation from the PREVIOUS year, and no relationship between discharge and precipitation from the same year, suggests that the contribution of precipitation to the discharge volume is not due to immediate run-off, but rather water that is in the ground. Although we acknowledge that correlation does not mean causation, this analysis points again to the likelihood that problems

with the collection system are significant and have implications for the accurate analysis of needed WWTP capacity, and more research needs to be undertaken to fully and accurately understand the capacity needs of the WWTP.

In addition, this past summer the City initiated a campaign for citizens to reduce water consumption. In October, the City boasted that there had been a 45% reduction in City water use! (October 21, 2015 Water Talks presentation by Geoff Harkness, as reported in the Mt. Shasta Herald October 28, 2015, by Lauren Steinheimer). Whereas we acknowledge that part of this reduced use is because of fixed leaks in the water infrastructure, it is also likely that household water conservation methods would reduce the amount of effluent going into the WWTP. What impact does this have on the amount of waste that is going to the WWTP? These are all questions that must be addressed in this MND/IS.

Additional capacity needs that have not been addressed in this MND/IS are the needs for any hook up permits granted that have not yet hooked up and the needs for development along Hatchery Lane and at The Landing.

Also stated on page 8 of the MND/IS: if the City were to allow CG to hook up to the WWTP, "the City would require that Crystal Geyser pay for its full share of the costs of expanding the facility to handle an additional 0.15 MGD of wastewater." This is not an acceptable arrangement. What if, because of all the issues previously raised about the estimation of capacity needs, there is no need for additional capacity to handle CG's wastewater? Paul Reuter in his presentation at the City Council meeting on Dec 14th implied that this could be the case. That would be a great situation for CG, since they will avoid paying for their share of the WWTP upgrades. Would the upgrades then be paid for by the taxpayers (EDA) and ratepayers?

Alternatively, let's assume a 1% growth rate over the next 20 years is reasonable. Given the current capacity of 0.7 MGD and the Crystal Geyser flow estimated in the range of 0.05 MGD (one production line) to 0.15 MGD (three production lines), that means that Crystal Geyser will use from 7% to 21% of the WWTP capacity when they hook up. This is a significant portion. If the "1% population growth/year"-related expansion is used by Crystal Geyser, that will use (roughly) 7 to 21 years of growth-related capacity that would otherwise be available to other users. In other words, further expansion to accommodate "population growth" would need to occur that much sooner. If such further expansion is not done (say because funds could not be raised), then population growth would need to be blocked. If such further expansion is done by raising rates, then the general public would essentially be paying for an expansion necessitated by CG's hogging the available capacity. If, on the other hand, CG is NOT allowed to shoehorn

its effluent into the 1% growth capacity, then they must be forbidden from any hook-up until a further WWTP expansion specifically dedicated to them, which should by itself trigger a CEQA process on all aspects of their facility. In either case, the population-growth capacity should not be used as an excuse to allow CG to use increased capacity without paying for it and without undergoing full environmental review.

D). Piecemeal Review:

CEQA clearly states that projects cannot be broken down into small steps in order to avoid CEQA review, yet that appears to be happening with this project. The MND/IS describes in numerous places how CG will be hooking up to the WWTP. The attempt to separate out the WWTP project from the CG project is an example of piecemeal review that is in violation of CEQA.

On page 8, 4th paragraph, it states, "With respect to Crystal Geyser, the scope of this Initial Study is limited to addressing the potential full-buildout volume of wastewater that could be generated by existing and foreseeable growth, i.e., 1.05 MGD." Here again, we see "piecemeal" review as defined by CEQA. Stating that only one aspect of CG operations (volume of wastewater) will be considered, when clearly CEQA requires all aspects of CG operation at full buildout, is piecemealing.

Page 11: Regarding the collection system: "Potential future improvements related to the capacity or structural components of the collection system would be evaluated as separate projects, and thus, require separate CEQA review and approval." Here again we see "piecemeal". The original EDA grant for upgrade and rerouting of the interceptor line (part of the collection system) was to facilitate CG hooking up to the WWTP. Trying to cut CG out of the WWTP project, with all of its many environmental impacts including the collection system, is piecemealing.

The City's responsibility for initiating CEQA-mandated environmental review that would include the CG plant is nicely swept under the rug with the statement on page 8, "Preparation of a separate environmental document pursuant to CEQA is needed to address the proposed Crystal Geyser operation." More piecemeal is implied. The document goes on to say, "In September 2015, Crystal Geyser announced plans to prepare an Environmental Impact Report (EIR) for proposed plant operations." (page 8, 3rd paragraph). CG, their PR firm, City officials, ENPLAN staff, and PACE engineers know this statement means nothing. An environmental review needs a public agency to be "lead agency." In contrast to their September 15 statement, Crystal Geyser

appears to be delaying the submission of an application to hook up to the WWTP to make it difficult for the City to assume lead agency status and initiate an EIR. Crystal Geyser's announcement that they would do an EIR appears to be a publicity stunt designed to mislead the public.

II. The WWTP Upgrades:

Page 6: "Improvements to the WWTP and Sacramento River outfall are needed to: (1) meet new Central Valley RWQCB treatment and discharge requirements and (2) increase the treatment capacity of the facility."

A). Current System (pages 1-5):

In the current plant, wastewater is processed through a series of lagoons for biological treatment: "As waste water progresses through the series of lagoons, organic and suspended solids are removed through a combination of aerobic and anaerobic processes, as well as aeration." (page 1). Since removal of sludge from the lagoons is required very infrequently, it appears that most of the organic matter is released as CO_2, possibly with some conversion of nitrogen containing compounds to N_2 gas. During the spring, summer, and fall, effluent from the lagoons is treated and filtered to remove remaining suspended solids and disinfected with chlorine gas before being pumped to the golf course or leach field.

In the late fall, winter, and early spring, because it is outside, the filter system does not work, so the filtering step is skipped, the lagoon effluent disinfected with chlorine gas, and discharged to the Sacramento River.

This system is deficient because:
(1). the lagoon system does not adequately remove nitrogen (no data is given);
(2). the treatment process does not adequately remove copper and zinc (no data is given) ;
(3). the current system cannot consistently meet effluent limits for biochemical oxygen demand, total suspended solids, and pH levels (no data is given) ;
(4). Chlorine gas disinfection is problematic because it alters effluent pH and creates chlorinated byproducts that exceed acceptable limits (no data is given) ;
(5). A new biosolids use or disposal plan must be developed.

There are failing infrastructure problems:

(1). a year-round filtration system is needed with increased capacity;
(2). a new operations building is needed;
(3). the outfall system has leaks;
(4). if the lagoons were to remain in service, repairs would be needed to meet permit requirements.

Whereas the MND/IS provides little data substantiating these needs, we note that the PER prepared by PACE Engineering does include some additional information. It is of note what has been left out of the MND/IS. Specifically, the PER states on page 17 that new NPDES permit presents new effluent limits for among other things, bis 2 phthalate. However, the remainder of the PER and all of the MND/IS say nothing about bis 2 phthalate. There is no data to reflect monitoring of bis 2 phthalate, no WWTP components designed to specifically remove bis 2 phthalate. This leaves one to believe that the new plant will not be able to address phthalate contaminants and leaves one wondering why it has been left out. Removal of bis 2 phthalate must be addressed in this project. Bis 2 phthalate is used in plastics and is known to leach from PVC plastics which are commonly used in industrial manufacturing equipment and plumbing as well as household plumbing. The possible presence of bis 2 pthalate in wastewater from both residential and industrial sources must be considered.

B). New WWTP system:

The new system (MND/IS, page 11-14) will eliminate the lagoons, and replace them with a Sequential Oxidation Activated Sludge (SEQUOX) system. This system appears to consist of concrete-lined basins that facilitate alternating aeration and anoxic treatment for removal of ammonia and nitrates, consumption of biochemical oxygen demand, and settling and removal of sludge. There will be two outputs from the SEQUOX system; 1) denitrified effluent will go to the new filtration system followed by UV treatment. 2). Sludge will be pumped to the dewatering facility for water removal, then shipped away.

Regarding the data of ammonia, dissolved oxygen, pH, alkalinity, and nitrate (Figures 1-5, Appendix A of the PER), the format in which the data is presented makes it incomprehensible. Line graphs are ill-suited for displaying this type of data: some graphs have so much data, it is impossible to identify individual data points (for example, Figures 2- 4 have data from 20-22 different dates); smoothed fits are misleading when some data points are missing (for example in Figure 4 about half of the dates are missing data for sample site 2); there is so much variability in the data it appears that data for any given site should be averaged; if there is seasonal variation in the data, it is not obvious from the way the data is plotted, and data is missing from January

through mid-July. We do not see how any meaningful conclusions can be drawn from this presentation of the data and request that further data analysis be completed.

There does not appear to be any component of this proposed WWTP that is designed to remove metals like copper and zinc. We can find no statement in the MND/IS document that indicates where in the new system these metals will be removed. UV treatment most certainly will not destroy them. The filtration system is not definitively described, but is stated to be designed "for further removal of total suspended solids". The WWTP design appears to be lacking a function it is supposed to be designed to carry out. Ionic metals could remain dissolved in the effluent. Data about what form of the metals detected in the effluent would be helpful here. Do the tests for metals detect them in their soluble ionic form? Is there evidence that the metals are particulate? Are there certain seasons when metals are more abundant in the effluent? Moreover, there is no discussion of how the removed metals (which are toxic) will be handled and disposed of in an environmentally safe manner.

The Document referred to in the MND/IS, "Draft Preliminary Engineering Report and Feasibility Study for City of Mt. Shasta State Mandated Wastewater Treatment and Disposal Improvement Project" contains data for copper, zinc, and total suspended solids (TSS) (figure 2 and 3, page 20) for 2012 (note figure 2 is mislabeled).

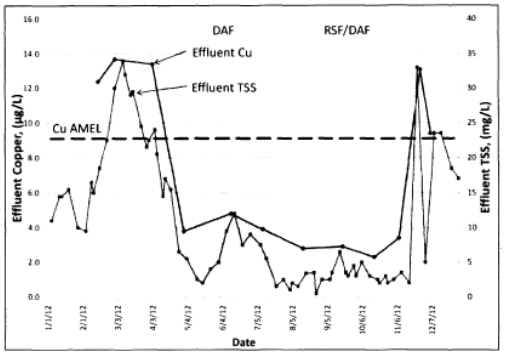


Figure 2 – Effluent Copper & Zinc Comparison

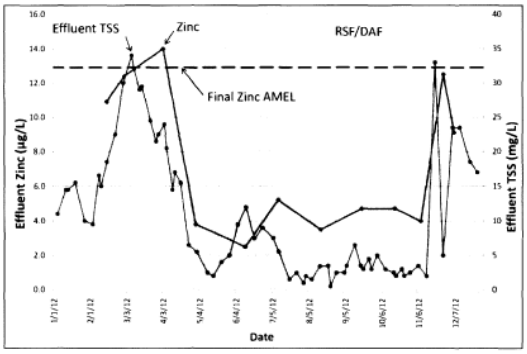


Figure 3 – Effluent Zinc & TSS Comparison

In this document we are told there is "a strong correlation between TSS and copper and zinc, suggesting removal of TSS through efficient biological treatment and effluent filtration will be required in order to comply with [copper and zinc requirements of] the new permit." This statement does not logically follow from the data presented nor is it substantiated by the data. Yes, there is an apparent correlation between TSS and copper and TSS and zinc in the data that is given, but correlation does NOT mean causation. The data in figures 2 and 3 are incomplete. We have been told that TSS increases in the winter because the filtering system cannot operate in

the winter months, yet the TSS data in figures 2 and 3 show peaks in TSS in November and March, but a substantial valley in December through February when the filters are not functioning. Also of importance is that there are no data for copper and zinc from mid-December through mid-February when the TSS is relatively low. Why not? Surely that data must have been collected. And certainly there must be data sets for additional years. Why not include them? We request more thorough and definitive chemical analyses be done of the effluents that contain high levels of copper and zinc to determine if the copper and zinc are indeed bound up in the TSS and will indeed be removed by the filtration system.

It is not clear where in the system the effluent pH will be monitored and adjusted to comply with NPDES standards.

UV treatment appears to be a suitable means for disinfection of the effluent. The description of the UV treatment is very brief. Will LED lights be utilized? There are now LED lights that emit in the ultraviolet range. If not planned, the use of LED lights for the UV treatment needs to be explored since they would be significantly less expensive to operate and maintain than the more typical ARC-lamp.

The amount of sludge produced in this proposed system is significantly larger than sludge from the current plant (from rarely needing to be removed to being shipped out every three days!), yet no explanation for the difference is given. We can surmise that in the current plant in the lagoons there is significantly greater degradation of organic material to CO_2 than occurs in the SEQUOX system (perhaps because of a greater residence time in the lagoons?). The carbon-rich sludge from the SEQUOX system could be vermicomposted into a useful product! It is possible that replacement of the dewatering facility with a composting facility would be less expensive and it would create a product that could offset the cost of the total operation. Such an option needs to be explored.

Cleaning up the output of the WWTP could also be greatly facilitated by a campaign to education the public about what is appropriate and inappropriate to dump down our drains. This, coupled with an enhanced hazardous waste disposal service, could go a long way in keeping our water ways clean.

C). Environmental Checklist and Beyond

In the checklist on page 20, four of eighteen categories for potential environmental effects are checked (Biological Resources, Cultural Resources, Utilities and Service Systems, and

Mandatory Findings of Significance). Inclusion of Crystal Geyser operations and the developments along Hatchery Lane and at The Landing would add many more of the categories: Aesthetics, Air Quality, Geology and Soils, Green House Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Transportation/ Circulation...). We find this checklist to be incomplete, leaving the remainder of the MND/IS woefully inadequate.

Specifically:

Page 25: The air quality assessment indicates that "Operational emissions are based on full buildout of the proposed project, including the potential Crystal Geyser contribution (1.05MGD)." This seems misleading, certainly the calculation of emissions does not include the emissions from the operation of the plant (since so little is known about what that will be), only the emissions from processing an additional 0.15 MGD. Yet at the same time it acknowledges that Crystal Geyser will inevitably hook up to the system.

Page 26: It is stated "Hydrogen sulfide is formed during the decomposition of organic material in anaerobic environments. According to the engineer, with the proposed improvements, the project would result in minimal hydrogen sulfide production; therefore, the potential for hydrogen sulfide emissions is less than significant." The new system will include anaerobic decomposition cycles, so it is not clear why the new system will produce minimal hydrogen sulfide. It is important to have substantiation of this claim.

Page 26: Vinyl chloride is a potential contaminant that could be produced by the plant because "vinyl chloride is produced during the microbial breakdown of chlorinated solvents (e.g., engine cleaner, degreasing agents, adhesive solvents, paint removers, etc). ...."With respect to the breakdown of chlorinated solvents, the proposed project would not result in an increase in such solvents being discharged to the facility..." However, industrial use of such solvents by an operation like Crystal Geyser and/or commercial use of such solvents by a new development along Hatchery Lane could result in significant increases in their presence in the waste water. We won't know unless these projects are covered in this Initial Study.

Page 27: In analyzing the air quality impact of the sludge treatment facility, it is stated that "sludge would be dried and processed using an enclosed centrifuge or sludge blower dewatering facility." The document goes on to say, "Potentially objectionable odors resulting from the facility operation and sludge hauling would be less than significant." We can see how an enclosed centrifugation system that returns the supernatant water to the treatment facility for

reprocessing would likely result in minimal odor. However, a "sludge blower" implies that a blower would be used, involving evaporation and the potential release of odors outside the enclosed area. There needs to be a definitive description of the dewatering process and a real assessment of possible odors generated by the facility.

Page 28: The Biological Resources section (page 28-34) appears to be deficient in the analysis of things that live in the river other than anadromous fish. Mollusks have been notably left out. It appears the wildlife analysis has relied solely on one document, "IPaC Trust Resource Report" from USFWS. However, the IPaC website very specifically states a disclaimer (in bold, red, capital letters): "IPaC will never replace our trained biological experts. It cannot perform complex biological analyses" (http://www.fws.gov/ipac/ipac_basics.html). In other words, someone sitting in front of a computer searching a data base is NOT a substituted for an expert out in the field doing an onsite assessment.

Local USFS wildlife biologists have found numerous mollusk species in the river in the Box Canyon area including *Anodonta californiensis, Gonidea angulata*, *Margaritifera falcata, Pisidium ultramontanum,* and *Fluminicola seminalis.*

A thorough survey was done in 1999 by the USFWS, "Mollusk Species of the Upper Sacramento," identifying numerous mollusk species in the upper Sacramento River, some of which are **threatened, endangered or sensitive**. There needs to be **expert, onsite** analysis of what is in the river in the area where the diffuser replacement work will be done and appropriate mitigations developed for their protection.

Pages 33-34: Mitigations for Biological Resources are given. Mitigation 4.3 states, "To ensure that active nests of migratory birds are not disturbed, vegetation removal and construction activities shall occur between August 31 and February 1, if feasible." The term, "if feasible" has the effect of negating the mitigation in front of it. The phrase, "if feasible' must be deleted to make this a real mitigation.

Page 35: Cultural Resources: Contrary to what is implied, the Winnemem Wintu Tribe was NOT consulted by ENPLAN.

Page 40-41: Greenhouse gas emissions: Discussion here is misleading with regard to Crystal Geyser's contribution to greenhouse gas emissions. Whereas it makes it sound like the total greenhouse gas emissions from CG operations is included, only the greenhouse gases released from treating an additional 0.15MGD is included. So here we again see

misrepresentation of GC impacts, and a clear indication that hookup of CG is clearly a foreseeable event.

Why will the greenhouse gas emissions be so much greater for the new plant compared with the current plant (from table 5, existing condition = 1,588 metric tons/year; proposed project = 3,130 metric ton/year)?

Page 43: In the first paragraph there is a discussion about the proximity of schools which states that Mt. Shasta Elementary School is the nearest school. This is not true. Golden Eagle Charter School, the Seventh Day Adventist School, and Siskiyou Christian School are all significantly closer (there may be others)

Page 51: Here again is discussion about Crystal Geyser and population growth, with claims that CG's needs will be accommodated after a separate CEQA process (referring back to Section I.B.2). Again, this is misleading, making it sound like Crystal Geyser will pay for the capacity they need, but there is no guarantee that they will do so.

Page 59, paragraph b: "The effects of increased wastewater generation by a potentially foreseeable project, Crystal Geyser, are also addressed." Here again is a misleading statement, making it sound like the environmental impacts of CG operations have been considered, where what has been considered is just the impact of increasing the capacity of the plant to process an additional 0.15 MGD. Also imbedded in this statement is the fact that CG is a foreseeable consequence of improvements to the WWTP.

A few last questions: Figures 3 and 4 of the MND/IS show an "emergency retention basin." What emergencies are anticipated?

Figure 4 shows items labeled "Lime addition" and "Sodium Hypochlorite." What are these items and how are they involved in processing effluent?

III. Summary

In conclusion, we find unresolved issues in the MND/IS that we believe must be addressed to ensure the new WWTP will meet the real needs of our community. These include the need to consider additional foreseeable consequences of the upgrade (Crystal Geyser hookup, development of the Landing and developments along Hatchery Lane), inconsistencies between the EDA-funded portion of the project and the full project with respect to increased capacity

needs, lack of a thorough analysis of capacity needs, concerns about the appearance of piecemealing to avoid CEQA review, and numerous questions/concerns/issues regarding the data used to justify the new WWTP design and the environmental assessment.

We offer these comments with a genuine interest in the development of a WWTP that is functionally, environmentally, and economically appropriate for our Community.

We would like to have responses to our questions/comments/concerns in writing. Please let us know what the timeline will be for obtaining your response.

Respectfully Submitted by

Geneva M. Omann, Ph.D. (Biochemistry)
Secretary
for We Advocate Thorough Environmental Review