

1 **Public Comment on Draft Bay Area Plan and Draft Bay Area Plan Draft**
2 **Environmental Impact Report (State Clearinghouse No. 2012062029): by Robert**
3 **Silvestri, 73 Surrey Ave. Mill Valley, CA 94941; May 15, 2013: GHG Emissions**
4

5 This letter is submitted as public comment on the Draft Bay Area Plan and
6 Draft Bay Area Plan Draft Environmental Impact Report (State Clearinghouse No.
7 2012062029) regarding GHG emissions noted in the DEIR.

8 **INTRODUCTION**

9 A fundamental purpose and goal of AB32, SB375, the Sustainable
10 Communities Strategy (SCS) and Plan Bay Area is the reduction of per capita CO2
11 emissions / greenhouse gases (GHGs) from the use of private automobiles and
12 light trucks by 7 percent by 2020 and by 15 percent by 2035. The Sustainable
13 Communities Strategy requires all Metropolitan Planning Organizations (MPOs) to
14 create transportation oriented development plans as a means of achieving those
15 goals. In addition, SECTION 4. of SB375 states that Section 65080(b)(1)(G) of the
16 Government Code (is amended to read) that “Prior to adopting a Sustainable
17 Communities Strategy, the metropolitan planning organization shall quantify the
18 reduction in greenhouse gas emissions projected to be achieved by the
19 sustainable communities strategy and set forth the difference, if any, between
20 the amount of that reduction and the target for the region established by the
21 state board.”

22 After review of the Plan Bay Area document and the Alternatives (“the
23 Plan”), and the Draft Environmental Impact Report for the proposed Plan and the
24 Alternatives (the “DEIR”), and in particular Part Two, Chapter 2.5 *Climate Change*
25 *and Greenhouse Gas*, and Chapter 3.1, *Alternatives to the Proposed Plan*, my
26 findings are that the DEIR fails to adequately establish reasonably proof of the
27 efficacy of the proposed Plan or the Alternatives in reducing per capita or overall
28 greenhouse gas emissions (GHGs), to meet SCS goals, and therefore fails the
29 technical requirements under CEQA. Furthermore, based on the more specific

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30 types of analysis demonstrated herein, my findings are that Plan Bay Area and the
31 Alternatives will increase overall and per capita GHGs rather than decrease them.
32 Please note the following comments to support this conclusion:

33

34 **1 – THE CLIMATE CHANGE DATA PRESENTED IN THE DEIR IS NOT RELEVANT TO**
35 **SB375 REQUIREMENTS:**

36 The DEIR expends the first 41 of its 85 pages, and numerous pages
37 thereafter, presenting a variety of statistics and theoretical projections about
38 climate change, globally and locally, and its potential impacts. However, there is
39 no requirement for the DEIR to establish whether climate change is or is not
40 happening, or is or is not disputable. Therefore, all this data is irrelevant to the
41 question of whether or not the Bay Area Plan and its Alternatives will reduce or
42 increase GHGs and if so, by how much, specifically.

43 One needs to ask why then this data has been included. It appears that it
44 was included to sensationalize the problem and mislead the reader to assume, by
45 inference, that there is in fact some cause and effect between this climate change
46 data and the proposed Plan and Alternatives, without offering any actual proof or
47 analysis to support the proposed Plan's or Alternative's efficacy in that regard.

48 The DEIR's cite of EMFAC 2011 data or MTC's supplemental technical
49 report, *Summary of Predicted Traveler Responses*, in support of its analysis is
50 inadequate. Neither EMFAC's data nor the MTC Report is sufficiently detailed to
51 properly draw the correct conclusions about the efficacy of the Plan or its
52 Alternatives. Raw data and simplistic analysis are not a substitute for thorough
53 analytical methodologies. Furthermore, basing the DEIR on previous studies that
54 concluded that high density, transit oriented development (TOD) reduces GHGs
55 does not constitute proof or adequate analysis to conclude that the Plan and its

56 Alternatives reduce GHGs. In addition, the theory that high density TOD reduces
57 GHGs has been largely discredited by recent research and to be demonstrated to
58 be inadequate to reach the conclusions found in the DEIR. This commentary will
59 provide the types of analysis required to reasonably analyze all the GHG impacts
60 of the Plan.

61 CONCLUSION:

62 As will be presented in this commentary, the DEIR fails to demonstrate that
63 the Plan or Alternatives have beneficial impacts on either per capita or overall
64 GHG emissions in order to comply with the requirements of SB375. Further, the
65 DEIR fails to adequately analyze GHG impacts using specific Bay Area examples
66 and circumstances.

67

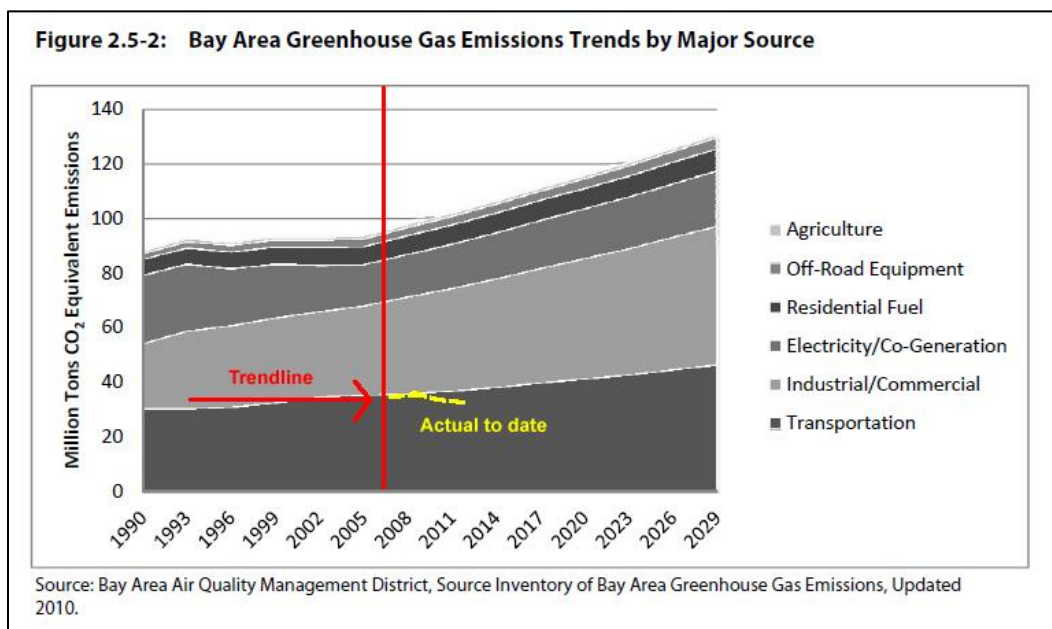
68 **2 – THE DEIR USES “STATISTICAL DATA” ON AUTO AND LIGHT TRUCK GHG**
69 **EMISSIONS TOO SELECTIVELY TO REACH ITS CONCLUSIONS, WHICH ARE NOT**
70 **BORNE OUT BY A MORE THOROUGH ANALYSIS:**

71 A fundamental goal of the Plan is to reduce per capita GHGs by reducing
72 auto and light truck emissions. The DEIR argues that the Plan and Alternatives will
73 accomplish this. To substantiate this claim the DEIR presents projections of future
74 GHGs from various sources, and statistical extrapolations of this assumed data to
75 forecast future events and trends. However, the metrics and statistical “facts”
76 that these prognostications are based upon appear to have been carefully “cherry
77 picked” from an enormous amount of available data, both past and present.
78 Much of the data used in the DEIR is either questionable or has been discredited
79 by more recent research and data. Further, to merely compile statistics based on
80 unexamined metrics to present a “bleak” picture of the future, and then to use
81 that picture as evidence to support the Plan, does not constitute a scientific

82 argument or proof of the Plan’s efficacy or value. However, proving the efficacy
83 and value of implementing the Plan is a requirement of the DEIR.

84 EXAMPLE:

85 On page 2.5-6 of the DEIR Figure 2.5-2 projects the rise in GHGs from
86 various economic sectors (shown below). “Transportation” is the dark area at the
87 bottom. These projections are extrapolated from data collected in a study that

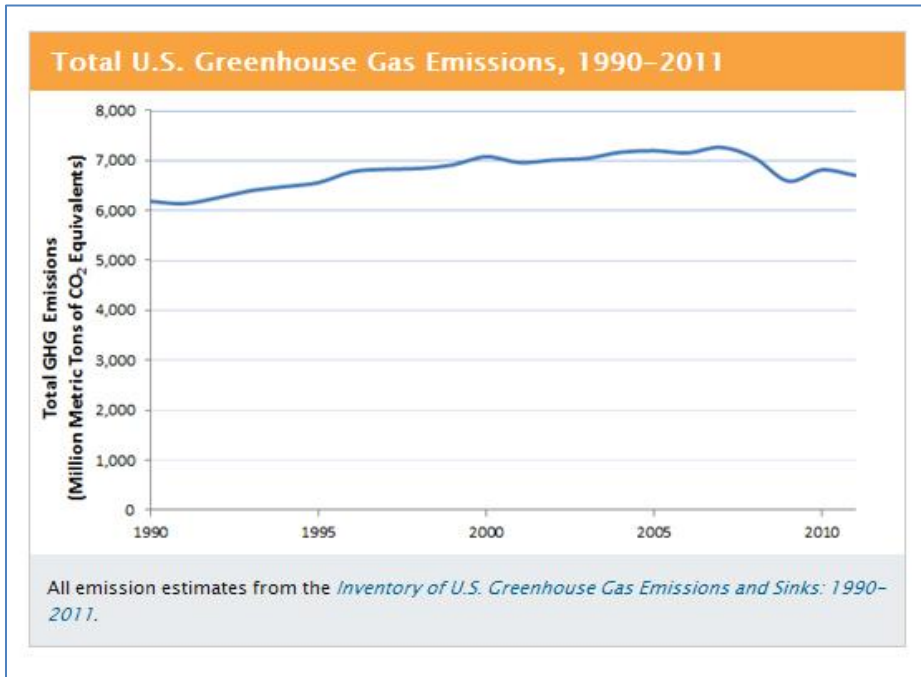


88
89 included the years up to 2005, subsequently compiled and published in 2010.
90 However, the projections shown on this chart are both biased and irrelevant to
91 the purposes of SB375, Plan Bay Area, and the DEIR.

92 The years leading up to 2005 were arguably part of the biggest growth
93 boom in the history of this country (1993 to 2008), so any metrics generally based
94 on that are inherently distorted. In spite of this, the DEIR future projections in
95 Figure 2.5-2 show a straight, sloping line upwards for “transportation” from the
96 very day of the end of the data points that the DEIR relies on. Real data from 2005
97 to 2013 (shown in yellow on chart) has proven this to be false. Also, data

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98 published since those used in the DEIR shows declining GHG emissions, as well,
99 including transportation. See the chart below, published by the EPA.



100

101 As this chart clearly shows, GHG emissions began to drop significantly after
102 the middle of 2008 and have been on a downward to sideways trend ever since.
103 However, SB375 and the Bay Area Plan are only focused on decreasing per capita
104 GHG emissions from personal automobiles and light trucks, not the entire
105 “transportation” sector (e.g. trains, boats, public transit, etc.). So in order to do a
106 proper analysis, we must look at the data more closely.

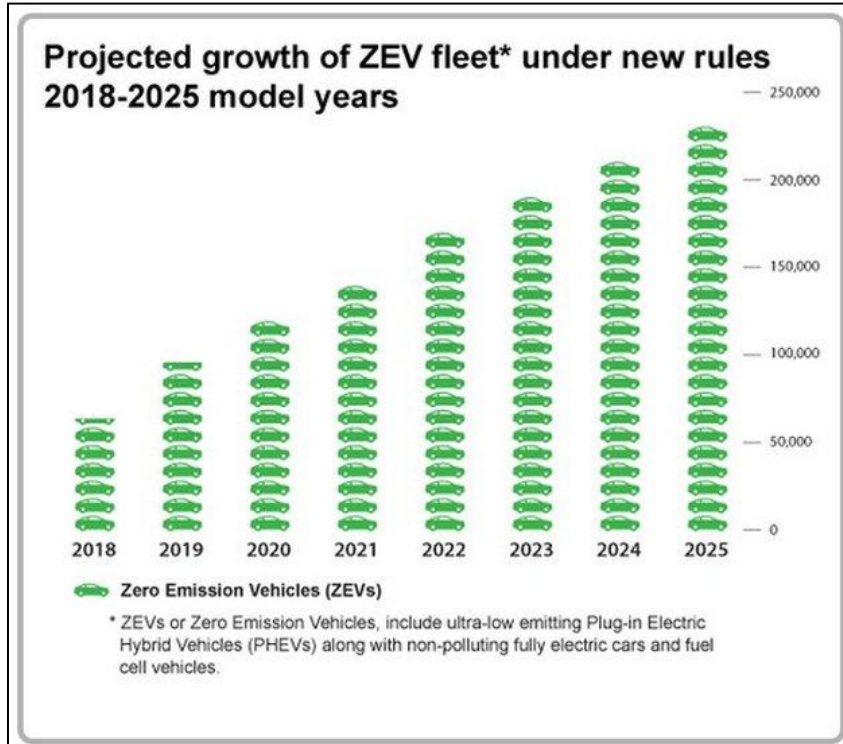
107 As chart 2.5-2 shows, GHG emissions associated with “transportation” have
108 in fact been leveling off since the early 1990s (rate of increase decreasing or
109 nonexistent) and not significantly increasing. However, when we look at just GHG
110 emissions from autos and light trucks, we see that these have been trending
111 down since 1990. For example, Figure 2.5-7 on page 2.5-58 of the DEIR shows
112 “per capita car and light truck emissions” dramatically decreasing since 1990 out
113 as far as 2050, directly contradicting the projections of Figure 2.5-2 (this doesn’t

114 even include the impacts of improved vehicle technology or the new CAFE
115 standards). Recently published data by the EPA confirms that this flat to down
116 trend has actually continued through 2012. So it is reasonable to ask, why the
117 DEIR consciously choose to use outdated data (Figure 2.5-2) and not include the
118 positive effects of the new CAFE standards in its analysis.

119 The reason that GHG's from cars and light trucks have been trending
120 downward is the result of a host of environmental laws and GHG reduction
121 technologies beginning to have significant effect, including the effects of
122 improved gas mileage and improved emissions technologies, as newer models
123 enter regular use, and it is also due to the increase in fuel prices that have begun
124 to adjust upwards to reflect true global oil pricing: increases that bring us more in
125 line with other nations and that are not likely to ever go down again on an
126 inflation adjusted basis.

127 It's also important to note that Northern California and the Pacific
128 Northwest has some of the highest new technology adoption rates and highest
129 vehicle turnover rates of anywhere in the United States, which has been
130 decreasing per capita GHG emissions from private auto and light truck use at a
131 greater rate in the Bay Area than national averages. All this has sped up the
132 manufacture, marketing and rapid public adoption of a wide variety of new types
133 of PZEV (partial zero emissions) and ZEV (zero emission) vehicles.

134 This auto industry trend is now considered permanent by the auto and light
135 truck industry, contradicting the fundamental arguments behind SB375 and Plan
136 Bay Area's future GHG projections from autos and light trucks. The U.S.
137 government and the EPA have recently calculated that in 2013 "up to 40 percent
138 of new cars sold in the US will meet California's Clean Car Program standards,"
139 within the time frame contemplated by Plan Bay Area (chart below by CA EPA).



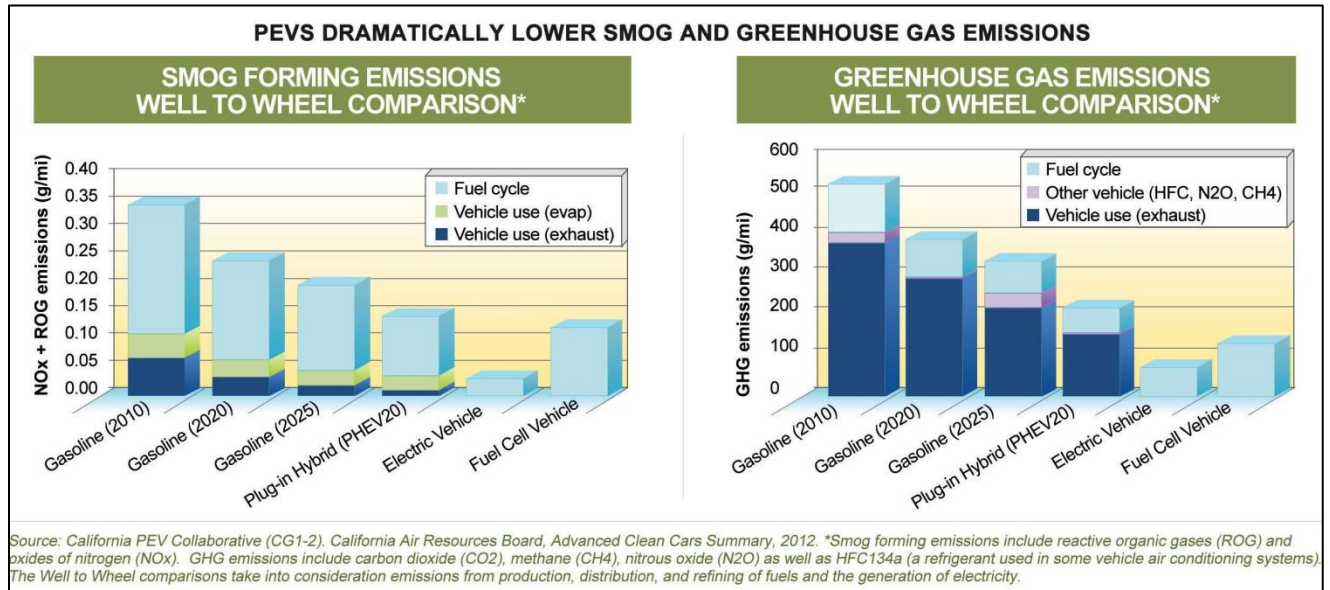
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141 This chart shows a projected 325% increase in ZEV vehicles (autos and light
142 trucks) sold in California between today and 2025. This fact, combined with the
143 other factors noted above, will certainly help reduce GHG emissions from autos
144 and light trucks in the years to come even more dramatically than shown in Figure
145 2.5-7. And this does not even take into account further improvements in
146 emissions technology being brought to market every year (to meet the new 54.5
147 mpg CAFE Standards) that will impact the GHG output of every type of auto and
148 light truck model sold in the coming decade.

149 The GHG reduction impacts of all this are quite significant because the list
150 of PZEV and ZEV models for sale has become larger, now including at least one
151 model by every major manufacturer and scores of model choices by leading
152 manufacturers (e.g. Ford, General Motors, Toyota, Honda, Nissan). For reference,
153 please note the comparative GHG emission reductions of various vehicle types

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154 shown on the chart below (courtesy of the California PEV Collaborative and the
 155 California Air Resources Board).



156

157 None of this information has been properly acknowledged or factored into
 158 the DEIR's analysis and projections. In fact the DEIR even admits, on page 2.5-43,
 159 that its emissions projections are "presented without accounting for reductions in
 160 mobile source emissions that would be expected from ongoing implementation of
 161 Pavley 1 and LCFS... from these legislative requirements," even though this
 162 omission distorts the DEIR's conclusions.

163 **CONCLUSION:**

164 The DEIR's omission of relevant, recent data regarding the plateauing of
 165 GHG's from autos and light trucks, and the highly questionable future projections
 166 it states, reinforce the conclusion that the DEIR did not adequately examine all
 167 available information and statistics to justify its projections. This is very important
 168 since it relates directly to the main purpose of the underlying legislation (AB32
 169 and SB375) that drives the SCS process.

170 As a general comment on the Plan and its Alternatives, attempting to
171 change human behavior and socially re-engineer society and land use based on
172 the present design of automobiles is like trying to do that because of the design of
173 a washer and dryer. If I proposed that, everyone would laugh. But like a washer or
174 dryer, an automobile is just an appliance. The market understands that the most
175 efficient use of our time, money and natural resources is to engineer a better
176 machine (one that is fully recyclable and produces no GHGs), which it is doing and
177 for which we need laws to continue to pressure them to do. The required
178 technology is available to us so what actual, specific scientific evidence, research
179 or data points does the DEIR have to support its projections of endless increases
180 in GHG emissions from autos and light trucks, in light of compelling evidence that
181 the exact opposite is occurring? And what evidence does the DEIR present to
182 prove in any way that the Plan and its Alternatives will in fact have a beneficial
183 effect on per capita GHG emissions from cars and light trucks?

184

185 **3 – A DETAILED EXAMINATION OF ACTUAL AUTO AND LIGHT TRUCK DRIVING**
186 **IMPACTS OF GROWTH IN MARIN COUNTY REACH THE OPPOSITE CONCLUSIONS**
187 **OF THE DEIR, AND SHOW THAT THE PLAN WILL INCREASE GHG EMISSIONS**
188 **RATHER THAN REDUCE GHG EMISSIONS:**

189 On page 2.5-41 of the DEIR, under the title “Significant Criteria” it states
190 that “Implementation of Plan Bay Area would have a potentially significant
191 adverse impact if the Plan would:

192 “Criterion 1: Fail to reduce per capita passenger vehicle and light duty truck
193 CO2 emissions by seven percent by 2020 and by 15 percent by 2035 as
194 compared to 2005 baseline, per SB 375.

195 “Criterion 2: Result in a net increase in direct and indirect GHG emissions in
196 2040 when compared to existing conditions.”

197 Careful analysis of the potential impacts of the Plan in Marin County (used
198 here as an example) on the use of autos and light trucks indicates that the Plan
199 and the DEIR analysis fail objective tests on both of these Criteria.

200 In the “Method of Analysis – Greenhouse Gas Emissions” section starting
201 on page 42 of the DEIR, states that it notes the methodology and metrics used to
202 analyze the Plan’s Alternatives and their respective GHG impacts of cars and light
203 trucks. However, the DEIR’s analysis is superficial and inadequate, and circular,
204 and cannot be accepted as having reached valid conclusions based only on the
205 methods and metrics it used. Further, one cannot claim compliance with a
206 regulation, as proof of achieving the goal of that regulation, as the DEIR attempts
207 to do with its GHG emissions reduction outcomes.

208 EXAMPLE:

209 A detailed analysis of actual auto and light truck use in Marin County, and
210 its potential impact of actual GHG MTCO₂ reductions (annual metric tons of CO₂
211 reduced), shows that the transportation and associated land development
212 proposals espoused in the Plan will not result in any reduction in GHG emissions
213 from auto and light truck usage, and in fact will increase overall GHG emissions
214 and impacts in Marin County. Further, both charts shown on pages 2.5-44 and
215 2.5-45 (Figures 2.5-5 and 2.5-6), respectively, do not have anything to do with the
216 major components of the One Bay Area Plan, which involves the development of
217 high density, transit oriented development (TOD) to alter personal driving of
218 autos and light trucks.

219

220 ANALYSIS:

221 The stated goal of SB375 is “to reduce per capita greenhouse gas emissions
222 (GHGs) by 15 percent by 2035.” Its premise is that building high density TOD with
223 an affordable component, will decrease driving / the use of personal autos and
224 light trucks, and therefore reduce GHG emission and thereby have a positive
225 effect on global warming. The statistical rationale is as follows: Section 1(a) of
226 SB375 (restated in the DEIR) states: “The transportation sector contributes over
227 40 percent of the greenhouse gas emissions in California. Automobiles and light
228 trucks alone contribute almost 30 percent. The transportation sector is the single
229 largest contributor of greenhouse gases.” This infers that SB375 and the Plan will
230 affect 40 percent of all GHG emissions in California. This is absolutely false.

231 Per SB375 and the Sustainable Communities Strategy, and as acknowledged
232 in the Plan and the DEIR, there are two basic legal requirements: (1) that “prior to
233 adopting a Sustainable Communities Strategy (SCS), the Metropolitan Planning
234 Organization (MPO) shall quantify the reduction in GHG emissions projected to be
235 achieved.” [SB375, Section 3 (G)] and (2) that “...the MPO shall submit a
236 description of the methodology it intends to use to estimate the GHG emissions
237 reduced by its Sustainable Communities Strategy.” [SB375, Section 3 (I) (i)].

238 FALSE STATEMENTS IN THE DEIR:

239 Falsehood #1: “The transportation sector contributes over 40 percent of
240 the greenhouse gas emissions in California,”

241 The truth is that the “40 percent” figure is a 2020 projected figure not a real
242 measured number. The actual amount today (which itself is still estimation) is
243 about 35 percent (Source: CA Air Resources Board: updated Oct. 2010). It seems
244 unreasonable to base a Plan on a fabricated future guesstimate of GHG emissions
245 to justify the Plan’s need. In any case the real number, 35 percent, is also

246 misleading because it includes emissions from airlines, trains and trams, buses,
247 heavy construction equipment, commercial trucking and hauling, shipping, boats,
248 ferries, etc., *none of which* are affected by any of the Plan's Alternatives.

249 Falsehood #2: "Automobiles and light trucks alone contribute almost 30
250 percent."

251 The truth is that if you strip out the vehicles above, not affected by the
252 Plan, you're left with about 23 percent of GHGs that can be actually contributed
253 by personal use of automobiles and light trucks. (Source: CA Air Resources Board:
254 updated Oct. 2010).

255 Falsehood #3: "The transportation sector is the single largest contributor of
256 greenhouse gases."

257 In truth, according to California EPA, energy production is the number one
258 GHG producer in California at 41 percent. Transportation is second at 35 percent.
259 But even that is not correct because the California Air Resources Board statistics
260 err in saying "livestock and animal breeding" is only 3 percent, but that is just a
261 measure of total GHG tonnage from that category, not its global warming impact
262 or "CO2 equivalency" (MTCO2e: the true scientific method of comparison).
263 Methane gas (the majority of GHGs from livestock and breeding) is 35 times more
264 harmful than CO2 in its global warming impact. So "livestock and breeding"
265 actually dwarfs energy and transportation combined.

266 That aside, the question is what are the correct metrics and data points to
267 use to arrive at accurate projections for the purposes of the DEIR?

268 Using real data only for Marin County, as a test case, the total GHG output
269 for Marin is estimated at 2.7 million metric tons per year. With 23 percent of that
270 from cars and light trucks which equals 621,000 metric tons of GHG per year.

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271 (Source: Bay Area Air Quality Management District; Feb 2010 Report: Source
272 Inventory of Bay Area Greenhouse Gas Emissions).

273 However, 23 percent is misleading because much of Marin’s auto and light
274 truck usage and the associated GHG emissions will not be affected by the Plan
275 either through public transportation improvements or high density housing,
276 regardless of where it is built.

277 These kinds of driving include:

- 278 • Deliveries and pickups by car, truck and van
- 279 • Passenger vans and shuttles to private businesses and public facilities
- 280 • Workman and building contractors transportation
- 281 • Gardeners and home services
- 282 • Utility service vehicles: water, power, sewer
- 283 • City Agencies vehicles: police, fire, public works and other services
- 284 • Health and safety vehicles

285 This accounts for roughly 40 percent of vehicle use in Marin. That leaves 60
286 percent of 23 percent or 13.8 percent for personal travel. That equates to 372,600
287 metric tons GHG (MTCO₂) per year that might conceivably be positively affected
288 by the Plan. However, 13.8 percent is still misleading because Marin County has
289 no significant public transportation and with its geography being what it is, there
290 are no opportunities for the traditional mass transit solutions that work well in
291 dense “legacy” cities in the U.S (subways, surface trams, etc.).

292 65 percent of the personal driving in Marin is driving to work (Source:
293 citydata.com).

294

295

296 This is true regardless of where we locate housing because:

- 297 • We cannot discriminate in rentals or sales of homes based on where people
298 work or what kind of job they have;
- 299 • No one can predict where they will have to go to find employment. People
300 will go where the job is; and
- 301 • People don't make the decisions about where they work and where they
302 live for the same reasons: i.e. people work where the best job opportunity
303 is and they change that choice increasingly often. However, people choose
304 to live where it's best for your family and lifestyle (schools, open space,
305 amenities, etc.). There is no evidence whatsoever in any credible studies
306 that can show that people chose where to live based on access to public
307 transportation except in the core of urban centers like New York City,
308 Chicago or Boston.

309 This analysis leaves 35 percent of 13.8 percent or 4.83 percent for other
310 personal driving, which equates to about 30,000 metric tons of GHGs per year
311 that might be positively affected by the Plan. However, this 4.83 percent is still
312 misleading because most Marin County driving is not optional because it cannot
313 be served by public transportation, and certainly not by any public transportation
314 contemplated in the Plan, for Marin.

315 The types of non-optional driving include:

- 316 • Driving to lessons, soccer, schools, friends and social activities.
- 317 • Vacations, driving to the beach or mountains, or a park, etc.
- 318 • Driving to buy large things we cannot carry (paint, hardware, large grocery
319 purchases, plants, clothing, equipment, etc.).
- 320 • People shop price not location (drive to Costco, Target, etc.).
- 321 • People have busy lives and must do multiple things in one trip.

- 322 • Because what you need is not nearby (i.e. people go to the doctor they
323 need, wherever that is, not because he's next door).

324 So all in all only about 10 percent of people, who are not doing any of these
325 things in Marin County, might be able to change their driving habits due to Plan
326 Bay Area's scheme for high density housing near the highway 101 corridor. That
327 leaves only 10 percent of 4.83 percent or 0.48 percent or 3,000 metric tons of
328 GHGs per year could possibly be saved by SB375.

329 3,000 metric tons of GHGs per year is approximately 10th of 1 percent of all of
330 Marin County's annual GHG output (3,000 / 2,700,000). This is a statistically
331 insignificant savings (less than 1 percent is considered a rounding error).

332 However, it also must be noted that these are only an estimate of those emissions
333 that "could possibly" be influenced by the Plan, not those that will be guaranteed
334 to be saved. In fact there is nothing being proposed in the Plan that has any
335 possibility to significantly affect any emissions in Marin County.

336 More troubling is that the DEIR / Plan doesn't factor in or in any way
337 adequately consider the GHG producing outcomes of more growth and
338 development, due to MTCO2 sequestration loss, that have to be considered in
339 weighing the costs or benefits of the Plan.

340 EXAMPLE:

341 For Marin County, careful analysis suggests that the development proposed by
342 the Plan's Alternatives 2 through 5 will actually increase GHG emissions, not lower
343 them. Consider the following:

344 A typical residence produces approximately 8 metric tons of GHGs per year
345 (estimates vary and are constantly being adjusted. This EPA estimate of 8 MTCO2
346 is at the high end for a national average). The 2007 – 2014 RHNA cycle called for

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347 4,882 new homes in Marin (about 25 percent of which were built) and the 2014 –
348 2022 RHNA cycle calls for 2,292 homes in Marin. This includes both market rate
349 and affordable units. Assuming a figure of 8 MTCO₂e per year, using the
350 cumulative total of 5,954 new homes, this equates to an additional 47,632 metric
351 tons of additional GHGs per year. This would represent an increase of 1.8 percent
352 of the total GHG production of Marin County, presently. Comparing this to the
353 greatest potential GHG emissions savings of the Plan (3,000 MTCO₂ per year)
354 produces a net added GHGs of 44,632 MTCO₂ per year, not a reduction.

355 With this being calculated, the natural sequestration loss of development must
356 now also be considered.

357 GHG SEQUESTRATION LOSS ANALYSIS:

358 The average single family residential lot size in Marin is approximately .15
359 acres (Marin County Recorder's Office). Assuming that 20 percent of the various
360 types of affordable units required were built at densities of 20 units per acre (the
361 typical in-lieu required percentage) and the remainder built as single family
362 homes, that would equate to a total loss of 774 acres of land lost (4,763 single
363 family homes at .15 acres per home = 714 acres plus 1,191 multifamily homes at
364 20 units per acre = 60 acres of land lost).

365 The annual carbon sequestration value of one acre of typical Marin
366 undeveloped land (grass with some trees, not forested land) is about 1.5 MTCO₂e
367 per year. Therefore, taking 774 acres out of service equates to a negative 1,161
368 GHGs per year.

369 Adding these two together, the net added GHGs from new development plus
370 the loss of natural GHG sequestration of land, we arrive at a net increase in GHGs
371 of 45,793 MTCO₂e per year.

372 CONCLUSION:

373 Based on the RHNA allocations proposed, Bay Area Plan would increase GHGs
374 produced in Marin County by 45,793 MTCO₂e per year, *not* reduce GHG
375 emissions as the DEIR claims. If the methodologies used herein are applied to
376 other parts of the Bay Area, the results would be equal or worse. Furthermore,
377 based on the kind of analysis demonstrated here, additional high density TOD
378 would not only not reduce per capita or overall GHG emissions from cars and
379 light trucks, but would actually increase GHG emissions in Marin County, as the
380 result of producing more of the kinds of required driving noted in the above
381 analysis, in all categories. I have not even factored this into my increased GHG
382 analysis of the Plan. Therefore the analysis presented on pages 3.1-58 through
383 3.1-64 are false in that actual GHG emissions will be far less than indicated.

384 What accurate and specific scientific evidence or data points does DEIR
385 have to support the efficacy of its Plan Bay Area Alternatives in Marin County,
386 with regard to actually reducing auto and light truck driving mileage and the
387 resultant GHG emissions, when all required datasets are considered, as presented
388 in the analysis above?

389 What are the impacts on the efficacy of Alternatives presented in the Plan,
390 in achieving the goals of SB375, if all factors presented here are accurately
391 calculated for the entire Bay Area? This example shows that the DEIR fails to
392 specifically analyze the real impacts of the Plan in enough detail to reach realistic
393 conclusions and therefore the DEIR GHG emissions benefit analysis must be
394 rejected as inadequate.

395

396

397 **4 – GHG EMISSIONS ASSUMPTIONS USED IN THE DEIR TO CALCULATE GHG**
398 **IMPACTS OR SAVINGS BY TYPES OF HOUSING UNITS ARE FLAWED**

399 Generally, the One Bay Area Plan and the DEIR make the unexamined
400 assumption that high density, transit oriented development, and particularly
401 multifamily housing units, produce a lower per capita MTCO₂e per annum (GHG)
402 footprint than detached single family housing, and are therefore categorically
403 superior. For example, on page 2.5-50, the DEIR states that “This decline (in GHG
404 emissions to meet SB375 goals) is attributable to numerous factors, most
405 importantly the integrated land use and transportation plan in which land use
406 pattern focuses on growth in higher density locations near transit service.” This is
407 stated as fact but is nowhere actually proven in any conclusive way.

408 This assumption about the connection between high density TOD and GHG
409 emissions reductions has been often repeated “Smart Growth gospel” for
410 decades, and it has gone unchallenged in many “meta” studies on global climate
411 change. Though it is considered “heresy” by much of the environmental
412 community to even suggest otherwise, a close look at the original studies that
413 support these assumptions, when compared with data from more recent
414 evaluations, reveal that those studies were flawed and this assumption is simply
415 not true. In fact high density TOD generally has a greater, per capita, GHG
416 emissions footprint than single family homes.

417 This irony is due to the fact that most of the assumptions of studies that
418 compare high density TOD to suburban single family development are biased
419 toward a predetermined conclusion. The DEIR’s unexamined acceptance of
420 previous studies results in its faulty conclusions.

421 Most of us want to believe that scientific studies are “scientific.” However,
422 like medical studies that one day “prove” something is good for us to eat then
423 prove that it’s bad for us the next day science is unfortunately, by and large, the

424 result of the goals of those funding the studies and the fundamental principal of
425 “garbage in, garbage out.” And in fairness, as scientific knowledge has advanced,
426 older studies have proven to be inadequate due to faulty assumptions.

427 In the 1970’s “sprawl” was an easy target for disdain for a new breed of
428 young environmentalists who had grown up in suburbs, gone to good colleges
429 and moved to cities where the available 24/7 access to activities better suited
430 their lifestyle. In some ways the early environmental movement was a general
431 attack on “white bread” suburbia and all its perceived false values and
432 conspicuous consumption.

433 However, as much as urban centers are marvelously good economic
434 environments and great social environments for certain demographic groups,
435 urban development, as it exists today and as we still build it today, has yet to
436 produce good environmental solutions. And when rated on a human health scale,
437 urbanism also scores very poorly in human health metrics, per capita, for disease
438 and disorders of all kinds. GHG’s and air pollution in general are included in the
439 possible reasons for that. With very few exceptions, we don’t find “disease
440 clusters” in rural or suburban areas unless a specific toxic pollutant is present, as
441 we do with urban environments.

442 The DEIR consultants do not appear to have actually gone back to original
443 sources or brought a skeptical eye to the datasets they employed to justify their
444 conclusions and projections. Consider the following:

445 ANALYSIS:

446 There are five reasons why the assumptions that high density development
447 produces lower GHG emissions on a per capita basis are false.

448 These are as follows:

- 449 1. The Definition of a “Unit” of Housing;
- 450 2. Common Areas and GHG Per Unit Calculations;
- 451 3. Urbanism’s “Heat Island” and “Cold Sink” Effects;
- 452 4. Urbanism’s GHG “Externalities;”
- 453 5. The Effects of Local GHG Sequestration.

454 Introductory Comments:

455 Many of the studies have been developed to analyze and compare the GHG
456 output of various housing densities and living configurations. Those undertaken in
457 the 1970’s and early 1980’s, particularly, were overly simplistic and led to
458 seemingly obvious but statistically incorrect conclusions. The resultant “urban
459 legend” about the beneficial relationship between GHG’s and urbanism has
460 become dogma. However, this conclusion is flawed.

461 As with all “science,” one has to ask who did the study, who paid for the
462 study, and towards what end. During the early decades of the environmental
463 movement there was great urgency to create the EPA, pass clean air and water
464 legislation, endangered species laws, and address variety of other issues. Climate
465 changing GHGs were not on the radar but the environmental report card of the
466 nation was worse than it is today. Many studies tried to show how bad things
467 were in order to attract media and funding. They extrapolated trends that have
468 not come true (mostly because of the legislation that was passed as a result). The
469 five factors I’ve noted above are among the things that have taken decades to
470 look at more carefully, and they have produced surprising results.

471 The Definition of a “Unit” of Housing: functional unit vs. living unit: There
472 are two definitions of a habitable unit. A “functional” unit means a unit that can
473 support an average family with all those amenities that are generally considered
474 minimum standards for habitability. It does not factor in unit size, construction
475 method, and so on. A “living unit” includes all the requirements of a functional

476 unit but it is adjusted for square footage size (i.e. per person per square foot of
477 living space) and sometimes for construction type. However, many earlier studies
478 through the 1990's did not differentiate between these two definitions.

479 If one uses the functional unit definition to arrive at a per capita GHG
480 calculation, it's no surprise that high density units (which on average are smaller
481 than single family homes) have lower energy usage and correspondingly lower
482 GHG emissions per capita. However, as noted in *Comparing High and Low
483 Residential Density: Life-Cycle Analysis of Energy Use and Greenhouse Gas
484 Emissions*. J. Urban Plan. Dev., 132(1), 10–21. By Norman, J., MacLean, H., and
485 Kennedy, C. (2006): "When the functional unit is changed to a per unit of living
486 space basis the (beneficial) factor decreases to 1.0–1.5." A factor of 1.0 indicates
487 no advantage either way (and this is before the other considerations noted
488 below).

489 Conclusion: When trying to compare the GHG output of different Plan
490 Alternatives that include both high density and low density single family, the use
491 of the correct definition is relevant, and in the case of all of the suburban areas in
492 the Bay Area (e.g. Marin County) it becomes extremely relevant. The Plan does
493 not state which definitions it is relying on in the studies used to develop the DEIR.

494 Common Areas and GHG per Unit Calculations: Up until recently, very few
495 studies correctly factored in the "pro rata share" that each unit needs to include
496 for common spaces in a multifamily, high density building. These would include
497 the GHG burden to heat, light, cool and otherwise make habitable common
498 spaces such as elevators, lobbies, community rooms, laundry areas, storage areas,
499 swimming pools and recreational areas, hallways, and all other commonly shared
500 areas. The DEIR does not reference any studies that factor in this common area
501 GHG burden for multifamily development, or express it in a per capita basis.

502 Conclusion: It is not arguable that correctly factoring in typical high density
503 common areas reduces the advantages that high density development has over
504 detached single family development when calculating GHG emissions equivalents
505 on a per capita basis. This would have differing impacts on the outcomes of the
506 Plan in different parts of the Bay Area: e.g. it would be very significant in
507 calculating GHG emissions per capita in San Francisco, San Jose and Oakland, but
508 less so in Marin, Sonoma and Napa. How does the DEIR justify its assumptions and
509 GHG reduction conclusions since this type of analysis was not performed for the
510 entire Plan Bay Area?

511 Urbanism's "Heat Island" and "Cold Sink" Effects: Recent studies have
512 begun to find that dense urban cores / high density developments that have so
513 much concrete, steel, stone and other temperature variant materials have a
514 negative effect on energy consumption and GHG emissions. Heating and cooling
515 effects, such as the "heat island" effect (once an urban environment gets hot, it
516 takes more and more MTCO₂e to cool it down) and the "cold sink" effect (once an
517 urban environment gets cold, it takes more and more MTCO₂e to heat it up) must
518 now be considered for any analysis to be accurate (Note: According to the U.S.
519 Energy Department, building operations are the biggest energy user, using 40
520 percent of the nation's energy). More development produces more MTCO₂e.

521 For example, according to a recent study done by the Lawrence Berkeley
522 National Laboratory's Heat Island Group, about these phenomena in the city of
523 Los Angeles, they estimated that because of the heat island effect "the demand
524 for electric power rises nearly 2% [more] for every degree Fahrenheit the daily
525 maximum temperature rises." The DEIR even acknowledges the effects of heat
526 islands (page 25-21) but fails to apply its effects to its findings.

527 Conclusion: Correctly factoring in the heat island and cold sink effects
528 would negatively alter the DEIR's analysis of the projected GHG emissions

529 outcomes of the Plan. The DEIR does not acknowledge this required analysis in
530 arriving at its conclusions.

531 In Marin, for example, where over 65 percent of the County is dedicated
532 open space, there is a natural balance of development and natural topography
533 that acts to eliminate the heat island and cold sink effects and offer a moderate
534 climate throughout the year. This has beneficial effects on heating and cooling
535 energy demands and GHG emissions. How can the DEIR justify its assumptions
536 and GHG reduction conclusions when this type of analysis has not been
537 performed for the Plan and its Alternatives?

538 Urbanism's GHG "Externalities:" Proper analysis of GHG emissions
539 externalities, or "exogenous" impacts and costs, has rarely been factored into any
540 GHG calculation algorithms, in any studies, even those conducted by the EPA and
541 CA EPA. The principle of external GHG impacts is simple. Everything that is
542 required to service the habitability of development in any setting has external and
543 largely unaccounted for "costs" that need to be factored into any per capita GHG
544 emissions claims. Some of these would include the GHG loads required to provide
545 fuel and energy, water, food, services such as garbage and sewage removal and
546 treatment, and the unique demands of geographic location and micro-climates.

547 Example:

548 New York City recycles / repurposes less than 10 percent of its "trash."
549 Marin County recycles / repurposes almost 80 percent of its waste. Marin ships it
550 remaining trash to local landfills, at a minimum distance. NYC's trash travels
551 thousands of miles, on average, to be dumped in landfills in the Western United
552 States, or sorted in the South before being shipped to landfills overseas,
553 sometimes as far as Asia. All of this has a GHG emissions cost that is not included
554 in per capita energy consumption / GHG emissions metrics in studies or the DEIR.

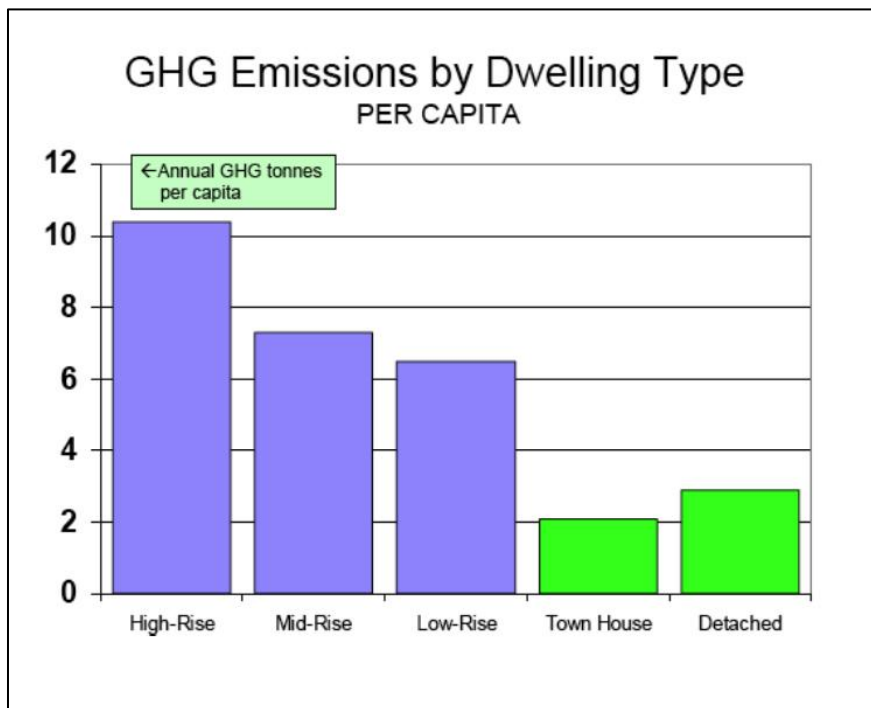
555 This same principle applies to all the other categories. Power and water to
556 major metropolitan areas takes significant energy to transport and transmission
557 loss boosting requirements for power and water evaporation both have
558 measurable GHG emissions burdens that must be expressed in per capita metrics,
559 but rarely are in studies, and are certainly not factored into the DEIR. Even food
560 transportation has a quantifiable GHG cost that is significantly higher in urban
561 environments than it is in places like Marin, where much of our food is locally
562 grown.

563 In addition, a recent study, *Greenhouse Gas Emissions Along the Urban-*
564 *Rural Gradient*, by Clinton J. Andrews, published in the Journal of Environmental
565 Planning and Management, Vol. 51, Issue 6, 2008, notes that “Reflecting their
566 central regional roles, municipalities... have higher per-capita emissions because
567 they host both residential and commercial buildings. Buildings in urban areas
568 typically contribute more emissions than personal transportation” outweighing
569 any advantages that might exist.

570 A study conducted by the Australian Conservation Foundation, *Housing*
571 *Form in Australia and its Impacts on Greenhouse Gas Emissions* (Oct. 2007), which
572 did attempt to factor in all of the categories of variables (living unit definition,
573 inclusion of common areas, the heat island and cold sink effects, the type and
574 amount of driving and vehicle trips taken, and the GHG externalities), concluded
575 that “reducing GHG emissions is not so simple as to be achieved through the
576 urban consolidation agenda. Indeed, there is considerable evidence to the
577 contrary.” This study concludes that the Plan’s transportation oriented
578 development (TOD) approach is flawed.

579 GHG *per capita* emission estimates from the recently published Australian
580 Conservation Foundation Consumption Atlas, indicates virtually the opposite of
581 generally held perceptions. The data shows that “lower density areas, which rely

582 more on automobiles, tend to produce less in GHG emissions than the high
583 density, more public transport dependent areas that are favored by urban
584 consolidation policies.” Their comparative findings about residential building
585 types, resulting from this kind of comprehensive GHG per capita emissions
586 analysis is even more eye-opening (see chart below).



587

588 This research concludes that “low rise” high density development, the kind
589 that is envisioned by the Plan for Marin and many other parts of the Bay Area,
590 produces 2.5 times the GHG emissions of single family home development and 3
591 times the GHG emissions of attached, single family townhouse development. High
592 rise development produces 5 times the GHG emissions impacts of single family
593 town homes. Even if these results were wrong by half they would still show a
594 decided advantage to low density, suburban development.

595 Conclusion: The “facts” and metrics that form the basis of the DEIR’s
596 conclusions about the Plan, that heavily favor high density TOD, are seriously

597 flawed and misleading compared to any analysis that factors in all of the GHG
598 emissions impacts of different types of factors noted herein. How can the DEIR
599 justify its assumptions and GHG reduction conclusions in light of this information
600 and without performing this kind of rigorous analysis in the DEIR?

601 The Effects of Local GHG Sequestration: The final piece of data analysis that
602 is required to accurately assess the true GHG emissions impacts of various land
603 use scenarios, and the Plan's Alternatives, on a per capita basis for the entire Bay
604 Area Region, is the calculation of what portion of GHG's produced are sequestered
605 locally and what portion is unaccountably "exported" to neighboring counties or
606 regions.

607 This is relevant inquiry because all of the Plan Alternatives, except
608 Alternative 1; *No Project*, will influence land use patterns and increase density,
609 impacting the local MTCO_{2e} sequestration potential of the existing ecosystems.
610 This analysis is also relevant since the entire premise of the Plan and the DEIR is
611 that the reduction of autos and light trucks is directly tied to transportation, land
612 use and development patterns (i.e. their claim that high density urban
613 development near public transportation produces superior GHG emissions
614 reductions when compared to low density, suburban development). However,
615 here is no evidence that local MTCO_{2e} sequestration has been considered in the
616 DEIR when making claims about reducing GHG emissions from autos and light
617 trucks.

618 Furthermore, I have been unable to find a single study that combines the
619 four other factors noted above with potential local sequestration MTCO_{2e}
620 variants that effect actual GHG impacts of various transportation oriented land
621 use and development density scenarios. Yet, this data is vital to making sound
622 planning and land use decisions and it weighs on the questionable efficacy of the
623 Plan as described and analyzed in the DEIR.

624 Analysis:

625 Local Sequestration of Auto and Light Truck Emissions Compared in Urban
626 and Suburban Locations (San Francisco and Marin County):

627 Automobile ownership in San Francisco County is presently 658 cars / light
628 trucks per 1,000 people, or .66 per person. Auto ownership in Marin County is
629 presently 756 cars / light trucks per 1,000, or .77 per person.

630 The population of San Francisco is 812,826 people. This equates to a total of
631 536,465 vehicles in San Francisco. The population of Marin County is 255, 031.
632 This equates to a total of 196,734 vehicles in Marin County. These totals generally
633 match DMV registration records.

634 According to the EPA, the average American car puts out 5.2 MTCO₂ (metric
635 tons of CO₂) per year. As noted above, local auto sales figures would suggest that
636 the Bay Area Region has a significantly lower average due to our early adoption of
637 PZEV and ZEV vehicles. However, for the sake of this analysis I will use the worse-
638 case scenario national averages.

639 Using the EPA figure, this equates to:

- 640 • San Francisco County produces 2,789,618 MTCO₂ per year in GHG's from
641 auto and light truck usage,
- 642 • Marin County produces 1,023,022 MTCO₂ per year in GHG's from auto and
643 light truck usage.

644 According to the latest U.S. Census, San Francisco County, a dense urban
645 development area has a total of 329,700 occupied housing units, of which 62,653
646 are single family detached homes and 267,047 are multifamily units (19 percent
647 and 81 percent, respectively).

648 Marin County, a rural and suburban, low density development area has a
649 total of 100,650 housing units of which 63,656 are single family detached homes
650 and 39,994 are multifamily units (63 percent and 37 percent, respectively).

651 On this per housing unit basis then, when comparing the GHG emissions
652 from the use of autos and light trucks of San Francisco (high density urban
653 development) and Marin County (low density rural and suburban development):

- 654 • San Francisco produces an average of 8.46 MTCO₂ per housing unit per year
655 in auto GHG emissions;
- 656 • Marin County produces an average of 10.16 MTCO₂ per housing unit per
657 year in auto GHG emissions.

658 Using this overly simplistic analysis based on only this one measure, one
659 might conclude, as the DEIR apparently concludes, that dense urban development
660 is superior to rural or suburban development with regard to auto and light truck
661 emissions. However, that kind of analysis is inadequate to reach that conclusion.

662 *PLEASE NOTE: Keep in mind that this part of the analysis is strictly breaking*
663 *out auto and light truck GHG emissions when compared to housing unit counts*
664 *and not factoring in all the other considerations presented above regarding the*
665 *effects and impacts of unit sizes, definition of what a unit is, accounting for*
666 *common areas in multifamily high density buildings, heat island and cold sink*
667 *effects, or GHG "externalities" that are exported to other regions, and the negative*
668 *correlation between type of unit and GHG per capita emissions (greater density*
669 *equals higher GHG emissions per capita).*

670 However, continuing to use this simple measurement metric, we must now
671 apply the impacts of local MTCO₂ sequestration to properly compare the overall
672 GHG impacts of urban environments to rural / suburban environments.

673 Local Sequestration Calculations:

674 San Francisco City/County covers 231.09 square miles or 147,898 acres of
675 land. Of that approximately 10 percent is dedicated open space (mostly the land
676 covered by Golden Gate Park, the Presidio and coastal areas and golf courses). The
677 remainder is urban (90 percent).

678 Marin County covers 828 square miles or 529,920 acres of land. Of that
679 approximately 65 percent is permanently dedicated open space and 15 percent is
680 agricultural / recreational rural land. The remainder is approximately 5 percent
681 fully developed land and 15 percent suburban.

682 The MTCO₂ sequestration equivalencies for different types of land use are
683 as follows (Sources: U.S. EPA Calculator, CA EPA, and CA Air Resources Board,
684 which differ):

- 685 • Forest and open vegetated land: more than 10 years old:
 - 686 ○ 2.5 MTCO₂ per year per acre.
- 687 • Agricultural / Recreational grassland:
 - 688 ○ 1.5 MTCO₂ per acre.
- 689 • Suburban land with a 40 percent lot coverage maximum:
 - 690 ○ 1.0 MTCO₂ per year per acre
- 691 • Fully developed urban landscape: minimal vegetation
 - 692 ○ 0.2 MTCO₂ per year per acre

693 Comparing San Francisco County to Marin County:

694 San Francisco:

695 90 percent urban developed land: 133,108 acres at 0.2 per acre equals
696 sequestration of 26,622 MTCO₂e per year.

697 10 percent forest and open vegetated land: 14,790 acres at 2.5 per acre
698 equals sequestration of 36,975 MTCO₂e per year.

699 TOTAL San Francisco local sequestration equals 63,597MTCO₂e per year.

700 Marin County:

701 65 percent forest / open land: 344,448 acres at 2.5 per acre equals
702 sequestration of 861,120 MTCO₂e per year.

703 15 percent is agricultural / recreational rural land: 79,488 acres at 1.5 per
704 acre equals sequestration of 119,232 MTCO₂e per year.

705 15 percent suburban land: 79,488 acres at 1.0 per acre equals sequestration
706 of 79,488 MTCO₂e per year.

707 5 percent urban developed land: 26,495 acres at 0.2 per acre equals
708 sequestration equal 5,299 MTCO₂e per year

709 TOTAL Marin local sequestration equals 1,065,139 MTCO₂e per year.

710 Conclusion:

711 Based on this analysis, Marin County, a rural / suburban development area
712 that produces more GHG's per auto and light truck than San Francisco, locally
713 sequesters more than 100 percent of its locally generated auto and light truck
714 MTCO₂ emissions per year, whereas San Francisco only sequesters about 1.1
715 percent of its locally generated auto and light truck MTCO₂ emissions per year.

716 This simple analysis resoundingly demonstrates that the entire premise of
717 Plan Bay Area, the conclusions of the DEIR and the underlying premise of SB375
718 are completely false in asserting that high density, transit oriented development

719 categorically results in a reduction of MTCO₂e emissions for personal autos and
720 light trucks.

721 Plan Bay Area's premise only works if you ignore all the GHG's and
722 pollutants that are "exported" from urban regions to others. And this correct
723 analytical method indicates that the denser a place becomes the worse the
724 balance of GHG emissions and local sequestration gets. When you now factor in
725 the other negatives of high density building types, noted above, the effects of
726 increasing density is decidedly negative for overall GHG emissions per capita.

727 What scientific evidence or data points does DEIR have to support the
728 efficacy of its Plan Bay Area Alternatives, with regard to actually reducing auto
729 and light truck driving mileage and the resultant GHG emissions, when all
730 required datasets noted above are considered? What are the impacts on the
731 efficacy of the Alternatives presented in the Plan, in achieving the goals of SB375,
732 if the loss of land and the associated MTCO₂e sequestration is accurately
733 calculated? How does the DEIR account for the GHG's that it is exporting from
734 the Bay Area to other regions due to lack of local sequestration?

735 FINAL CONCLUSIONS OF ITEM #4:

736 The various facts presented in these analysis and the resultant conclusions
737 provide evidence, without doubt, that when all factors are considered (the
738 impacts of unit sizes, definition of what a unit is, accounting for common areas in
739 multifamily high density buildings, heat island and cold sink effects, unaccounted
740 for GHG "externalities" exported to other regions, and local GHG sequestration) a
741 suburban, single family home development, as it is found in Marin, Sonoma, Napa
742 and other parts of the Bay Area Region is superior in reducing GHG emission on an
743 overall basis and on a per capita basis than dense urban, TOD development found
744 in San Francisco, Oakland and San Jose.

745 The Plan and the resultant DEIR does not acknowledge or in any way
746 address or account for this data and findings presented here. What accurate and
747 specific scientific evidence or data points then do the DEIR consultants have to
748 support the efficacy of its Plan Bay Area Alternatives, with regard to actually
749 reducing auto and light truck driving mileage and the resultant GHG emissions, if
750 all required datasets are considered, as presented in the analysis above? How
751 does the DEIR justify the lack of the kind of comprehensive analysis, noted herein,
752 in arriving at its GHG emissions savings conclusions that it uses to justify Plan Bay
753 Area?

754 **FINAL COMMENTS:**

755 The Bay Area Plan DEIR is without sufficient statistical or scientific basis to
756 justify its conclusions and projections. In fact in reviewing the entire DEIR there
757 does not appear to actually be any detailed analysis or analytical methodology
758 provided for any of its assumptions about the relationship between TOD and GHG
759 emissions it claims. The Alternatives described in the DEIR (aside from Alternative
760 #) will be more economically destabilizing for small cities, are financially
761 irresponsible in that they encourage the expenditure of large sums of taxpayer
762 fund for no discernible benefits, and they will, overall, be environmentally
763 harmful rather than beneficial as claimed.

764 Building more and more housing, of any type, and other kinds of
765 development, without jobs growth first, leads to “unsustainable” communities
766 and potential bankruptcy for small cities (e.g. Vallejo, Modesto and San
767 Bernadino). The building methods available to us today, even with token gestures
768 like LEED certification, do not even begin to justify the belief that more TOD
769 development is good for the environment. The truth is that development, TOD or
770 otherwise, particularly in counties like Marin, Sonoma and Napa, only sets in
771 motion an endless feedback loop the drives even more development to

772 accommodate support services and our consumption driven economy, and ever
773 more auto and light truck use and, more importantly, more shipping, trucking and
774 other more impactful transportation demands as a result.

775 The basic assumptions of the Plan are fundamentally flawed and contradict
776 the laws of supply and demand, free markets and how cities grow and survive.
777 Most troubling is that in the end, after all the costs and burdens that the One Bay
778 Area Plan are tallied, combined with the burdens of the HCD RHNA allocation
779 process will impose on our communities, the Plan will not result in providing what
780 we really need: more high quality jobs and more quality, affordable housing
781 choices for those most in need.

782 Examination of the Plan Bay Area Plan DEIR shows that this report fails to
783 satisfy the requirements of SB375 and the technical requirements of the DEIR
784 under CEQA because it fails to prove that any of the Alternatives will actually
785 achieve the goal of reducing per capita or overall GHG emission from the use of
786 autos and light trucks.

787 The DEIR analysis makes the common error of mistaking correlation with
788 causation. It substitutes unscientific observations and unqualified statistics for
789 proper scientific inquiry or demonstrable facts to arrive at what appear to be
790 predetermined conclusions that are insupportable and inaccurate.

791 The DEIR attempts to persuade readers by inference and through anecdotal
792 evidence rather than by doing the kind of specific and direct analysis as I've
793 presented above. And in fact the burden of proof is on those who drafted the
794 DEIR to show why the analysis I've presented was not undertaken. The DEIR offers
795 a "take our word for it" approach but offers no detailed calculations or formulas,
796 of any actual proof whatsoever to prove the Plan's efficacy in meeting the goals of
797 SB375. Its statistical data relies on studies done by its partners (MTC, BAAMQ,
798 etc.), whose objectivity and motivations must be questioned. It seems

799 questionable that with the breadth of studies and scientific knowledge available
800 today to anyone wishing to do serious research, that the DEIR would choose to
801 rely so heavily on statistical data developed by the very organizations (MTC,
802 ABAG) who created the Plan that the DEIR is supposed to be objectively vetting.
803 And considering how much irrelevant information has been included in the DEIR,
804 a more cynical view would be that the DEIR is trying to “paper over” the situation
805 and throw so much material at the reader (in excess of 1,300 pages) that the
806 reader gives up accepts its conclusions, unchallenged.

807 Based on the evidence and kinds of analysis presented herein, the DEIR has
808 failed to fulfill the technical requirements under CEQA, and the Plan and its
809 Alternatives has failed to comply with the requirements and goals of AB32, SB375
810 and the SCS in reducing per capita or overall GHG emission. The analysis I’ve
811 presented demonstrates that the Plan and its Alternatives will increase per capita
812 and overall GHGs rather than decrease per capita and overall GHGs, so the DEIR is
813 both incorrect and misleading in its conclusions, and inadequate under the
814 requirements of CEQA Guidelines.