



Autumn Wind Associates
Air Quality CEQA Analysis and Consulting Services
916.719.5472 ▪ ggilbert@autumnwind.us

February 14, 2017

Gateway Neighborhood Association
724 Butte Ave
Mt. Shasta, CA 96067

W.A.T.E.R
PO Box 873
Mt. Shasta, CA 96067

RE: AWA Comments Regarding Concerns Regarding Air Quality Analysis and Significance Determinations Within the Crystal Geyser Bottling Plant DEIR

At the request of the above-identified community and environmental interest groups, Autumn Wind Associates has reviewed the above-referenced DEIR and provides these comments regarding likely defects found within the project's emissions estimation process and significance determinations.

Greg Gilbert has provided air quality project analysis and strategic services to land use-related and other clients since forming AWA in 2001. Prior to 2001 he worked at 2 CA air districts for 11 years, with broad responsibilities in stationary source enforcement; compliance; public education and outreach; rule development; air emissions inventory analysis; development and implementation of low-emission mobile source incentive programs; development and implementation of CEQA guidance, thresholds of significance, and mitigations; and analysis, review, and commentary involving many EIRs and MNDs. Since 2001 he has provided air quality analysis of CEQA and NEPA documents, for both private-sector and air district clients. Mr. Gilbert received his undergraduate degree in Environmental Studies from UCSB, thereafter

completing numerous professional and graduate-level courses in transportation, planning, law, and air quality.

As explained below it appears that the DEIR contains critical flaws and is deficient in the following areas:

- Underestimates important project-related mobile source emissions, particularly those that will result from project-related heavy-duty truck trips
- Changes or modifies critical emission modeling inputs with little or no explanatory support in the project's environmental documentation;
- Under-represents employee trip distances
- Fails to estimate and evaluate emissions for all equipment and vehicles identified in the DEIR
- Provides inadequate support for enforceable mitigation to ensure the project will not cause significant air quality impacts, particularly in the areas of ozone pre-cursor emissions and cancer risk.

I. Introduction

In our review of the Crystal Geysers DEIR we found no meaningful information to explain critical changes made by the Lead Agency to default emission inputs or choices customarily applied in the modeling process used to estimate Crystal Geysers's project emissions. This lack of information and explanation runs counter to CEQA's essential interest in a fully informed, fully explained environmental review process, and inhibits the public's and decision-maker's ability to understand how and why emission estimates and significance determinations were developed as they were for the Crystal Geysers project. No less importantly, it confounds the potential for critical outside review of the DEIR's air quality analysis to understand, confirm, and verify the accuracy of its emissions estimates, the efficacy of its proposed mitigations, and the validity of its significance determinations.

Because only a slight increase over daily NOx emissions modeled for the project—no more than .11 lbs/day against the 250 lb/day threshold—would lead to an exceedance of that threshold, any single issue we have identified as a probable defect in this comment letter holds the potential to undo and derail the accuracy of the DEIR's significance determinations. Unfortunately, not all project emissions were included for review in the DEIR, and some appear to have been inappropriately manipulated to produce lower emission estimates. Corrections, particularly for those involving the project's daily heavy-duty truck trips, will likely lead to increases in estimated criteria air pollutants, GHGs, and TACs; these, in turn, would jeopardize the DEIR's

health risk modeling findings, along with air quality significance determinations made by the Lead Agency. Energy use estimates in the DEIR would also be expected to increase.

The following detailed concerns should, we believe, lead to the conclusion that the emissions estimates and impact determinations contained in the DEIR must require significant correction, and that an amended EIR will necessitate recirculation with public review and comment.

II. Land Uses and ITE Trip Rates

DEIR Appendix M Table 4 shows the two land use types used to estimate the project's daily vehicle trips as "General Heavy Industrial" and "Single Family Housing". The "General Heavy Industrial" land use type is found within the ITE (Institute of Transportation Engineers) Trip Manual; the latest Manual version¹ provides specific trip generations expressed in trips per day per 1000 square feet of proposed building space.

ITE trip rate values for the General Heavy Industrial are not fungible with the General Light Industry land use category; they are not interchangeable and trip rates are critical to the accurate estimation of a project's vehicle-related emission impacts. However, while DEIR Appendix M Table 4 identifies a trip rate applied to the General Heavy Industrial land use type, at numerous locations in Appendix M's CalEEMod output sheets (see, for example, Table 4.3 Trip Type Information) the "General Light Industry" land use has been substituted without explanation.

In addition, ITE daily trip rates that would ordinarily be applied have been overridden (using a value of 1.78 trips/day/1000 sq. ft.) without explanation by the Lead Agency, although they may rely on truck trip and employee information contained in email written by Crystal Geyser plant manager R Weklych. (See Weklych email provided at the Lead Agency's website, dated 9/27/16, with daily truck trip and distance estimates.) Weklych estimates of employee and commercial truck trips for the project appear to have been used to override ITE trip rates customarily used to estimate a project's trip rate, although no information is provided in the DEIR to substantiate the Weklych estimates and despite that they result in trip rates for the project that vary a great deal from those provided by ITE.

ITE trip rates have been developed by expert transportation engineers based on years of land use and transportation data, and substitution of the lower daily trip rate should have been justified and explained

¹ See Tom Brohard's comment letter dated February 16, 2017 and submitted to the County Planning Department regarding his expert concerns for potential problems with the DEIR's treatment of traffic and circulation issues; we accept by reference ITE information there.

in the DEIR. It was not. Further, it appears that the trip rate used for the commercial land use (General Light Industry or General Heavy Industrial) derived from inputs obtained from the Weklych memo is underestimated based on the failure to include certain routine truck trips that can be expected to occur. Corroborating information regarding the failure to include certain trips in the emissions estimation process is provided below.

III. Trips and Trip Distances Appear to Be Underestimated

Routine project-related truck trips will generate the largest share of the project's ongoing criteria and greenhouse gas emissions over its multi-decade lifetime. It appears that the Weklych email was used to develop important trip number, type, and distance inputs necessary to run the CalEEMod emissions estimating model.

Specifically, the Weklych email is the basis for the DEIR's estimates of truck trips, destinations, and miles-traveled. It appears, however, that these inputs did not include some vehicle trip and equipment-related information necessary for estimating more fully the project's mobile source emissions.

Raw materials (e.g. tea, fruit juice extracts) required for bottling at the plant are not identified in the DEIR—their trip characteristics should have been included in the CalEEMod modeling process—nor are they mentioned in the Weklych email. Similarly, no information is found for forklifts, commonly used and critical to warehouse and transportation operations; liquid- or gaseous-fueled forklifts produce operational emissions that should have been reflected in DEIR emission estimates, and electric lifts were not noted in energy calculations or GHG information in the DEIR. At Appendix D, pg. 3 the DEIR states that wastewater (RO) will require use of an 80 hp pump, expected to operate at a 50 hp load, but there is no mention in the Air Quality element or Appendix M to show that the pump's emissions were factored for CAP, DPM-health risk impacts or GHGs, or, if electric-powered, factored for energy and GHG impacts. Finally, the DEIR fails to take note of the emissions that will result from the weekly delivery of the 3.3 million gallons/yr of propane identified as needed for full plant production.

Propane deliveries to the plant's current 30,000-gallon tank, or in combination with a 2nd tank mentioned for future placement next to the existing tank, will be by truck. The industry standard for such deliveries is by truck-transport load, at approximately 9500 gallons per delivery. No information is found in the DEIR regarding emissions to result from propane deliveries necessary for plant operation. Transport loads typically originate in the Bay Area (Martinez or Benicia refineries); transport-related emissions from the Martinez-Benicia area should have been estimated and evaluated in the Air Quality, Energy, and GHG elements of the DEIR.

A 9500-gallon propane transport load would typically require about 50 minutes to offload using a belly pump. Vapor pumping via compressor use on older transports typically requires roughly twice as much time to unload. In either approach, the truck’s diesel engine is expected to power the compressor or hydraulic pump during offloading; offloading emissions must be combined with onroad emissions generated by trips to and from the Benicia refinery area. 3.3 million gallons of annual propane identified in the DEIR should result in roughly 350 transport loads (avg. 9500 gallons each) at a one-way distance (Mt. Shasta to Benicia) of 250 miles.

Annually this would result in the emissions from heavy-heavy-duty (HHD) truck operations traveling about 175,000 miles, and to which would be added the emissions resulting from truck pumping operations to offload those transport loads into Crystal Geyser’s propane storage tank(s). No mention is made in the Weklych memo of propane delivery trips, nor did we find information in Appendix M to indicate that transport delivery-related emissions were included in the DEIR’s emissions estimates. With the addition of related CAP, GHG, and DPM (diesel particulate matter, a CARB-identified carcinogen) emissions, emission impact levels deemed less than significant in the DEIR would then be unreliable, and virtually certain to cause the NOx threshold of significance (250 lb/day) to be exceeded.

IV. Fleet Mix Characteristics Have Been Manipulated Without Explanation or Justification

Appendix M, Table 5 – Fleet Mix is reproduced with this screenshot:

Table 5 - Fleet Mix



LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.213	0.213	0.213	0.000	0.000	0.000	0.240	0.120	0.000	0.000	0.000	0.000	0.000

Notes: Reflects a more conservative fleet mix of heavy duty trucks for delivery truck trips and RO truck trips. Applied to all land uses.

Here is the screenshot of an unmanipulated EMFAC fleet mix, taken from the CalEEMod model:

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.274619	0.095731	0.149477	0.135240	0.097034	0.010114	0.011725	0.210442	0.002432	0.001174	0.006104	0.001751	0.004157

Table 5 screenshot, above, was taken directly from the CalEEMod modeling results prepared for the Crystal Geyser DEIR, and it was generated from CARB’s EMFAC model that runs in the background of

the CalEEMod model. Table 5's purpose is to identify the percentages of vehicles, by weight class, that will comprise the "fleet mix" operating at or for the proposed Crystal Geysers plant.

Weight classes of vehicles range from light passenger cars to the heaviest onroad trucks, and the weight class shares in the screenshot above must total to 100% to provide an accurate representation of the fleet mix operating in the Siskiyou region and that will operate in conjunction with the proposed Crystal Geysers bottling plant. The acronyms represent cars and truck vehicle types on the basis of their loaded weights---as an example, LDA stands for "Light Duty Auto", LDT1 stands for "Light Duty Truck 1", etc. and they are at the lightest end of the passenger vehicle scale. In Table 5 above, the MHD weight class---medium heavy-duty vehicles---shows that that weight class (19,501 lbs – 33,000 lbs) comprise 24% of the total fleet mix that was used to model Crystal Geysers's onroad vehicle emissions. HHD trucks---weighing considerably more than MHD trucks---represent 12% of the total, modeled fleet mix involving Crystal Geysers. Where did those percentages come from, and what justifies their use in the DEIR? Unfortunately, the DEIR is silent on those important, emissions-relevant questions.

The Emission FACtors (EMFAC) model, developed and maintained by CARB, underpins the CalEEMod emissions calculation model used for Crystal Geysers DEIR emission estimates. EMFAC provides critically important quantitative information on all onroad motor vehicles (e.g. light-duty auto, medium heavy-duty, heavy-heavy-duty, etc.) operating on Siskiyou highways, freeways, and roads, and it accounts for populations of currently operating vehicle that range in age from current-year to vehicles that are 35 years old. The CA Air Resources Board (CARB) created and caretakes the EMFAC model, and it is responsible for assigning shares by weight class of vehicle to the fleet mix table; it does so based on extensive, ongoing information and research keyed to vehicle populations operating in California's air basins and with input from regional transportation agencies that include Siskiyou County's. Changes to the fleet mix are a serious matter since emissions estimates, budgeting, and air quality attainment strategies at the regional, state, and even the federal level rely on EMFAC values.

Review of Table 5 shows that vehicle types MDV, LHD2, LHD2 in the fleet mix for Crystal Geysers were zeroed out. Those zero values should have been given substantive explanation in the DEIR, since they would create a significant hole (representing 19% of the total fleet mix) in the middle of the routine, typical, everyday vehicle fleet mix operating in Siskiyou County. No explanation is found in the DEIR, however, to justify manipulation of the expert state air agency's EMFAC fleet mix values.

Manipulating EMFAC values without explanation is a serious matter since heavier vehicles (LDA being the lightest, LDT1 being the next with slightly more weight, etc.) produce more emissions than lighter vehicles. Eliminating heavier vehicles from the fleet mix will result in the reduction of a project's

operational mobile source emissions, just as assigning a greater share of the fleet mix to heavier vehicles would cause the aggregated emissions estimate to increase.

While CEQA provides wide latitude to the Lead Agency to choose the methods and inputs used to estimate and evaluate the significance of project's emissions, substantive changes to accepted and customary calculation methodology must be clearly identified and explained in the EIR. Beneath Appendix M's Table 5 there is a note---it states "Reflects a more conservative fleet mix of heavy-duty trucks.... Applied to all land uses". This statement provides no rationale for why changes in the fleet mix are "more conservative", particularly since eliminating heavier vehicle types (MDV, LHD1, LHD2) to increase proportional shares of lighter-duty, lower-emitting vehicles would artificially reduce project emissions which are then used to determine significance thresholds.

"Conservative" within the context of CEQA generally means that impacts are reviewed with a bias toward emissions estimation under the most extreme yet reasonable circumstances. This is done to ensure that a project's air or health impacts are evaluated at their most reasonably extreme status. Because there is no explanation nor any mention of the re-jiggered fleet mix found in Table 5, it appears that the "more conservative" rationale could have been undertaken to produce a reduction in calculated project emissions in order to avoid a significant emissions impact determination. If this is the case, it is entirely unacceptable under CEQA.

LDA through LDT2 vehicle types in the Table 5 excerpt shown above comprise vehicles weighing less than 5750 lbs. Elimination of the next two classes above LDT2 means that the emissions from those vehicles weighing between 5751 and 19,500 lbs and that operate routinely in the region's fleet mix would be eliminated from CalEEMod emissions estimates prepared for the Crystal Geysers project. Pick-up truck and oversized pick-up truck vehicles are common in rural areas including Siskiyou County, and are found within those weight classes eliminated in Table 5 and, accordingly, within CalEEMod modeling results found in the DEIR.

The photograph below was recently taken of vehicles in the Crystal Geysers-Roxanne plant in Weed; pickup trucks in the parking lot are over 5750 lbs GVWR. The photograph provides clear, visual evidence that the heavier trucks eliminated from the fleet mix for the Crystal Geysers DEIR without explanation are part of the routine fleet mix for the region. The LHD1 and LHD2 weight classes should not have been removed from the fleet mix used to model mobile source emissions for the Crystal Geysers project without cause and meaningful explanation and justification in the DEIR. Why were they removed?



Without evidence to justify the fleet mix changes reflected in Appendix M’s Table 5, the public cannot be sure why the DEIR’s fleet mix changes were undertaken nor whether the fleet mix was manipulated in order to produce artificially low emission estimates. As noted previously, the calculations completed for the air quality emission estimates in the DEIR have produced a NOx estimate which hovers only .11 lbs/day below the NOx significance threshold. Only a very, very slight increase in emissions, as would likely occur with use of the standard EMFAC fleet mix in CalEEMod modeling runs, would be likely to invalidate the DEIR’s less-than-significant impact determination noted as Impact 4.2-1 at pg. 4.2-14.

We attempted to replicate DEIR modeling inputs found in Appendix M to run CalEEMod--but without manipulating EMFAC’s default fleet mix percentages appropriate for the project area. In other words, we left the EMFAC default fleet mix alone, as should always occur unless clear and convincing evidence and reason dictate otherwise. The default EMFAC screenshot varies appreciably from that used in the DEIR and as noted in Appendix M’s Table 5 shown above:

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.274619	0.095731	0.149477	0.135240	0.097034	0.010114	0.011725	0.210442	0.002432	0.001174	0.006104	0.001751	0.004157

The unmanipulated CalEEMod run produces a fleet mix that includes 13.5% Medium Duty Vehicles (MDV), 9.7% Light Heavy-Duty 1, and 10% Light Heavy-Duty 2 vehicles---the weight classes whose percentage shares were inexplicably reduced to zero in the DEIR. It shows that the MHD (Medium Heavy-Duty Trucks) weight class should comprise about 11.7% of the fleet mix, and HHD should comprise about 21%. These are significantly different from those found in the DEIR’s “Table 5” shown

further above, and they clearly identify an increase in heavier (and higher-emitting) vehicles in comparison to what was modeled in the DEIR for Crystal Geyser Bottling Plant. A heavier fleet would automatically result in greater quantities of mobile source emissions.

Additionally, the great majority of the project's long-term emissions will result from heavy-duty truck trips transporting project-related materials to or from the Crystal Geyser plant. Appendix M's Table 5 shows that the fleet mix share of HHD trucks—comprising the heaviest onroad trucks hauling loads up to 80,000 lbs GVWR—were shifted down in number in the DEIR, while MHD trucks were increased above the EMFAC default for the fleet mix operating in Siskiyou County. Re-assigning truck trips to a lighter vehicle weight class would result in artificially reducing fleet emissions. No justification is found in the DEIR for what is found in Table 5, and in fact the DEIR provides evidence to dispute the re-jiggering of MHD and HHD shares at pg. 4.2-18 with this: “The project would result in 50 semi-trailer trucks (100 truck trips) entering and exiting the site at full production....”

“Semi-trailer trucks” means a Class 8 tractor pulling two full-length trailers, a CA maximum, non-permit length of about 75' and weighing 80,000 lbs GVWR, not medium-duty (Class 6) trucks with a GVWR at or below 33,000 lbs. As evidenced in the DEIR's Table 5, the fleet mix change reflects twice as many medium heavy-duty (MHD) trucks as heavy heavy-duty (HHD) trucks--- yet descriptive information at various locations in the DEIR point clearly to the bulk of commercial truck trips as undertaken by heavy heavy-duty (HHV) trucks, and not MHD trucks. As noted previously, the heavier the truck, the greater the relative emission quantity, and so manipulated EMFAC fleet mix data to decrease HHD trucks in favor of more MHD trucks would artificially reduce total project emissions estimates. Unexplained and unjustified changes made by the Lead Agency to EMFAC fleet mix shares conflict with the DEIR's declarative statement that “50 semi-trailer trucks” will operate at the facility each day---leading to only more doubt about the validity and integrity of the modeling inputs, emission and health risk estimates, and significance determinations in the DEIR.

V. Weekly Hours of Operation Estimates Are Not Consistent

At Appendix M, Table 6 there is this: “Assumes 6 days of operation per week with 24 hour operations 5 days per week and 10 hours on the weekend.” This statement is poorly written, confusing, and fails to provide for a clear understanding of total hours/week of plant operation. Does it intend to say that the 6th day per week, on a weekend, will consist of ten hours of work? Is the ten hours on the weekend on one day, or split between two days? One interpretation is that it means to reflect 120 hours/week.

The Weklych email of 12/6/16, however, indicates 144 hours/week of plant operation. DEIR Project Description, pg. 3-9 states “In its daily operations, CGWC plans to operate the Plant up to 24 hours per day (depending on demand), Monday through Friday, with one day shift on Saturday from 7:00 am to 3:30 pm and one swing shift starting Sunday evening at 11:00 pm.”

This may total to 129 hours/week of operation, although the hours (or hour) of operation identified for Sunday is uncertain and probably reflects a typo since a swing shift would typically start in late afternoon and run to around midnight. Moreover, it makes little sense that a swing shift would start at 11:00 PM Sunday if two 24-hr shifts are identified for beginning just one hour later (at 00:00 hours Monday).

Confusion regarding hours of weekly and daily operation renders the accuracy of operational emissions estimates found in the Air Quality element and Appendix variable and uncertain. Explanatory information, along with a precise weekly hourly value consistent throughout the DEIR, was not provided in the DEIR. Ordinarily a slight difference in hours would likely not result in determination of significant air impacts. However, in this case the project’s estimated operational NO_x emissions are only .044% below the daily CEQA significance threshold of 250 lbs/day---thus the variation in weekly hours of operation could easily render the emissions estimates and significance determinations found in the DEIR inaccurate. Inconsistencies in weekly hours of operation must be eliminated by use of a precise, consistent value, with hours-related emissions estimates then keyed to that value.

VI. Urban Trip Lengths Should Not Have Been Used to Estimate Project Emissions

At Appendix M, pg. 1 under “Project-Specific Inputs for the Crystal Geyser Bottling Plant Project”, the Lead Agency has specified their use of the “urban” land use setting. Siskiyou County is decidedly very rural in setting and location, and with towns and residential areas routinely located at considerable distance from employee work locations. No information is provided in the DEIR to explain why “urban” was selected by the Lead Agency. Urban land uses reflect shorter trip distances, based on residential, commercial, and work land use types being closer to one another, the availability of mixed use housing-with-commercial, transportation options (RT buses, trains, etc.), and access to greater consumer products and services with less travel required. By contrast, rural trip lengths are in general longer because of greater distances between home, work, and commercial-retail land uses. At pg. 4.2-23, the DEIR characterizes the area as rural: “The County is currently in attainment or unclassified for all criteria air pollutants, and the region’s development plans maintain a *rural* character.” (Emphasis added.)

The “urban” setting is also reflected in Appendix M where “urban” trip lengths were used in the CalEEMod emissions modeling process. No evidence is provided to justify the use of shorter-length trips associated with an urban setting, and employees who will work at the Crystal Geysers facility can be expected to commute longer distances due to the relative shortage of jobs in the region and because rentals in or near the plant’s location are in short supply. Thus, employees will routinely drive longer distances to work than is reflected in the urban trip lengths used in the DEIR for vehicle emissions modeling. Further, just because the local air district or transportation planning agency for the region has provide both urban and rural trip lengths for its jurisdictional area---which occurs in virtually every region of the state—the choice to reflect shorter trip distances in a rural area (using the urban trip length values) for purposes of calculating a CEQA project’s air emission impacts must be justified by evidence. No such evidence or any discussion is found in the DEIR that justifies the Lead Agency’s selection of the urban trip length values, rather than the appropriate rural values.

For example, some employees can be expected to commute from Yreka, a distance well beyond the values found in the urban trip lengths used to model Crystal Geysers’ employee trip-related emissions. Unless justified with reasonable evidence and explained in the DEIR, a rural setting should have been specified for the project and longer-distance rural trip lengths as the most conservative approach should have been used for emissions modeling in the DEIR. By using the urban setting, emissions modeled for the project would automatically be lower than if the project were modeled using the longer average distances reflected in the rural land use setting. This is inappropriate since the project is in what it characterizes as a “rural character” area where longer distances will continue to occur in most residential, shopping, and work-related vehicle trips.

VII. Mitigations are Inadequate to Prevent or Lessen Air Quality Impact Significance

At Appendix M, Section 8.1, the Lead Agency takes a 75% CO₂ credit for instituting a “Recycling and Composting Services” mitigation measure, but no descriptive information is found in the DEIR’s Air Quality element or Appendix M that details the program’s elements, what entity will be responsible and liable for its permanent operation, the timetable for implementation of the measure, and that provides benchmarks by which its effectiveness to justify the 75% claim will be measured. No mention is made in the DEIR of deferral of the details pending a future study, nor does the DEIR articulate any specific, enforceable performance criteria now or upon a future study to ensure successful implementation and operation of the measure across the project’s lifetime. Unless the measure is given adequate description and detail for its establishment and ongoing operation, and how it will ensure its effectiveness, the measure cannot be relied upon to produce *any* claimable mitigation benefit.

DEIR Mitigation Measure 4.6-1's components are identified and explained at DEIR pg. 4.6-18, and include solar PV and carpooling for employees. At MM 4.6-1(a), "Install solar arrays on the rooftop..." contains no timeline that specifies when the solar power system will be installed and made operational, and under the preceding qualifying language ("CGWC shall implement a combination of the following measures to achieve a net reduction of 25,486 MT of CO₂e annually") it may never be installed. As written, it might appear to the public, and decisionmakers who will vote on the adequacy of the Crystal Geyser EIR, that solar will be installed—yet the mitigation measure does not require it. If the County wishes to mitigate the project with use of solar power, it must provide enforceable performance criteria in the mitigation measure.

Additionally, use of the "carpool or rideshare program" measure is claimed in the DEIR for its potential to produce substantial emission reductions, yet realistically the measure will provide little if any actual reductions since it is both unenforceable as written and relies on unsupported assumptions for its claim of emission benefits.

At pg. 4.6-18, the DEIR states that the carpool/rideshare measure "...shall include a shift scheduling program that allows interested parties to work similar work schedules to promote ride-sharing... This measure would provide a reduction of 1.11 MT of CO₂e per participant annually". The mere provision of a program is not what will produce emission benefits---only those employees who use it will generate the claimed 1.11 MT of CO₂e reductions annually and as written the measure is unenforceable due to its failure to require its use by any employee. ("Allow" permits discretion and choice, and is therefore unenforceable.) Nor does it provide necessary discussion or detail of exactly how its enforcement will be assured by the Applicant sufficient to justify the claim of 1.11 MT of emission reduction annually. Moreover, carpooling (or ridesharing) is a measure which has had extremely limited success in CA, with those occurring sparingly in urban areas with extreme traffic congestion.

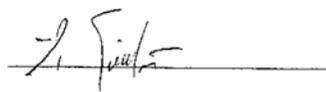
Carpooling or ridesharing as used in the DEIR is a classic "feel good", window-dressing but otherwise functionally deficient mitigation measure designed only to give the appearance of emission reductions, yet with no enforceability or any substantive proof that it would produce ongoing reliable, surplus, claimable emission benefits. Urban carpooling works not because it has been included occasionally in mitigation requirements for projects subject to CEQA review, or because it is near and dear to adherents of behavioral modification as the panacea for CA's sizable vehicle-generated air pollution, but because costs to the individual commuter for commuting and congestion on grossly overcrowded CA urban roadways have forced real-life behavioral changes in commuting choices and patterns. By contrast, Siskiyou County is not exactly burdened with roadway congestion challenges, nor have costs for employee commuting risen to the level that would pragmatically motivate carpooling and ridesharing for most employees who will travel to and from the proposed Crystal Geyser plant each day. Moreover, the

DEIR fails to provide any evidence that carpooling/ridesharing has worked—when it has worked to provide more than sporadic, limited emission benefits in limited applications. Perhaps other CGR operations in CA (Weed, Olancha, etc.) can show with good evidence that they have employee ridesharing programs with near-100% participation.

Voluntary air district emission reduction programs that include qualitative measures have traditionally been provided no more than 5% emission benefit claimability for a measure such as “carpooling/ridesharing”, yet in this case the Lead Agency has apparently assumed, without explanation or calculations in the DEIR, that all employee commutes will be reduced by the measure across 250 days/yr (see note at bottom of Table 4.6-3) to blindly justify a claim of 1.1 MT/yr CO₂e reduction. Longer distances and extremely heavy reliance on individual, personal vehicles for vehicle trips are the rule in extremely rural areas such as in Siskiyou County, and thus no more than a tiny percentage of employees should be expected to rideshare or carpool without hard, mandatory requirements and/or highly effective inducements provided by Crystal Geysers.

Our research to assess the relative or absolute success of carpooling/ridesharing as a CEQA mitigation in CA with contacts to traffic engineers and air district planning managers has underscored the relative failure of the carpooling/ridesharing option other than in very limited and largely urban settings. While this measure may appeal facially to some unsuspecting members of the public or to decisionmakers in Siskiyou County, it is almost certain to produce little if any claimable emission or energy benefits unless and until it is made mandatory for all Crystal Geysers employees, with specific and enforceable performance duties and criteria reflected in the project’s final, approved MMRP.

Sincerely,



Greg Gilbert

Autumn Wind Associates