- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
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- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.
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- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
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- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
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- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.

### \* 444 - WATER CONTACT BACTERIA.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Water Contact Bacteria.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Coastal states report unhealthy levels of pollution related bacteria at swimming beaches, There were more than 2,500 beach closings in 1996.

"In 1990 Monterey County had more beach closures than the entire state of New Jersey and in the late 1980's Lover's Point and the Cannery Row area of Pacific Grove were among the worst offenders." Herald Oct 27 1999 FP

On October 11, 1999 Monterey County Environmental Health Dept. found enterococcus bacteria at Ocean Ave in Carmel at levels three times higher than state safety standards. In August 1999 they found a similar problem at Stillwaler Cove in Pebble Beach.

Contact with that bacteria can lead to several gastrointestinal illnesses. The County delayed a week before posting warning signs on Carmel beach. -Herald Oct 22 99

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly Identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Water Contact Bacteria.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically lestable, repealable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.

- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements,
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level
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- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- Founded in 1998, <u>H.O.P.E.</u> is a non-profit, tax deductible, public interest group protecting our Monterey Peninsula's natural land, air, and water ecosystems and public participation in government, using science, law, education, news alerts and advocacy.

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- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
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- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 445 SEWAGE SPILLS.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Sewage Spills.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Contact with water contaminated with sewage can cause gasteroenteritis hepatitus, typhoid, polio, diarrhea, and ear infections.

"Health officials warned that contact with contaminated water can cause gasteroenteritis as well as hepatitus, typhoid and polio." Herald Mar 23 2000 CALIFORNIA "In 1998, beaches statewide were closed for a combined total of 3,273 days, compared to 745 days in 1991, according to the most recent data available from the Natural Resources Defense Council. Sewage spills and urban runoff caused the majority of the closures." AP May 28, 2000

PEBBLE BEACH Monterey County Health Dept closed the Spanish Bay beach 'for a few days to a week' beginning on

March 22 2000 because of a sewage spill from a broken sewer main. Herald Mar 23 2000

\*Contamination shuts Stitlwater Cove\* headline Herald Apr 6 2000 "High levels of fecal coliform have been found...coming from a storm sewer that drains the famous Pebble Beach Golf Links, sald Walter Wong, the county's director of Environmental Health."

CARMEL "About 1,000 gallons of sewage spilled into Mission Trail Park in Carmel early Thursday evening." From the park it flowed into nearby Mission Trail creek, than about half a mile down to the Carmel River and into the Carmel River Lagoon and the

Carmel Bay. "Emergency crews flushed the spill area with bleach and about 1000 gailons of water." Herald, Mar 24, 2000

CHLORINE Chlorine bleach is the standard application after a spill. Chlorine is extremely toxic and reactive itself.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Sewage Spills.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 446 SEWAGE RUNOFF.
- The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Sewage Runoff.
- If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.
- The Carmel Area Wastewater District was given multiple stop orders in the 1990's for allowing sewage overflow into the Carmel River.

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Sewage Runoff.
- 1b. If no objective criteria are used please state that clearly.
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- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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## \* 447 - STANDING RIVER WATER.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Standing River Water.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Excessive pumping from the Carmel River reduces river flows - especially during late summer in California.

Low river flows cause standing water pools. Standing water pools cause toxic blue-green algae blooms. "Mystery poison found in Carmel River" "Health Dept warns that children, pets should stay away." - Carmel Pine Cone Headlines Sept 19 1997 At least three

dogs died from Oct 1996 to September 1997 Immediately after drinking from the standing pools in the Carmel River. One attending veterinarian suspected a blue-green algae (also known as cyanbacteria), but there was no investigation. "I've been here 35

years and never seen anything like this before." said Carmel Valley veterinarian Gerald Petkus. County Health Dept Director Melton said two other dogs died after drinking water in 1995. No water samples were taken. According to Melton the atgae is "very

loxic to any animal" (this presumably includes humans).

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Standing River Water.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
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- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
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- Please provide a graph of HISTORICAL measurements.

- 17. Please quantify how this Impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
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- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dales and where they can be examined.

## \* 448 - ELEVATED WATER TEMPERATURES.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Elevated Water Temperatures.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Elevated water temperatures can lead to stress, poor condition and poor survival in aquatic species.

As water temperature rises the maximum amount of dissolved-oxygen the water can hold decreases. Water can hold a maximum of about 15% DO at 0 (zero) degrees C, but only about 9% at 20 degrees C. Environmental Science; Morgan, Moran & Weirsma; W.C. Brown Pub. 1993 p 289

When a watercourse is lowered by pumping, the river or stream temperature increases. This increase can imperil lish and amphibians who depend on milder water temperatures for habital and reproduction.

Trees cool large amounts of surface level air and land (especially black asphalt) by providing shade and by evaporation. When streamside trees are removed the lemperature of the stream can rise 10 degrees F or more.

Warm water discharge associated with power plants (Diablo Canyon nuclear and Moss Landing fuel powered) "can cause serious damage to giant and bull kelp forests through loss of adult tissue and early death as well as retardation of gametophytic and sporophytic development." DEIR Giant & Bull Kelp Fishing Regulations, Dec 2000

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Elevated Water Temperatures.
- 1b. If no objective criteria are used please state that clearly.

- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, faisifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
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- 35. Please list, describe and quantify all Indirect impacts related to this one.
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- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please stale the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this Impact.
- Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.

- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 449 RUNOFF WATER TEMPERATURE.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Runoff Water Temperature.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

"Runoff from an asphalt road or parking lot may have a temperature of 83 degrees F or more in the summer. Sensitive species such as trout prefer a temperature of 68 degrees F or less and begin dying when water temperature reaches 77 degrees F." The Cumulative Effects of Land Development on Streams, Rivers, Lakes, Tidal Waters & Wellands, by Richard Klein 1979

### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Runoff Water Temperature.
- 1b. If no objective criteria are used please state that clearly.
- 2. If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.

- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantity the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction Impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.
- Please list, describe and quantify all Indirect impacts related to this one.
- Please list and quantify every OTHER IMPACT this impact or miligation could increase.
- 37. Please describe the EXISTING USABLE timit of the RESOURCE this impact affects.

- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 450 RUNOFF WATER TEMPERATURE IMPACTS ON EACH LISTED SPECIES.

The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Runoff Water Temperature impacts on Each Listed Species.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

"Runoff from an asphalt road or parking lot may have a temperature of 83 degrees F or more in the summer. Sensitive species such as trout prefer a temperature of 68 degrees F or less and begin dying when water temperature reaches 77 degrees F. The

Cumulative Effects of Land Development on Streams, Rivers, Lakes, Tidal Waters & Wetlands, by Richard Klein 1979

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Runoff Water Temperature impacts on Each Listed Species.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, faisifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- If no measurement units are used please state that clearly.
- Sa. Please state the METHOD of measurement used to determine the significance for each criteria.

- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts Increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.

- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantity all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantity all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this Impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please stale whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and stiff be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact
- 46. Please provide the reverse of this impact as Mitigation,
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 451 RUNOFF WATER TEMPERATURE IMPACTS ON THE RED-LEGGED FROG.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Runoff Water Temperature Impacts on the Red-Legged Frog.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

#### QUANTIFICATION OF BASELINES AND IMPACTS:

- This impact appears to be potentially significant.
- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Runoff Water Temperature Impacts on the Red-Legged Frog.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
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- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.

- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
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- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please slate whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- Please name each EXPERT who prepared and reviewed this impact.

- Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 452 ROADWAY CAPACITY.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Roadway Cepacity.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Please graph the road capacity needed through the construction phase of the project.

Please graph the road capacity available through the construction phase of the project.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Roadway Capacity.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.

- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
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- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationate for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
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- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.

- Please list; describe and quantify all Indirect Impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or miligation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
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- 40. Please state whether the margin of error is measured or assumed
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- Please provide the reverse of this impact as Mitigalion.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 453 LEVEL OF SERVICE (LOS) DELAY INCREASE.

The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Level of Service (LOS) Delay Increase.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Level of Service measures traffic time delay up to 60 seconds.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Level of Service (LOS) Delay Increase.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- Please state the METHOD of measurement used to determine the significance for each criteria.

- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
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- Please state the variance's MARGINS of ERROR or confidence level
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- 12. Please stale the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- 25. Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.

- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
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- 31. Please quantify all potential CUMULATIVE impacts related to this one.
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- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
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- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
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- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 454 VOLUME TO CAPACITY RATIO (V/C) DELAY INCREASE.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Volume to Capacity Ratio (v/c) Delay Increase.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph. The Pebble Beach Lot Program FEIR used a v/c increase of one percent as a significant impact with an existing evening rush hour (PM) Level of Service of \*F\*.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Volume to Capacity Ratio (v/c) Delay Increase.
- 1b. If no objective criteria are used please slate that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repealable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- Please state the THRESHOLD number at which the impact changes from significant to less than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level
- Please state whether this MARGIN of ERROR is measured or assumed.

- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the stignificance threshold values.
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- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- 34. Pléase list, describe and quantify all Growth impacts related to this one.
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- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- .37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.

- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 455 TRAFFIC GROWTH.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Traffic Growth.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Traffic Growth.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.

- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a UNEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
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- 35. Please list, describe and quantify all Indirect impacts related to this one.

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- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 456 TRAFFIC VOLUMES.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Traffic Volumes.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

The Pebble Beach Lot Program FEIR used a traffic increase of one percent as a significant impact with an existing PM Level of Service of \*F\*.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly Identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Traffic Volumes.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.

- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
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## \* 457 - QUEUE LENGTH INCREASE.

The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Queue Length Increase.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

My training and experience as senior design engineer for an English race car manufacturer (Eldon/Saracen of Maidstone, Kent), many years study and teaching of higher math and applied physics and 30 years as a computer scientist makes it easy to

understand the very basic engineering involved with determining traffic and other impacts this project would cause and worsen.

Queue Length is a another way to measure delay distinct from Level of Service. It measures the distance cars are stopped from an intersection.

Level of Service measures time - not distance. Level of Service does not and cannot measure delay beyond 60 seconds. Queue Length can measure delays far beyond one minute - up to hours.

#### QUANTIFICATION OF BASEUNES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Queue Length Increase.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
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- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 458 DELAY IN VEHICLE-HOURS.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Delay in Vehicle-Hours.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Maximum and average driving delay can be measured in vehicle hours. Access, p 22, Spring 2000, University of California Transportation Research

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Delay In Vehicle-Hours.
- 1b. If no objective criteria are used please state that clearly.
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- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria fisted above.
- 9. Please slale the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
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- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 459 RELATIVE TRAFFIC LEVEL INCREASE (1 NEW VEHICLE TRIP IS SIGNIFICANT).

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Relative Traffic Level Increase (1 new vehicle trip is significant).

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

According to TAMC the two Intersections from Highway 1 to Carmel Valley, Carmel Valley Road and Rio Road, are both operating at LOS \*F\* as of 1998.

Cal-Trans standard for a significant impact when an existing intersection is at LOS "F" is the addition of a single vehicle trip. Any activity creating at least one new vehicle trip during rush hour is causing a significant impact:

"It is the Department's position that the addition of even one peak hour trip in a LOS 'F' environment represents a significant impact." (Cal-Trans letter dated Nov 18, 1997 to

the Monterey County Planning Dept on the September Ranch project.)

LOS stands for "Level of Service" where the scale ranges from 'A' to 'F' 'A' means free-flowing, 'F' means gridlock-measured as a minimum trip delay of 60 seconds.

"Peak hour trip" means during rush hour (8 - 9:30 am and 4:00 - 5:30 pm)

Monterey County Public Works: "If the Intersection is already operating at LOS F, any increase (one vehicle) in the critical movements volume to capacity ratio is considered significant." For Intersections already operating at unacceptable levels D or

E, a significant impact would occur if a project adds 0.01 or more to the critical movements volume to capacity ratio."

#### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Relative Traffic Level increase (1 new vehicle trip is significant).
- 1b. If no objective criteria are used please state that clearly.
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- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 460 COMMUTING TRAFFIC.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential Impacts of Commuting Traffic.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

The larger the distance between a job and the home - the more commuting traffic is caused.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Commuting Traffic.
- 1b. If no objective criteria are used please state that clearly.
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- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- 16. Please quantify the length of time this impact would tast.
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- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- 25. Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
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- 33. Please list, describe and quantify all Construction impacts related to this one.
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- Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 461 TOURIST TRAFFIC.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Tourist Traffic.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Tourist Traffic can be significant in areas, like the Monterey Peninsula, where non-trivial amounts of hotels depend upon and advertise for tourist business. Tourist Traffic increases in the Summer as opposed to Holiday Traffic which centers around holidays.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Tourist Traffic.

- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
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- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
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- 35. Please list, describe and quantify all Indirect Impacts related to this one...
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- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.

48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.

### \* 462 - HOLIDAY TRAFFIC.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Holiday Traffic.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

According to a 1999 Calif State Automobile Assoc survey "Monterey is one of the most popular destinations for in-state travelers, along with Tahoe and Southern California." Inns in Carmel and Pacific Grove were about 70 percent sold out for Thanksgiving 1999.

### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Holiday Traffic.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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### \* 463 - CONSTRUCTION TRAFFIC VOLUMES.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Construction Traffic Volumes.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

You can't have construction without construction vehicle traffic.

A single truck can carry about 10 cubic yards or soil or rock. Every 100 cubic yards of malerial removed requires at least 10 round trip truck lips - or 20 one-way truck trips. This does not round the heavy vehicle trips required for the equipment

load the trucks nor the support vehicles used by the employees.

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Construction Traffic Volumes.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
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- \* 464 CONSTRUCTION TRUCK TRAFFIC.
- The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Construction Truck Traffic.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph. What is the maximum number of tractor trailers which will be allowed on site at any one time?

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Construction Truck Traffic.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- \* 465 CONSTRUCTION EMPLOYEE TRAFFIC.
- The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Construction Employee Traffic.
- If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Construction crews finish work at rush hours. Construction employee traffic using private cars and other vehicles inherently adds to peak hour traffic congestion.

# QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

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- \* 466 HIGHWAYS CAUSE GROWTH.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Highways Cause Growth.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

\*Highways Create Demand for Travel and Expansion by Their Very Existence.\*

In January 1997 US Federal District Court, Judge Suzanne B. Conton for the Northern District of Illinois, Opinion wrote:

"Highways create demand for travel and expansion by their very existence. Swain v. Brinegar, 517 F.2d 766, 777 (7th Cir.1975); Def. 12 (M) Par. 86. However the final impact statement in this case relies on the implausible assumption that the same level

of transportation needs will exist whether or not the toll road is constructed." "[FHWA's] decision in this regard was arbitrary and capricious, 5 USC Sec 706(2)(a)."

This federal court opinion further reinforces the concensus of expert and legal opinion that expanded road capacity generates changes in travel and land activities that must be accounted for in project and plan appraisals. As one of the panelists at a

Transportation Research Board (TRB) Annual Meeting session on the induced travel effects of highway capacity changes obesrved last week, to general agreement from all other panelists, including Kevin Heanue, Director of Environment and Planning at FHWA,

"There is no longer a question that these dynamics occur. The only question is how large are the effects in a particular case."

It should be obvious that since a lack of roads constrains growth, any increase in roads allows growth.

"Environmental Impact Statements on highways and sewage treatment plants seldom evaluate the resulting impact on urban growth patterns. These secondary effects may, however, be more damaging than the primary effects. The second form of shortsightedness

is the tendency to consider only changes in the physical environment and to ignore changes in the social environment. Yet impacts on polution patterns or community behavioral patterns may affect the quality of the human environment much more than impacts on air or soild waste."

U.S. EPA, letter to the President's Council of Environmental Quality 21 December, 1971

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Highways Cause Growth.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- B. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- 9. Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13, Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- Please quantify the length of time this impact would last.

- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please stale that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
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- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE Impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.

- 40. Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 467 ADDING TRAFFIC LANES AS MITIGATION.

The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Adding Traffic Lanes as Mitigation.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

There is now overwhelming evidence, including a nationwide study of 70 metropolitan areas over 15 years (Texas Transportation Institute), another California specific study (Hansen 1995) which included Monterey County, that when an area is congested - additional lanes do not provide congestion relief.

These studies show that when an area is congested additional lanes do not provide congestion relief. It is documented that additional lanes increase traffic.

Further it has been demonstrated in San Francisco and New York that when lane miles are removed congestion is alleviated (e.g. SF Central Freeway 1996, New York's West Side Highway 1988) shows that "When road capacity shrinks - So Can traffic" - Auto Free Times Winter 1996-97.

### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Adding Traffic Lanes as Mitigation.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- Please quote the definition used.
- 4. If no measurement units are used please state that clearly.

- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
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- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
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- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average,
- 12. Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number,
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.

- 27. Please state whether the MARGIN of ERROR is measured or assumed.
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- 31. Please quantify all potential CUMULATIVE impacts related to this one.
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- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
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- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
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- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 468 ROAD CONSTRUCTION DELAYS.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Road Construction Delays.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

The Surface Transportation Policy Project (STTP) released a falt 1999 report 'Road Work Ahead: Is Construction Worth the Wait?' The study found that motorists can lose more time in road construction delays than they will save in years of driving on the

newly "improved" road.

In a case study, the report highlights Trenton' Route 29 project, an \$85 million, four lane highway along the Deleware waterfront. The report shows that traffic delays stemming from the project are so long that it will take ten years for drivers to make

up the time and actually benefit from the project. (Auto-Free Times Spring 2000, p 16)

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Road Construction Delays.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.

- 18. Please state the THRESHOLD number at which the impact-changes from significant to less-than-significant and the clear criteria and rationale for that number.
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- Please state whether the margin of error is measured or assumed.

- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
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- 46. Please provide the reverse of this impact as Miligation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.

# 469 - THE PIGOU-KNIGHT-DOWNS PARADOX.

The Document appears to have Ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of The Pigou-Knight-Downs Paradox.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Economic theory can be applied to transportation. The Pigou-Knight-Downs paradox helps explain why expanding road capacity may elicit new demand with no improvement in congestion. The social cost of a trip on a congested roadway equals the private cost plus the cost of time lost in congestion.

Yet drivers can only rationally choose the route with the lower private cost. Expanding capacity may only recongest the route with drivers who had been using alternative roads with spare capacity but a longer distance and travel time.

Please analyze the polential impacts of Pigou-Knight-Downs Paradox on the proposed roadway increases. (by Sherman L Lewis, Professor of Political Science California State University, Hayward)

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of The Pigou-Knight-Downs Paradox.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.

- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
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- Please state the variance's MARGINS of ERROR or confidence level.
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- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
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- 20b. If no margin of error is used please state that clearly.
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- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- 25. Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please-quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this Impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 470 ADDITIONAL STOP SIGNS INCREASING NOISE.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Additional Stop Signs Increasing Noise.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

As vehicles accelerate away from a stop sign the engine noise rises significantly above that of a vehicles transiting the same road at a constant rate.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Additional Stop Signs Increasing Noise.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repealable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- \* 471 ADDITIONAL STOP SIGNS INCREASING DELAY.

The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Additional Stop Signs Increasing Delay.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Travel times increase for every vehicle as stop signs are added, decreasing free flowing traffic which harms an area's Level of Service (LOS).

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

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- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Miligation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 472 ADDITIONAL STOP SIGNS INCREASING DELAY.

Travel times increase for every vehicle as stop signs are added, decreasing free flowing traffic which harms an area's Level of Service (LOS).

## MITIGATION QUANTIFICATION

PRIMARY MITIGATION MEASURE: Additional Stop Signs Increasing Delay.

This Mitigation Measure is of the wrong type, inadequate, not fully enforceable and causes its own potentially significant environmental impacts.

## BACK-UP MITIGATION MEASURE:

- A1. Please describe the "Back-up", Secondary or Reserve" Mitigation measure in case the primary mitigation measure fails.
- A2. If there is no Back-up Mitigation Measure please state that clearly.

# MITIGATION IMPACT REDUCTION

- B1. Please state the Absolute Amount of impact reduction contributed by the Primary mitigation measure: Additional Stop Signs Increasing Delay, using the same units of measure used to determine the impact.
- B2. Please state the Absolute Amount of impact reduction contributed by the Secondary mitigation measure using the same units of measure used to determine the impact.
- 83. Please state the impact reduction, in Percent, contributed by the primary miligation measure: Additional Stop Signs

- Increasing Delay, using the same units of measure used to determine the impact.
- B4. Please state the impact reduction, in Percent, contributed by the secondary mitigation measure using the same units of measure used to determine the impact.
- TRACK RECORD EXAMPLE C1. Please cite at least one real world example of successful implementation of an identical or reasonably identical example for the primary mitigation measure: Additional Stop Signs Increasing Delay.
- C2. Please cite at least one real world example of successful implementation of an identical or reasonably identical example for the back-up mitigation measure.

This would be an example that is in place and has been selfsustaining for a minimum of 5 years; Include clear descriptions of mitigation measures, how long the mitigation measure has been operating, where in the process the mitigation is now, and what percentage of mitigation has been successful, and how successful is defined.

- C3. If there are no successful examples for the primary measure please identify the proposed miligation measure as speculative or experimental.
- C4. If there are no successful examples for the secondary measure - please identify the proposed mitigation measure as speculative or experimental.
- D1. TRACK RECORD STUDY Please provide a survey reporting the number of times this primary mitigation measure has been attempted, and the ratio of successful vs unsuccessful implementations. If no such study is available please identify as speculative or experimental the proposed mitigation measure: Additional Stop Signs Increasing Delay.
- D2. Please provide a survey reporting the number of times this secondary mitigation measure has been attempted, and the ratio of successful vs unsuccessful implementations. If no such study is available please identify as speculative or experimental

the proposed miligation measure: Additional Stop Signs Increasing Delay.

- NEW LEVEL IF SUCCESSFUL E1. Please state the new total number if the proposed primary mitigation measure is successful.
- E2. Please state the new total number if the proposed secondary mitigation measure is successful.
- E3. Please state the total change, in PERCENT, to which the primary mitigation measure would raise or lower the maximum impact amounts.
- E4. Please state whether this total maximum change percent is an average amount, a worst case expected or a best case expected.
- E5. Please state the total change, in PERCENT, to which the secondary mitigation measure would raise or lower the maximum impact amounts.
- E6. Please state whether this total maximum change percent is an average amount, a worst case expected or a best case expected.
- E7. Please state the degree, in ABSOLUTE AMOUNT, to which the primary mitigation measure would raise or lower the maximum impact amounts.
- EB. Please state whether this total maximum change amount is an average amount, a worst case expected or a best case expected.

- E9. Please state the degree, in ABSOLUTE AMOUNT, to which the secondary mitigation measure would raise or lower the maximum impact amounts.
- E10. Please state whether this total maximum change amount is an average amount, a worst case expected or a best case expected.
- F1. Please state the deadline when this primary Miligation Measure must be completed.
- F2. Please state the deadline when this secondary Mitigation Measure must be completed.
- G. MONITORING Unfortunately most mitigation measures are inadequate or fail or both. The U.S. EPA studied 1200 Environmental Assessments and FONSis and estimated that 70% of them contained either inadequate mitigation measures or no mitigation measures.

So the public can determine the probability of the ability of the Agency to enforce the miligation measures -

- G1. Please explain clearly how the primary miligation measure will be monitored.
- G2. Please explain clearly how the secondary mitigallon measure will be monitored.
- G3. Please explain clearly what date-certain deadlines will be used to determine whether this primary miligation measure has failed.
- G4. Please explain clearly what specific performance criteria will be used to determine whether this primary mitigation measure has failed by the deadlines listed above.
- G5. Please explain clearly what date-certain deadlines will be used to determine whether this secondary mitigation measure has failed.
- G6. Please explain clearly what specific performance criteria will be used to determine whether this secondary mitigation measure has failed by the deadlines listed above.
- G7. Please explain clearly which other specific criteria will be used to determine whether the primary mitigation measure has failed.
- G8. Please explain clearly which other specific criteria will be used to determine whether the secondary miligation measure has failed.
- G9. Please explain clearly how much money will be needed to adequately monitor these mitigations.
- G10. Please explain the source and the quantify the certainty of the money needed to adequately monitor these mitigations.
- H1. Please explain clearly how this primary mitigation measure will be protected from impacts of future projects and all non-discretionary activities.
- H2. Please explain clearly how this secondary mitigation measure will be protected from impacts of future projects and all non-discretionary activities.

MONITORING FREQUENCY I1. Please describe carefully how often this primary mitigation measure will be monitored.

- Please describe carefully how often this secondary mitigation measure will be monitored.
- J1. Please describe clearly how long the primary miligation should last.
- Please describe clearly how long the secondary mitigation should last.

AGENCY ENFORCEMENT K1. Please list all agencies who will enforce the primary mitigation measure.

K2. Please list all agencies who will enforce the secondary mitigation measure.

One of California's few examples of a fully enforceable legal violation is a parking ticket. If the ticket is not paid, ultimately a vehicle's registration will not be renewed.

- Please explain clearly how the primary mitigation measure will be fully enforced.
- L2. Please explain clearly how the secondary miligation measure will be fully enforced.
- M1. Please explain clearly how long it takes each agency listed above to issue a stop order after a valid complaint is filed.
- M2. Please give a specific example of a real complaint that resulted in a stop work order for failure to comply with a mitigation measure for each agency.

MITIGATION LOCATION N1. Please describe the exact physical location(s) for the proposed primary mitigation.

N2. Please describe the exact physical location(s) for the proposed secondary mitigation.

MITIGATION IMPACTS Mitigation measures normally create their own impacts.

- Please list all potential impacts from the primary mitigalion measure
- O2. Please quantify all potential environmental impacts from the primary mitigation measure.
- Please qualify all potential impacts from the primary mitigation measure.
- P1. Please list all potential impacts from the secondary mitigation measure
- P2. Please quantify all polential environmental impacts from the secondary mitigation measure.
- P3. Please qualify all potential impacts from the secondary mitigation measure.

EXPERT QUÁLIFICATIONS Q1. Please name each expert who prepared and reviewed the primary mitigation measure.

- Q2. Please name each expert who prepared and reviewed the secondary mitigation measure.
- Q3. Please cite each expert's training, competence and experience specific to the primary mitigation measure.
- Q4. Please cite each expert's training, competence and experience specific to the secondary mitigation measure.
- R. What will it cost, in time and money, to replace the loss from the Impact?
- \* 473 ADDITIONAL STOP LIGHTS INCREASING DELAY.

Travel times increase as stop lights are added, decreasing free flowing traffic which harms an area's Level of Service (LOS).

# MITIGATION QUANTIFICATION

PRIMARY MITIGATION MEASURE: Additional Stop Lights Increasing Delay.

This Mitigation Measure is of the wrong type, inadequale, not fully enforceable and causes its own potentially significant environmental impacts.

#### BACK-UP MITIGATION MEASURE:

- A1 . Please describe the "Back-up", Secondary or Reserve' Mitigation measure in case the primary mitigation measure fails
- A2. If there is no Back-up Mitigation Measure please state that clearly.

### MITIGATION IMPACT REDUCTION

- B1. Please state the Absolute Amount of Impact reduction contributed by the Primary mitigation measure: Additional Stop Lights Increasing Delay, using the same units of measure used to determine the impact.
- B2. Please state the Absolute Amount of impact reduction contributed by the Secondary mitigation measure using the same units of measure used to determine the impact.
- B3. Please state the impact reduction, in Percent, contributed by the primary mitigation measure: Additional Stop Lights Increasing Delay, using the same units of measure used to determine the impact.
- 84. Please state the impact reduction, In Percent, contributed by the secondary mitigation measure using the same units of measure used to determine the impact.

TRACK RECORD EXAMPLE C1. Please cite at least one real world example of successful implementation of an identical or reasonably identical example for the primary mitigation measure: Additional Stop Lights Increasing Delay.

C2. Piease cite at least one real world example of successful implementation of an identical or reasonably identical example for the back-up mitigation measure.

This would be an example that is in place and has been selfsustaining for a minimum of 5 years; Include clear descriptions of mitigation measures, how long the mitigation measure has been operating, where in the process the mitigation is now, and what percentage of mitigation has been successful, and how successful is defined.

- C3. If there are no successful examples for the primary measure - please identify the proposed mitigation measure as speculative or experimental.
- C4. If there are no successful examples for the secondary measure - please identify the proposed mitigation measure as speculative or experimental.
- D1. TRACK RECORD STUDY Please provide a survey reporting the number of times this primary mitigation measure has been attempted, and the ratio of successful vs unsuccessful Implementations. If no such study is available please identify as speculative or experimental the proposed mitigation measure: Additional Stop Lights Increasing Delay.
- D2. Please provide a survey reporting the number of times this secondary mitigation measure has been attempted, and the ratio of successful vs unsuccessful implementations. If no such study is available please identify as speculative or experimental

the proposed mitigation measure: Additional Stop Lights Increasing Delay.

- NEW LEVEL IF SUCCESSFUL E1. Please state the new total number if the proposed primary mitigation measure is successful.
- E2. Please state the new total number if the proposed secondary mitigation measure is successful.
- E3. Please stale the total change, in PERCENT, to which the primary miligation measure would raise or lower the maximum impact amounts.

- E4. Please state whether this total maximum change percent is an average amount, a worst case expected or a best case expected.
- E5. Please state the total change, in PERCENT, to which the secondary miligation measure would raise or lower the maximum impact amounts.
- E6. Please state whether this total maximum change percent is an average amount, a worst case expected or a best case expected.
- E7. Please state the degree, in ABSOLUTE AMOUNT, to which the primary mitigation measure would raise or lower the maximum impact amounts.
- E8. Please state whether this total maximum change amount is an average amount, a worst case expected or a best case expected.
- E9. Please state the degree, in ABSOLUTE AMOUNT, to which the secondary mitigation measure would raise or lower the maximum impact amounts.
- E10. Please state whether this total maximum change amount is an average amount, a worst case expected or a best case expected.
- F1. Please state the deadline when this primary Mitigation Measure must be completed.
- F2. Please state the deadline when this secondary Mitigation Measure must be completed.
- G. MONITORING Unfortunately most mitigation measures are inadequate or fail or both. 'The U.S. EPA studied 1200 Environmental Assessments and FONSIs and estimated that 70% of them contained either inadequate mitigation measures or no mitigation measures.

So the public can determine the probability of the ability of the Agency to enforce the miligation measures -

- G1. Please explain clearly how the primary mitigation measure will be monitored.
- G2. Please explain clearly how the secondary mitigation measure will be monitored.
- G3. Please explain clearly what date-certain deadlines will be used to determine whether this primary mitigation measure has failed.
- G4. Please explain clearly what specific performance criteria will be used to determine whether this primary mifigation measure has failed by the deadlines listed above.
- G5. Please explain clearly what date-certain deadlines will be used to determine whether this secondary mitigation measure has failed.
- G6. Please explain clearly what specific performance criteria will be used to determine whether this secondary mitigation measure has failed by the deadlines listed above.
- G7. Please explain clearly which other specific criteria will be used to determine whether the primary mitigation measure has failed.
- G8. Please explain clearly which other specific criteria will be used to determine whether the secondary mitigation measure has failed.
- G9. Please explain clearly how much money will be needed to adequately monitor these mitigations.
- G10. Please explain the source and the quantify the certainty of the money needed to adequately monitor these mitigations.

- H1. Please explain clearly how this primary mitigation measure will be protected from impacts of future projects and all non-discretionary activities.
- H2. Please explain clearly how this secondary mitigation measure will be protected from impacts of future projects and all non-discretionary activities.

MONITORING FREQUENCY I1. Please describe carefully how often this primary mitigation measure will be monitored.

- Please describe carefully how often this secondary mitigation measure will be monitored.
- J1. Please describe clearly how long the primary mitigation should last
- J2. Please describe clearly how long the secondary mitigation should last.

AGENCY ENFORCEMENT K1. Please list all agencies who will enforce the primary miligation measure.

K2. Please list all agencies who will enforce the secondary mitigation measure.

One of California's few examples of a fully enforceable legal violation is a parking ticket. If the ticket is not paid, ultimately a vehicle's registration will not be renewed.

- Please explain clearly how the primary mitigation measure will be fully enforced.
- L2. Please explain clearly how the secondary miligation measure will be fully enforced.
- M1. Please explain clearly how long it takes each agency listed above to Issue a stop order after a valid complaint is filed.
- M2. Please give a specific example of a real complaint that resulted in a stop work order for failure to comply with a mitigation measure for each agency.

MITIGATION LOCATION N1. Please describe the exact physical location(s) for the proposed primary mitigation.

N2. Please describe the exact physical location(s) for the proposed secondary mitigation.

MITIGATION IMPACTS Mitigation measures normally create their own impacts.

- O1. Please list all polential impacts from the primary mitigation measure
- Please quantify all potential environmental impacts from the primary mitigation measure.
- Please qualify all potential impacts from the primary mitigation measure.
- P1. Please list all potential impacts from the secondary mitigation measure
- P2. Please quantify all potential environmental impacts from the secondary mitigation measure.
- P3. Please qualify all potential impacts from the secondary mitigation measure.

EXPERT QUALIFICATIONS Q1. Please name each expert who prepared and reviewed the primary miligation measure.

- Q2. Please name each expert who prepared and reviewed the secondary mitigalion measure.
- Q3. Please cite each expert's training, competence and experience specific to the primary mitigation measure.

- Q4. Please cite each expert's training, competence and experience specific to the secondary mitigation measure.
- R. What will it cost, in time and money, to replace the loss from the impact?
- \* 474 ADDITIONAL STOP SIGNS INCREASING AIR POLLUTION.

The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Additional Stop Signs Increasing Air Pollution.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Air pollution increases as stop signs are added. Stopped and accelerating vehicles emit significantly more air pollution than vehicles traveling at a steady stateVehicle engines change speed when accelerating and decelerating, it is less efficient than

when it operates at a steady speed. The amount can be roughly calculated from by comparing vehicles mpg figures in urban areas to their highway mpg. A range of 10% to 50% is typical. The increased air pollution should be similar in amount. Interestingly

vehicles emit more pollution when coasting or decelerating than when accelerating.

When stop signs are added to residential areas, morning air pollution increases significantly because vehicles emit huge amounts of pollution upon startup, for about the first five miles, before the catalytic converters get up to operating temperature.

# QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Additional Stop Signs Increasing Air Pollution
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically lestable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please slate that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.

- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- .11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels,
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.

- 33. Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this Impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 475 ADDITIONAL STOP LIGHTS INCREASING AIR POLLUTION.

Air pollution increases as stop lights are added. Stopped and accelerating vehicles emit significantly more air pollution than vehicles traveling at a steady state. When stop lights are added to residential areas, morning air pollution increases significantly because vehicles emit huge amounts of pollution for about the first five miles before the catalytic converts get up to operating temperature.

### MITIGATION QUANTIFICATION

PRIMARY MITIGATION MEASURE: Additional Stop Lights Increasing Air Pollution.

This Mitigation Measure is of the wrong type, inadequate, not fully enforceable and causes its own potentially significant environmental impacts.

## BACK-UP MITIGATION MEASURE:

- A1 . Please describe the "Back-up", Secondary or Reserve" Mitigation measure in case the primary mitigation measure fails.
- A2. If there is no Back-up Miligation Measure please state that clearly.

#### MITIGATION IMPACT REDUCTION

- B1. Please state the Absolute Amount of impact reduction contributed by the Primary mitigation measure: Additional Stop Lights Increasing Air Pollution, using the same units of measure used to determine the impact.
- B2. Please state the Absolute Amount of impact reduction contributed by the Secondary mitigation measure using the same units of measure used to determine the impact.
- 83. Please state the impact reduction, in Percent, contributed by the primary mitigation measure: Additional Stop Lights Increasing Air Pollution, using the same units of measure used to determine the Impact.
- 84. Please state the impact reduction, in Percent, contributed by the secondary miligation measure using the same units of measure used to determine the impact.
- TRACK RECORD EXAMPLE C1. Please cite at least one real world example of successful implementation of an identical or reasonably identical example for the primary mitigation measure: Additional Stop Lights Increasing Air Pollution.
- C2. Please cite at least one real world example of successful implementation of an identical or reasonably identical example for the back-up milligation measure.

This would be an example that is in place and has been selfsustaining for a minimum of 5 years; Include clear descriptions of mitigation measures, how long the mitigation measure has been operating, where in the process the mitigation is now, and what percentage of mitigation has been successful, and how successful is defined.

- C3. If there are no successful examples for the primary measure - please identify the proposed mitigation measure as speculative or experimental.
- C4. If there are no successful examples for the secondary measure please identify the proposed mitigation measure as speculative or experimental.
- D1. TRACK RECORD STUDY Please provide a survey reporting the number of times this primary mitigation measure has been attempted, and the ratio of successful vs unsuccessful implementations. If no such study is available please identify as speculative or experimental the proposed mitigation measure: Additional Stop Lights Increasing Air Pollution.
- D2. Please provide a survey reporting the number of times this secondary mitigation measure has been attempted, and the ratio of successful vs unsuccessful implementations. If no such study is available please identify as speculative or experimental

the proposed mitigation measure: Additional Stop Lights Increasing Air Pollution.

- NEW LEVEL IF SUCCESSFUL E1. Please state the new total number if the proposed primary mitigation measure is successful.
- E2. Please state the new lotal number if the proposed secondary mitigation measure is successful.
- E3. Please state the total change, in PERCENT, to which the primary miligation measure would raise or lower the maximum impact amounts.
- E4. Please state whether this total maximum change percent is an average amount, a worst case expected or a best case expected.
- E5. Please state the total change, in PERCENT, to which the secondary mitigation measure would raise or lower the maximum impact amounts.

- E6. Please state whether this total maximum change percent is an average amount, a worst case expected or a best case expected.
- E7. Please state the degree, in ABSOLUTE AMOUNT. to which the primary mitigation measure would raise or lower the maximum impact amounts.
- E8. Please state whether this total maximum change amount is an average amount, a worst case expected or a best case expected.
- E9. Please state the degree, in ABSOLUTE AMOUNT, to which the secondary mitigation measure would raise or lower the maximum impact amounts.
- E10. Please state whether this total maximum change amount is an average amount, a worst case expected or a best case expected.
- F1. Please state the deadline when this primary Mitigation Measure must be completed.
- F2. Please state the deadline when this secondary Mitigation Measure must be completed.
- G. MONITORING Unfortunately most mitigation measures are inadequate or fail or both. 'The U.S. EPA studied 1200 Environmental Assessments and FONSIs and estimated that 70% of them contained either inadequate mitigation measures or no mitigation measures.
- So the public can determine the probability of the ability of the Agency to enforce the mitigation measures -
- G1. Please explain clearly how the primary mitigation measure will be monitored.
- G2. Please explain clearly how the secondary mitigation measure will be monitored.
- G3. Please explain clearly what date-certain deadlines will be used to determine whether this primary mitigation measure has failed
- G4. Please explain clearly what specific performance criteria will be used to determine whether this primary mitigation measure has failed by the deadlines listed above.
- G5. Please explain clearly what date-certain deadlines will be used to determine whether this secondary mitigation measure has failed.
- G6. Please explain clearly what specific performance criteria will be used to determine whether this secondary mitigation measure has failed by the deadlines listed above.
- G7. Please explain clearly which other specific criteria will be used to determine whether the primary mitigation measure has failed.
- G8. Please explain clearly which other specific criteria will be used to determine whether the secondary miligation measure has failed.
- G9. Please explain clearly how much money will be needed to adequately monitor these miligations.
- G10. Please explain the source and the quantify the certainty of the money needed to adequately monitor these mitigations.
- H1. Please explain clearly how this primary mitigation measure will be protected from impacts of future projects and all non-discretionary activities.
- H2. Please explain clearly how this secondary miligation measure will be protected from Impacts of future projects and all non-discretionary activities.

MONITORING FREQUENCY I1. Please describe carefully how often this primary mitigation measure will be monitored.

- Please describe carefully how often this secondary mitigation measure will be monitored.
- J1. Please describe clearly how long the primary mitigation should last.
- J2. Please describe clearly how long the secondary mitigation should last.

AGENCY ENFORCEMENT K1. Please list all agencies who will enforce the primary miligation measure.

K2. Please list all agencies who will enforce the secondary mitigation measure.

One of California's few examples of a fully enforceable legal violation is a parking ticket. If the ticket is not paid, ultimately a vehicle's registration will not be renewed.

- L1. Please explain clearly how the primary mitigation measure will be fully enforced.
- Please explain clearly how the secondary mitigation measure will be fully enforced.
- M1. Please explain clearly how long it takes each agency listed above to issue a stop order after a valid complaint is filed.
- M2. Please give a specific example of a real complaint that resulted in a stop work order for failure to comply with a mitigation measure for each agency.

MITIGATION LOCATION N1. Please describe the exact physical location(s) for the proposed primary mitigation.

N2. Please describe the exact physical location(s) for the proposed secondary mitigation.

MITIGATION IMPACTS Miligation measures normally create their own impacts.

- O1. Please list all potential impacts from the primary mitigation measure
- O2. Please quantify all potential environmental impacts from the primary mitigation measure.
- O3. Please qualify all potential impacts from the primary mitigation measure.
- P1. Please list all polential impacts from the secondary mitigation measure
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- P3. Please qualify all potential impacts from the secondary miligation measure.

EXPERT QUALIFICATIONS Q1. Please name each expert who prepared and reviewed the primary miligation measure.

- Q2. Please name each expert who prepared and reviewed the secondary mitigation measure.
- Q3. Please cite each expert's training, competence and experience specific to the primary mitigation measure.
- Q4. Please cite each expert's training, competence and experience specific to the secondary mitigation measure.
- R. What will it cost, in time and money, to replace the loss from the impact?
- 476 STOP LIGHTS CAUSING ACCIDENTS.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Stop Lights Causing Accidents.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

In two months, a new traffic light installed on Highway 156 @ Castroville Blvd in Castroville, CA caused seven accidents including one fatality. "Its typical of what happens when a new traffic light or a stop sign is put in somewhere and people aren"t

used to it." according to Officer Tosha Jackson, spokeswoman for the California Highway Patrol in Salinas. - Herald, Mar 30, 2000

Monterey County Public Works Director Lew Bauman "New traffic signals, he cautioned, often result in serious accidents as people get used to them." Herald, May 20,00 pg A16

#### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Stop Lights Causing Accidents.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.

- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less than significant and the clear criteria and rationale for that number.
- 19. Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD (evel
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts Increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- 25. Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.

- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 477 STOP SIGNS CAUSING ACCIDENTS.

The Document appears to have ignored this potentially significant Impact-Please carefully analyze and disclose the potential impacts of Stop Signs Causing Accidents.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

"Its typical of what happens when a new traffic light or a stop sign is put in somewhere and people aren" used to it." according to Officer Tosha Jackson, spokeswoman for the California Highway Patrol in Salinas. Herald, Mar 30, 2000

# QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Stop Signs Causing Accidents.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.

- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- . 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- 19. Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with Increasing Input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold
- 23. Please quantify the lotal PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- 25. Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- $29.\,Please$  list all potential CUMULATIVE impacts related to this one.

- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- 33. Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- 40. Please state whether the margin of error is measured or assumed
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and stiff be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.

## \* 478 - ROAD DAMAGE TO TREE ROOTS.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Road Damage to Tree Roots.

If you claim the document contains proof of no-significantimpact for this Impact please explicitly state the page number and paragraph.

### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Road Damage to Tree Roots.
- 1b. If no objective criteria are used please state that clearly.

- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- Piease state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed
- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RETATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.

- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or  $m_2^{\prime\prime}$  increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and stiff be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.

- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 479 ROAD DUST HARMING VEGETATION AND HABITAT
- The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Road Dust Harming Vegetation and Habitat.
- If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.
- QUANTIFICATION OF BASELINES AND IMPACTS:
- This impact appears to be potentially significant.
- Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Road Dust Harming Vegetation and Habitat.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.

- . 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the basetine number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the Impact would raise or lower the basetine number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- "28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.

- 40. Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this Impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- 480 PHYSICAL DIVISION OF AN ESTABLISHED HUMAN COMMUNITY.
- The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Physical Division of an established Human Community.
- If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Freeways create a barrier to human travel. This impact is normally significant and unmitagable.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant. .

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Physical Division of an established Human Community.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a, Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly
- Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.

- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts Increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
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- 30 Please describe all potential CUMULATIVE impacts related to this one.
- Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- 481 DISPLACEMENT.
- The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Displacement.
- If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.
- QUANTIFICATION OF BASELINES AND IMPACTS:
- This impact appears to be potentially significant.
- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Displacement.
- 1b. If no objective criteria are used please state that clearly.

- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
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- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.

- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
- 25. Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.
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- 34. Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
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- 43. Please name each EXPERT who prepared and reviewed this Impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.

- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 482 JOBS-HOUSING IMBALANCE CAUSING FARTHER COMMUTES

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Jobs-Housing Imbalance Causing Farther Commutes.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

When a project "creates jobs" - low wage jobs - the employees must travel farther to find affordable housing. This increases vehicle trips and attendant air pollution.

#### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Jobs-Housing Imbalance Causing Farther Commutes.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.

- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts Increase in a LINEAR RELATIONSHIP with increasing input, other Impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
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- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
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- 32. Please list, describe and quantify all potential compound and synergetic impacts.
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- Please list, describe and quantify all Growth Impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- Please fist and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.

- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \*483 PHYSICAL DIVISION OF AN ESTABLISHED WILDLIFE COMMUNITY.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Physical Division of an established Wildlife Community.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Freeways create a barrier to wildlife travel. This impact is normally significant and unmitagable.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly Identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Physical Division of an established Wildlife Community.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repealable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.

4

- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
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- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
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- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.
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- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is tell.
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- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be reclored.
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- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 484 WILDLIFE ROADKILL INCREASE.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Wildlife Roadkill Increase.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

The more roads and wider roads that divide wild areas, the more wild animals are killed by cars and other vehicles. Imperiled species are killed by vehicles.

"The Humane Society and the Urban Wildlife Research Center estimate that more than 1 million large animals are killed annually on U.S. highways. Roadkills usually increase with traffic speeds and volumes. Studies in the state of Florida indicate that

road kills are the primary cause of death for most large mammals, including several threatened species." (Todd Littman)

The SPCA of Monterey County responds to 15 to 20 vehicle hil deer calls per month during making season. They say the average car repair cost per collision is \$2,000. (Coast Weekly Nov 26, 2003)

After two years of anecdotal observation I estimate that in coastal Monterey County on roadways allowing 55 mph at least one animal is killed for every two lane-miles every day.

Animals on roads can also kill drivers. Cole Weston hit a horse near the entrance of Pt Lobos and nearly lost his eye.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Wildlife Roadkill Increase.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- Sa. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.
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- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.

- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
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- 40. Please state whether the margin of error is measured or assumed.
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- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please fist all other studies initiated by the applicant related to this Impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 485 WILDLIFE UNDERPASSES.

The Document appears to have ignored this potentially feasible Mitigation. Please carefully analyze and disclose the potential benefits of Wildlife Underpasses.

Highway underpasses designed specifically for deer, panthers and other large mammals are successful at reducing roadkill in many areas. Fences can help funnel animals into the underpasses and bridges. "Roadside Use Of Native Plants."

## \* 486 - ROAD OBLITERATION.

The Document appears to have ignored this potentially feasible Allemative. Please carefully analyze and disclose the potential benefits of Road Obliteration.

Roads are essentially impervious land. Removing roads Increases Infiltration, increases water tables, increases baseflow and decreases runoff temperatures.

This Alternative does not require any non-off-the shelf technology.

## ALTERNATIVE FACTUAL ANALYSIS

There is little or no factual evidence in the document showing why this alternative is infeasible.

- A. Please clearly identify by name and describe each of the objective (non-subjective) criteria used to determine this Allernative's benefits.
- A1. If no objective criteria are used please state that clearly.
- A2. If the criteria are different than those used to evaluate the benefits of the proposed project, please explain as it is not generally acceptable to compare apples and oranges.
- B. Please state the name of the measurement units (numbers) used to determine the value for Each criteria.
- B1. If no measurement units are used please state that clearly
- C. Please state the method of measurement used to determine the value for each criteria.

- C1. If no measurement units are used please state that clearly for each criteria.
- C2. If no objective criteria are used please clearly describe how the method of measuring value is scientifically credible and defensible.
- D. Please state the existing or current baseline measurement (level) for each criteria.
- E. Please state the normal variance or fluctuation, assumed or expected for each of the criteria listed above.
- E1. If an average is used, please state which kind of average.
- E2. Please state the extreme conditions which will be encountered.
- F. Please provide a graph of historical measurement.
- G. Please state the measured, assumed or expected margin of error for each measurement, calculation, and conclusion and whether it is measured or assumed.
- H. Please state the total maximum change, in Percent, to which the Alternative would raise or lower the baseline number.
- H1. Please state whether this total maximum change percent is an average amount, a worst case expected or a best case expected.
- H2. Please state the degree, in Absolute Amount, to which this Alternative would raise or lower the baseline number,
- H3. Please state whether this total maximum change amount is an average amount, a best case expected or other.
- Please state the threshold number at which the value changes from a significant impact to a less-than-significant impact and the clear rationale for that number.
- Please provide the margin of error used (in percent and absolute amount) to insure the Significance Threshold Level for this Alternative is not somehow exceeded.
- If no margin of error is used please state that clearly.
- J. ALTERNATIVE VALUE PROOF Please cite and provide relevant studies that clearly show that the project purposes could not be achieved with this alternative or with this alternative in combination with other alternatives.
- J1. Please discuss the limitations of those studies.

BENEFIT DURATION K. Please clearly describe how the benefits vary over the time during the studies.

K1. Please graph the benefits for this alternative versus time in the studies. It is important to know the duration of an Alternative's benefits compared with the benefits from the proposed project.

COSTS L. Please cite the costs for the Alternatives studied.

- L1. It is important to know the cost to benefit ratio, please explain that ratio.
- M. EXPERT QUALIFICATIONS Please name each expert who prepared and reviewed this Alternative analysis.
- M1. Please cite each expert's training, competence and experience specific to this Alternative analysis.

### \* 487 - BICYCLE TRAVEL.

The Document appears to have ignored this potentially feasible Mitigation. Please carefully analyze and disclose the potential benefits of Bicycle Travel.

Comparing the Environmental Impacts of Bicycles to Cars. Bike Car Air pollution None NOX,HC,CO2,CO,and the carcinogens benzene, MTBE and formaldehyde

Fuel Consumed renewable Limited fossil hydrocarbons carbonydrates

Lane Width 2 feet 12 feet

Path width 4 feet 120 feet (ten lanes)

Parking Space 12 ft ^2 120 ft^1

Can be taken on Mass Transit Yes No

Requires Subsidies of Sales Taxes & Bonds No Yes

#### \* 488 - BICYCLE TRAVEL

The Document appears to have ignored this potentially feasible Alternative. Please carefully analyze and disclose the potential benefits of Bicycle Travel.

Comparing the Environmental Impacts of Bicycles to Cars. Bike Car Air pollution None NOX,HC,CO2,CO,and the carcinogens benzene, MTBE and formaldehyde

Fuel Consumed renewable Limited fossil hydrocarbons carbohydrates

Lane Width 2 feet 12 feet

Path width 4 feet 120 feet (ten lanes)

Parking Space 12 ft \*2 120 ft\*1

Can be taken on Mass Transit Yes No

Requires Subsidies of Sales Taxes & Bonds No Yes

This Alternative does not require any non-off-the shelf lechnology.

### ALTERNATIVE FACTUAL ANALYSIS

There is little or no factual evidence in the document showing why this alternative is infeasible.

A. Please clearly Identify by name and describe each of the objective (non-subjective) criteria used to determine this Alternative's benefits.

- A1. If no objective criteria are used please state that clearly.
- A2. If the criteria are different than those used to evaluate the benefits of the proposed project, please explain as it is not generally acceptable to compare apples and oranges.
- B. Please state the name of the measurement units (numbers) used to determine the value for Each criteria.
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- D. Please state the existing or current baseline measurement (level) for each criteria.

- E. Please state the normal variance or fluctuation, assumed or expected for each of the criteria listed above.
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- F. Please provide a graph of historical measurement.
- G. Please state the measured, assumed or expected margin of error for each measurement, calculation, and conclusion and whether it is measured or assumed.
- H. Please state the total maximum change, in Percent, to which the Alternative would raise or lower the baseline number.
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- H2. Please state the degree, in Absolute Amount, to which this Alternative would raise or lower the baseline number;
- H3. Please state whether this total maximum change amount is an average amount, a best case expected or other.
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- 12. If no margin of error is used please state that clearly.
- J. ALTERNATIVE VALUE PROOF Please cite and provide relevant studies that clearly show that the project purposes could not be achieved with this alternative or with this alternative in combination with other alternatives.
- J1. Please discuss the limitations of those studies.

BENEFIT DURATION K. Please clearly describe how the benefits vary over the time during the studies.

K1. Please graph the benefits for this alternative versus time in the studies. It is important to know the duration of an Alternative's benefits compared with the benefits from the proposed project.

COSTS L. Please cite the costs for the Alternatives studied.

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- M. EXPERT QUALIFICATIONS Please name each expert who prepared and reviewed this Alternative analysis.
- M1. Please cite each expert's training, competence and experience specific to this Alternative analysis.

## \* 489 - CARPOOL PERCENTAGE OVERESTIMATE.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Carpool Percentage OverEstimate.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Survey forms returned to the ZeroWaste conference in Monterey in 1998, the showed less than 10 percent of the meeting attendees carpooled. Please provide substantial evidence of this carpool factor. If the carpool percentage number is even a small amount too high it can grossly undestimate the traffic and parking needs.

### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Carpool Percentage OverEstimate.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
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- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
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- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
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- 25. Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
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- 35. Please list, describe and quantify all Indirect Impacts related to this one.
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- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
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- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
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- Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this Impact, including subject matter breadth, author's names and dates and where they can be examined.
- 490 HIGHWAY 68 EXCEEDS CAPACITY.

The Document appears to have Ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Highway 68 Exceeds Capacity.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Traffic along the entire State Route 68 (SR68) comidor currently exceeds capacity. Approved development along SR68 will increase congestion by approximately 20% creating longer peak periods on both SR68 and Blanco Road.\* Doug Bilsee, Recent-TAMC Senlor Transportation Planner quoted in TAMC Minutes Oct 27, 1999 (From Highway 68 Corridor Study)

# QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Highway 68 Exceeds Capacity.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- Please slate the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please slate that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
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- Please state whether the MARGIN of ERROR is measured or assumed.
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- Please fist all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- 33. Please list, describe and quantify all Construction impacts related to this one.
- Please list, describe and quantify all Growth impacts related to this one.

- 35. Please list, describe and quantify all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase,
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT, of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and stiff be restored.
- Please name each EXPERT who prepared and reviewed this impact.
- Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Miligation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 491 HOLMAN HIGHWAY HIGHWAY 68 QUEUE LENGTH INCREASE.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Holman Highway - Highway 68 Queue Length Increase.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

The existing queue length from Highway 1 backing up towards Pacific Grove during morning and evening rush hour often extends for a half mile. It is not unusual for the stop and go traffic to extend beyond the Skyline Forest intersection. The typical

delay takes a half dozen light cycle changes to advance southward through the Highway 1 Signalized Intersection.

At the same time, the existing queue length from Highway 1 backing down towards Monterey during morning and evening rush hour often extends for a half mile. It is not unusual for the stop and go traffic to extend down the onramp from Del Monte Center.

The typical delay takes a half dozen light cycle changes to advance westward through the Highway 1 Signalized . intersection.

At the same time, the existing queue length from Highway 1 backing up towards Carmel during morning and evening rush hour often extends for a half mile. It is not unusual for the stop and go traffic to extend back onto the freeway prior to the offramp

for Pacific Grove. The typical delay takes a half dozen light cycle changes to advance westward through the Highway 1 Signalized intersection.

None of these three conditions are at the same time as event traffic or during a tourist season or a holiday. All three of those add additional vehicles and delay.

#### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly Identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Holman Highway - Highway 68 Queue Length Increase.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a: Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- Please provide a graph of HISTORICAL measurements.
- Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity:
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.

- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
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- 31. Please quantify all potential CUMULATIVE impacts related to this one.
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- 33. Please list, describe and quantify all Construction impacts related to this one
- 34. Please list, describe and quantify all Growth impacts related to this one.
- Please fist, describe and quantify all Indirect impacts related to this one.
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- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.

- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this Impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 492 HIGHWAY 1 TOWARDS BIG SUR QUEUE LENGTH INCREASE.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Highway 1 towards Big Sur Queue Length Increase.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

The existing queue length from Rio Road backing up towards Big Sur on weekends and holidays often extends for several miles. It is not unusual for the stop and go traffic to extend to Rocky Point - some 8 miles. The typical delay takes dozens of light

cycle changes to advance northward through the Rio Road Signalized Intersection.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly Identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Highway 1 towards Big Sur Queue Length Increase.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically lestable, repealable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.

- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
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- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a UNEAR RELATIONSHIP with increasing Input, other Impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- 38. Please stale the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
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- Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
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- Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 493 CARMEL VALLEY ROAD QUEUE LENGTH INCREASE.

The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Carmel Valley Road Queue Length Increase.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

The existing queue length at Carmel Valley Road extends for over a half mile east to the signalized intersection at the Middle School. It typically takes 5 light cycle changes to advance westward through the Rancho Blvd Signalized intersection.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the

impact significance of Carmel Valley Road Queue Length Increase.

- 1b. If no objective criteria are used please state that clearly,
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
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- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws,
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the

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- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- 34. Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
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- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
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- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.

- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 494 GLYPHOSATE (RODEO OR ROUNDUP ETC.) \*
  PESTICIDE.

The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Glyphosate (Rodeo or Roundup etc.) Pesticide.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Glyphosate is one of the most common poisons used in the United States. According to a U.S. Environmental Protection Agency (EPA) report some 38-48 million pounds were used in the U.S. in 1997.

"Glyphosate was not included in a USGS study of pesticides in watersheds because the method of analysis is difficult and time consuming." Joseph Domagalski, USGS, Sacramento.

\*[Glyphosate was] registered, in part, from data generated by a company called Industrial Biotest (IBT). IBT was the nation's largest commercial toxicological testing company until its fradulent testing was discovered in [1976]. \*All of Monsanto's toxicological registration data for Roundup came from IBT. \*(IBT) performed fradulent tests absolving Roundup of causing mutations in mice and turnors in rabbits. \*Beyond the Beauty Strip, Mitch Lansky 1992, Tilbury House

"Roundup is Monsanto's most profitable product." Rachel's Environment and Health Weekly #637, #638, #639

When EPA registers a chemical - The product itself is not tested only the "active" ingredient, in this case the (Glyphosate) chemical.

Chemical ingredients of the poisonous pesticides called "Inerts" are often toxic and can compose more than 99 percent of the product, yet the DEIR does not recognize, disclose, analyze or mitigate them. Please fix this. {See PANUPS article attached}

RACHEL'S ENVIRONMENT & HEALTH WEEKLY #590.
March 19, 1998 FROGS, ALLIGATORS, AND PESTICIDES—
The Australian government in 1997 took an unprecedented action, banning 84 herbicide products for use near water because of their harmful effects on tadpoles and frogs.[8]

"All of the 84 banned products contain Monsanto's glyphosate as the active ingredient. However, the harmful component appears to be not the glyphosate itself but an "inert" ingredient—a detergent or wetting agent added to the herbicides so that droplets of liquid spread out and cover the larget leaves."

"Detergents interfere with the ability of frogs to breathe through their skin, and tadpoles to breathe through their gills. Michael J. Tyler of the Department of Zoology at the University of Adelaide, Australia, says, "Although the herbicide [glyphosate]

is claimed to be 'environmentally friendly,' it is clear that users have been fulled into a false sense of security."

[8] Michael J. Tyler, "Herbicides Kill Frogs," FROGLOG No. 21 (March 1997), pg. 2.

What is the chemical composition of each of the "inerts" in the Glyphosale products proposed for use?

The herbicide Roundup, manufactured by Monsanto and marketed as an "environmentally friendly" chemical, is a case in which some of the known Inert ingredients in some formulations have far greater loxicity than the active ingredient (gtyphosate). Two of

these ingredients, isopropylamine and polyethoxylated tallowamines (POEAs), cause a range of health problems including nausea, vomiting, diarrhea, wheezing, burns, excess fluids in the lungs and eye, skin and gastrointestinal irritation. Glyphosate

products were the third leading cause of both acute pesticide poisoning and skin and eye illnesses among California farm workers between 1984 and 1990.

According to a 1990 "Spectrum Report done for Maine's Forest for the Future Program - Rainbow Trout fingerlings (essentially genetically identical to the ESA listed Steelhead) has a LC-50 of 1.3 milligrams per liter with Roundup. This is in dramatic

contrast to Glyphosate alone which California's Department of Fish & Game asserts has an LC-50 of 130 milligrams per liter.

Chemicals known to be toxic (e.g., POEA or polyoxyethyleneamine, naphthalene, and zinc). POEA is present in Monsanto's glyphosate formulations Roundup and Vision. The POEA is 400 times more toxic to immature salmon than a glyphosate formulation, Rodeo, that contains no POEA. It belongs to a class of surfactants that have been reported to cause adverse gastrointestinal and central nervous system effects and damage to red blood cells. POEA is contaminated with 1.4-dioxane, a chemical that causes loxic

effects in the liver and kidneys of humans and various cancers in numerous animal species.

Surfactants can have two effects on droplet surface tension. They can increase or Decrease surface tension, but they can not do both.

Increasing surface tension makes larger drops which drift less and do not adhere to plants as well.

Decreasing surface tension makes smaller drops which drift more and absorb better to target plants.

So please clarify which is proposed? Less or more surface tension?

What impurities are allowed by EPA in the glyphosate product?

What amounts of each impurity is allowed by EPA in the glyphosate product?

What illegal impurities have been found in the glyphosate product?

What amounts of each impurity has been found in the glyphosate product?

Metabolites and breakdown products of Glyphosale include the Proposition 65 known carcinogen Formaldehyde. It also causes gene mulations and is a reproductive toxicant. (CATs citing Lund 1986)

What amounts of Formaldehyde will be released by the proposed use?

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Glyphosate (Rodeo or Roundup etc.) Pesticide.
- 1b. If no objective criteria are used please state that clearly.

- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- 44. Please cite each experts training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact

- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 495 DDT

up to 50%) by weight.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of DDT.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

The EPA has set the Ambient Water Quality Protection of Aquatic Organisms criteria for DDT at 1 part per Trillon (with a "T").

Contrary to almost everyone's belief, DDT is not banned in the US. After a public outcry and several fawsuits it was "cancelled" in 1973 (37 FR 13369), which does not mean DDT cannot be manufactured or exported or even used in the US if EPA finds certain uses are necessary.

In fact DDT is manufactured in the US, some 65 tons were exported in 1992 (the most recent year records are available) and if the EPA Secretary for some reason (like an emergency) decides to - she could allow DDT's immediate U.S. use. DDT can also turn up as an "impurity" in some products up to 15 percent (legally

DDT has a biological half life of 8 years. Three half-lives have passed since it was supposedly "banned," yet it is turning up fresh in many rivers around the US.

\*DDT is being preserved in soils all over California.\* DDT in the Salinas Valley, 1986, California Water Resources Control Board Report # 86-2-WQ.

The lower fifty (50) miles of the Salinas River (Hydro Unit # 309.100) is on the US EPA's CWA 303(d) list for Pesticide contamination exceeding TMDL limits. The pesticides come from Agriculture, Irrigated Crop production, Agriculture-storm month.

Agriculture-irrigation tailwater, Agriculture Return flows, and non-point source pollution.

\*DDT has been found in moderate to high concentrations in the Salinas River and lower Moss Landing watershed for many years.\* DDT in the Salinas Valley, 1986, California Water Resources Control Board Report # 86-2-WQ.

US-EPA's Preliminary Remidiation Goal (PRG) for DDT concentrations is 5.6 mg/kg.

Western Farm Service in Salinas, CA had ODT soil concentrations detected up to 251 gm/kg in 1992.

QUANTIFICATION OF BASELINES AND IMPACTS:

This Impact appears to be potentially significant.

- Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of DDT.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH. criteria.
- 3b. Please quote the definition used.

- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please stale the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- 12. Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.

- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact
- 44. Please cife each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dales and where they can be examined.
- \* 496 PEPPERMINT OIL (DDT ALTERNATIVE).

The Document appears to have ignored this potentially feasible Alternative. Please carefully analyze and disclose the potential benefits of Peppermint Oil (DDT Alternative).

Peppermint Oil (from Mentha pipeirta) floated on top of mosquito larvae-filled water killed nearly all farvae in 24 hours.

Applied to humans as a repellent it averaged 85% effective. It was especially effective against Anopheles culicfacies - the principal malaria carrier in India. - Scientific American Feb. 2000 ciling Bioresource Technology

### ALTERNATIVE FACTUAL ANALYSIS

There is little or no factual evidence in the document showing why this alternative is infeasible.

- A. Please clearly identify by name and describe each of the objective (non-subjective) criteria used to determine this Alternative's benefits.
- A1. If no objective criteria are used please state that clearly.
- A2. If the criteria are different than those used to evaluate the benefits of the proposed project, please explain as it is not generally acceptable to compare apples and oranges.
- B. Please state the name of the measurement units (numbers) used to determine the value for Each criteria.
- B1. If no measurement units are used please state that clearly.
- C. Please state the method of measurement used to determine the value for each criteria.
- C1. If no measurement units are used please state that clearly for each criteria.
- C2. If no objective criteria are used please clearly describe how the method of measuring value is scientifically credible and defensible.
- D. Please state the existing or current baseline measurement (level) for each criteria.
- E. Please state the normal variance or fluctuation, assumed or expected for each of the criteria listed above.
- E1. If an average is used, please state which kind of average.
- Please state the extreme conditions which will be encountered.
- F. Please provide a graph of historical measurement.
- G. Please state the measured, assumed or expected margin of error for each measurement, calculation, and conclusion and whether it is measured or assumed.
- H. Please state the total maximum change, in Percent, to which the Alternative would raise or lower the baseline number.
- H1. Please state whether this total maximum change percent is an average amount, a worst case expected or a best case expected.
- H2. Please state the degree, in Absolute Amount, to which this Alternative would raise or lower the baseline number:
- H3. Please state whether this total maximum change amount is an average amount, a best case expected or other.
- Please state the threshold number at which the value changes from a significant impact to a less-than-significant impact and the clear rationale for that number.
- Please provide the margin of error used (in percent and absolute amount) to insure the Significance Threshold Level for this Alternative is not somehow exceeded.
- If no margin of error is used please state that clearly.

- J. ALTERNATIVE VALUE PROOF Please cite and provide relevant studies that clearly show that the project purposes could not be achieved with this alternative or with this alternative in combination with other alternatives.
- J1. Please discuss the limitations of those studies.

BENEFIT DURATION K. Please clearly describe how the benefits vary over the time during the studies.

- K1. Please graph the benefits for this alternative versus time in the studies. It is important to know the duration of an Alternative's benefits compared with the benefits from the proposed project.
- COSTS L. Please cite the costs for the Alternatives studied.
- Lf. It is important to know the cost to benefit ratio, please explain that ratio.
- M. EXPERT QUALIFICATIONS Please name each expert who prepared and reviewed this Alternative analysis.
- M1. Please cite each experts training, competence and experience specific to this Alternative analysis.
- \* 497 ORGANOPHOSPHORUS PESTICIDE COMPOUNDS.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Organophosphorus Pesticide Compounds.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Organophosphorus pesticide compounds include Diazinon and Melathion and are nerve agents originally developed in Nazi Germany in the 1930s. Because Organophosphorus pesticides are now widely used on food crops they were the first familyn of compounds to be evaluated under the 1996 FQPA.

CUMULATIVE According to Mark Miller, M.D. MPH a member of the Environmental Health Committee of the American Academy of Pediatrics (quoted in Coast Weekly April 22-1999) - even low level exposure to Organophosphorus pesticide compounds (e.g. diazinon, cypermethrin, Chlorpyrilos, hydramethlynon, propetamphos and Malathion) may cause symptoms. "The effects of organophosphates are cumulative so that if the chemical used in the home and in food is added to those used on school grounds, something may be the bucket."

### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Organophosphorus Pesticide Compounds.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.

- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.
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- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number,
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
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- 24. Please stale whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.

4. If no measurement units are used please state that clearly.

- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
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- 31. Please quantify all potential CUMULATIVE impacts related to this one.
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- Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 498 DIAZANON.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Diazanon.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Unreported pesticide use is about 20 percent of total California pesticide use. Obviously for some specific chemicals that percentage is higher. In the case of Diazanon it is a lot higher at about 45% of all Diazanon use. Which helps explain why Diazanon

is the second most commonly detected pesticide detected in California surface waters. ("Disrupting the Balance", 1999 CPR)

According to Mark Miller, M.D. MPH a member of the Environmental Health Committee of the American Academy of Pediatrics (quoted in Coast Weekly April 22 1999) - even low level exposure to Organophosphorus pesticide compounds (e.g. diazinon, cypermethrin, Chlomyrids, hydramathlyson, cycetamphos, and Malakiklosi.

Chlorpyrifos, hydramethlynon, propetamphos and Matathlon) may cause symptoms. 'The effects of organophosphates are cumulative so that if the chemical used in the home and in food is added to those used on school grounds, something may tip the bucket.'

Organophosphorus pesticide compounds (e.g. Diazinon and Malathion) are nerve agents originally developed in Nazi Germany in the 1930s.

The twenty most heavily used golf course pesticides in the US in 1982 (and their use in thousands of pounds of active ingredient) were: Chlorothalonii (1,298), MCPP mecoprop (1,096), MSMA (834), Iprodione (815), Thiram (635), Diazinon (512)...

The EPA has set the Ambient Water Quality Protection of Aquatic Organisms criteria for Diazanon at 9 parts per TRILLION.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Diazanon.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a, Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.

- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
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- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
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- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- 30 Please describe all potential CUMULATIVE impacts related to this one.
- Please quantify all potential CUMULATIVE Impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.

- 33. Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantity all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 499 TRICHLOROETHYLENE (TCE).

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Trichloroethylene (TCE).

If you claim the document contains proof of no-significantimpact for this Impact please explicitly state the page number and paragraph.

TCE is on the ATSDR list of hazardous substances (N=275) of the 20 most hazardous Substances:

TCE (Trichloroethylene) is known to the state of California to cause cancer and listed under Proposition 65. It was found widely in Ft. Ord's groundwater at levels up to 400 ppb.

It is mistabeled in Federally registered pesticides as an "Inert" ingredient.

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Trichloroethylene (TCE).
- 1b. If no objective criteria are used please state that clearly.

- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
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- 16. Please quantify the length of time this impact would last.
- Please quantify how this Impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
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- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal taws.
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- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
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- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
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- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.

48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dales and where they can be examined.

### \* 500 - SEWAGE SLUDGE.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Sewage Sludge.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

"Toxic chemicals, infectious organisms, and endotoxins or cellular material may all be present in biosolids."

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Sewage Studge.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.

- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
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- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.

### \* 501 - ETHYLENE GLYCOL

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Ethylene Glycol.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Vehicle antifreeze is typically made of Ethylene Glycol. 'As little as two ounces of Ethylene Glycol can kill a dog and only one teaspoon is enough to kill a cat.' Safe Brands Co. brochure, Omaha NE At least one condor has died from drinking water containing Ethylene Glycol antifreeze.

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Ethylene Glycol.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please cléarly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.

- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-finear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.

- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth Impacts related to this one.
- 35. Please list, describe and quantify all indirect impacts related to this one.
- 36. Please fist and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this Impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this Impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please stale whether the margin of error is measured or assumed.
- Please quantity what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this Impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 502 PROPOLYENE GLYCOL
- The Document appears to have ignored this potentially feasible Alternative. Please carefully analyze and disclose the potential benefits of Propolyene Glycol.

Propolyene Glycol is an alternate antifreeze chemical which is generally considered non-toxic to children and wildlife.

### **ALTERNATIVE FACTUAL ANALYSIS**

There is little or no factual evidence in the document showing why this alternative is infeasible.

- A. Please clearly identify by name and describe each of the objective (non-subjective) criteria used to determine this Alternative's benefits.
- A1. If no objective criteria are used please state that clearly.

- A2. If the criteria are different than those used to evaluate the benefits of the proposed project, please explain as it is not generally acceptable to compare apples and oranges.
- B. Please state the name of the measurement units (numbers) used to determine the value for Each criteria.
- B1. If no measurement units are used please state that clearly.
- C. Please state the method of measurement used to determine the value for each criteria.
- C1. If no measurement units are used please state that clearly for each criteria.
- C2. If no objective criteria are used please clearly describe how the method of measuring value is scientifically credible and defensible.
- D. Please state the existing or current baseline measurement (level) for each criteria.
- E. Please state the normal variance or fluctuation, assumed or expected for each of the criteria listed above.
- E1. If an average is used, please state which kind of average.
- E2. Please state the extreme conditions which will be encountered.
- F. Please provide a graph of historical measurement.
- G. Please state the measured, assumed or expected margin of error for each measurement, calculation, and conclusion and whether it is measured or assumed.
- H. Please state the total maximum change, in Percent, to which the Alternative would raise or lower the baseline number.
- H1. Please state whether this total maximum change percent is an average amount, a worst case expected or a best case expected.
- H2. Please state the degree, in Absolute Amount, to which this Alternative would raise or lower the baseline number;
- H3. Please state whether this total maximum change amount is an average amount, a best case expected or other.
- Please state the threshold number at which the value changes from a significant impact to a less-than-significant impact and the clear rationals for that number.
- Please provide the margin of error used (in percent and absolute amount) to insure the Significance Threshold Level for this Alternative is not somehow exceeded.
- 12. If no margin of error is used please state that clearly.
- J. ALTERNATIVE VALUE PROOF Please cile and provide relevant studies that clearly show that the project purposes could not be achieved with this alternative or with this alternative in combination with other alternatives.
- J1. Please discuss the limitations of those studies.
- BENEFIT DURATION K. Please clearly describe how the benefits vary over the time during the studies.
- K1. Please graph the benefits for this alternative versus time in the studies. It is Important to know the duration of an Alternative's benefits compared with the benefits from the proposed project.
- COSTS L. Please cite the costs for the Allematives studied.
- L1. It is important to know the cost to benefit ratio, please explain that ratio.

- M. EXPERT QUALIFICATIONS Please name each expert who prepared and reviewed this Alternative analysis.
- M1. Please cite each expert's training, competence and experience specific to this Alternative analysis.

### \* 503 - PEPPERMINT OIL.

The Document appears to have ignored this potentially feasible Alternative. Please carefully analyze and disclose the potential benefits of Peppermint Oil.

Peppermint Oil can repel mosquitos and kill nearly all their larvae when floated on their breeding water. Scientific American Feb, 2001, p 24

### ALTERNATIVE FACTUAL ANALYSIS

There is little or no factual evidence in the document showing why this alternative is infeasible. --

- A. Please clearly identify by name and describe each of the objective (non-subjective) criteria used to determine this Alternative's benefits
- A1. If no objective criteria are used please state that clearly,
- A2. If the criteria are different than those used to evaluate the benefits of the proposed project, please explain as it is not generally acceptable to compare apples and oranges.
- Please state the name of the measurement units (numbers) used to determine the value for Each criteria.
- B1. If no measurement units are used please state that clearly.
- C. Please state the method of measurement used to determine the value for each criteria.
- C1. If no measurement units are used please state that clearly for each criteria.
- C2. If no objective criteria are used please clearly describe how the method of measuring value is scientifically credible and defensible.
- D. Please state the existing or current baseline measurement (level) for each criteria.
- E. Please state the normal variance or fluctuation, assumed or expected for each of the criteria listed above.
- E1. If an average is used, please state which kind of average.
- E2. Please state the extreme conditions which will be encountered.
- F. Please provide a graph of historical measurement.
- G. Please state the measured, assumed or expected margin of error for each measurement, calculation, and conclusion and whether it is measured or assumed.
- H. Please state the total maximum change, in Percent, to which the Alternative would raise or lower the baseline number.
- H1. Please state whether this total maximum change percent is an average amount, a worst case expected or a best case expected.
- H2. Please state the degree, in Absolute Amount, to which this Alternative would raise or lower the baseline number;
- H3. Please state whether this total maximum change amount is an average amount, a best case expected or other.

- I. Please state the threshold number at which the value changes from a significant impact to a less-than-significant impact and the clear rationale for that number.
- Please provide the margin of error used (in percent and absolute amount) to insure the Significance Threshold Level for this Alternative is not somehow exceeded.
- 12. If no margin of error is used please state that clearly.
- J. ALTERNATIVE VALUE PROOF Please cite and provide relevant studies that clearly show that the project purposes could not be achieved with this alternative or with this alternative in combination with other alternatives.
- J1. Please discuss the limitations of those studies
- BENEFIT DURATION K. Please clearly describe how the benefits vary over the time during the studies.
- K1. Please graph the benefits for this alternative versus time in the studies. It is important to know the duration of an Alternative's benefits compared with the benefits from the proposed project.
- COSTS L. Please cite the costs for the Alternatives studied.
- L1. It is important to know the cost to benefit ratio, please explain that ratio.
- M. EXPERT QUALIFICATIONS Please name each expert who prepared and reviewed this Alternative analysis.
- M1. Please cits each expert's training, competence and experience specific to this Alternative analysis.

### \* 504 - MOLD - STACHYBOTRYS CHARTARUM.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Mold - Stachybotrys Chartarum.

If you claim the document contains proof of no-significantimpact for this Impact please explicitly state the page number and paragraph.

A smelly greenish-black natural fungus along Coastal California. It can grow where ever buildings have a water leak. It has toxic and allergic properties. Some doctors advise "vacate and remidiate" in order to prevent "irreversible brain damage and pulmonary bleeding." Herald Oct 21, 2001

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Mold - Stachybotrys Chartarum.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.

- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- 19. Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD (eye).
- 20s. Please state whether this MARGIN of ERROR is measured or assumed
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold unline.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.

- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this Impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 505 PHTHALATES.

The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Phthalates,

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Ubiquilous man-made oily solvents which make plastic flexible have become the most abundant chemicals in the environment. They can produce reproductive Impairment in

males at levels of 100 mg of D8P / kg of body weight in mother. Sci News Apr 3, 99

#### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly Identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Phthalates.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- 9. Please state the variance's MARGINS of ERROR or confidence level
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please stale the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.

- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
- 25. Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic impacts.
- .33. Please list, describe and quantify all Construction impacts related to this one.
  - Please list, describe and quantify all Growth impacts related to this one.
  - Please list, describe and quantify all Indirect impacts related to this one.
  - 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
  - 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
  - Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
  - Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
  - 40. Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.

- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 506 WASTE GENERATION, DISPOSAL & REDUCTION.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Waste Generation, Disposal & Reduction.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Waste Reduction Rates Mandated by Law Assembly Bill 939 requires each cily and county within California to reduce its waste stream by 50% by the year 2000. The County of Monterey is currently implementing programs to meet this mandated goal. Because this

project is located within Monterey County, all waste generated during any phase of the project will become part of the County's overall waste stream. The hundreds of tons of waste from this project, if landfilled, would have a significant impact on the

County's overall recycling rate, driving it downward, and potentially hindering the County from reaching and maintaining the 50% reduction mandate. This failure in reaching and/or maintaining the recycling rate could potentially result in the California

Integrated Waste Management Board issuing fines of \$10,000 per day until the County meets the 50% recycling rate.

It is imperative that the specific steps be described in detail that will be taken to ensure that construction and clearing debris will be kept out of the landfill and reused or recycled to the greatest extent possible. A detailed plan for reuse and recycling of all debris generated during the project needs to be included in the Environmental Impact Report. The specific areas to be addressed should include (but does not represent an extensive listing):

- 1) Reuse and Recycling of Debris Created during Cleaning:
- A. Soil: 1. How many tons of soil will be removed during clearing? 2. How will this be disposed of? 3. What percentage of it will be tandfilled? 4. If landfilled, where will it be disposed? 5. Will it be kept separate from other debris (rocks, trees,

brush, etc.) to be classified as "clean soil" to be reused? 6. What percentage will be kept separate? 7. How will it be kept separate from other types of debris? 8. Will it be reused at the Marina Landfill as clean soil? 9. What percentage of total soil will be reused in this manne? 10. If not reused at the Marina landfill, what other sites will accept the soil for reuse or recycling? 11. What percentage of soil will be reused at the construction site? 12. How will it be reused on site? 13. How much

will it cost (disposal fees and transportation costs) to dispose of this soil? 14. How many truck trips will be needed to transport the soil to the disposal or reuse sile? 15. How many days will be required to transport all the soil? 16. What impacts

will these truck trips have on existing traffic?

B. Trees and Vegetation: 1. How many tons of trees and vegetation (trunks, branches, stumps) will be removed during clearing? 2. What percentage of it will be landfilled? 3. If landfilled, where will it be disposed? 4. Will it be kept separate from other debris (rocks, soll, brush, etc.) to be classified as "clean wood waste or yard waste" to be recycled? 5. What percentage will be kept separate? 6. How will it be kept separate from other types of debris? 7. Will it be recycled at the Marina Landfill in their wood processing line? 8. What percentage of lotal trees will be recycled in this manner? 9. If not recycled at the Marina landfill, what other sites will accept the trees for recycling? 10. How will stumps be disposed of-reused, recycling? or the state of the state

landfilled? 11. How much will it cost (disposal fees and transportation costs) to dispose of the trees? 12. How many truck trips will be needed to transport the trees to the disposal or reuse site? 13. How many days will be required to transport all the

trees? 14. What impacts will these truck trips have on existing traffic?

C. Rocks—1. How many tons of rocks will be removed during clearing? 2. What percentage of these will be landfilled? 3. If landfilled, where will it be disposed? 4. Will it be kept separate from other debris (trees, soil, brush; etc.) to be reused? 5. What percentage will be kept separate? 6. How will it be kept separate from other types of debris? 7. Will it be reused at the Marina Landfill? 8. What percentage of total rocks will be reused in this manner? 9. If not reused at the Marina landfill, what

other sites will accept the rocks for reuse? 10. What percentage of the rocks will be reused at the construction site? 11. How will it be reused on site? 12. How much will it cost (disposal fees and transportation costs) to dispose of the rocks? 13. How

many truck trips will be needed to transport the rocks to the disposal or reuse site? 14. How many days will be required to transport all the rocks? 15. What impacts will these truck trips have on existing traffic?

D. Debris Created During Construction: 1. Wood waste (ex. lumber, plywood, pallets)— 2. How many tons of wood waste will be created during construction? 3. How will it be disposed of? 4. What percentage of it will be landfilled? 5. If landfilled, where

will it be disposed? 6. Will it be kept separate from other debris (soil, rebar, concrete, etc.) to be recycled? 7. What percentage will be kept separate? 8. How will it be kept separate from other types of debris? 9. Will it be recycled at the Marina

Landfill as part of their wood processing line? 10. What percentage of total wood waste will be recycled in this manner? 11. If not recycled at the Marina Landfill, what other sites will accept the wood waste for recycling? 12. What percentage of lumber.

plywood, and/or pallets will be reused at the construction site?

13. How will it be reused on site? 14. How much will it cost (disposal fees and transportation costs) to dispose of the wood waste? 15. How many truck trips will be needed to transport the

wood waste to the disposal or recycling site? 16. How many days will be required to transport all the wood waste? 17. What impacts will these truck trips have on existing traffic?

E. Rebar and Other Metal- 1. How many tons of scrap metal will be created during construction? 2. How will it be disposed of? 3. What percentage of it will be landfilled? 4. If landfilled, where will it be disposed? 5. Will it be kept separate from other debris (soil, concrete, wood waste, etc.) to be recycled? 6. What percentage of it will be kept separate? 7. How will it be kept separate from other types of debris? 8. Will it be recycled at the Marina Landfill? 9. What percentage of total scrap

metal will be recycled in this manner? 10. If not recycled at the Marina Landfill, what other sites will accept scrap metal for recycling? 11. How much will it cost (disposal fees and transportation costs) to dispose of the scrap metal? 12. How many

truck trips will be needed to transport the scrap metal to the disposal or recycling site? 13. How many days will be required to transport all the scrap metal? 14. What impacts will these truck trips have on existing traffic?

2) Recycled Content Materials Used in Construction, Not only is it important to recycle as much of the debris created from

the proposed project, but it is also important to utilize construction materials made with recycled content. Following are some

major opportunities to integrate recycled feedstock into the project. Please quantify how much recycled material will be used (tons) and what percentage of recycled material to raw material will be used (e.g 50% aggregate roadbase will be from recycled materials).

- What percentage of asphalt pavement used in the paving or repaving of roads will be made from recycled asphalt paving?
   How many tons of recycled materials will be used?
- What percentage of aggregate roadbase will be recycled aggregate?
   How many tons of recycled materials will be used?
- What percentage of sub-roadbase will be recycled aggregate?
   How many lons of recycled materials will be used?
- What percentage of shoulders will be recycled aggregate?
   How many tons of recycled materials will be used?
- 9. What percentage of reclaimed asphalt roofing scrap will be used in the asphalt paving? 10. How many tons of recycled materials will be used?
- 11. What percentage of crumb rubber from recycled tires will be used in the asphalt paving, aggregate base, and subbase?
  12. How many tons of recycled materials will be used?
- 13. What percentage of recycled glass cullet will be used in the asphalt paving? 14. How many lons of recycled materials will be used?

## QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Waste Generation, Disposal & Reduction.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repealable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please stale that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.

- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
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- \* 507 LANDFILL LEAKAGE.

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If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

All Dumps leak, whether they have superliners or not.

According to Peter Montague and Rachel's Hazardous Waste Weekly: In the FEDERAL REGISTER Feb. 5, 1981, the EPA first stated its opinion that All Landfills Will Eventually Leak

There is good theoretical and empirical evidence that the hazardous constituents that are placed in land disposal facilities very likely will migrate from the facility into the broader environment. This may occur several years, even many decades, after

placement of the waste in the facility, but data and scientific prediction indicate that, in most cases, even with the application of best available land disposal technology, it will occur eventually." [pg. 11128]

"Manmade permeable materials that might be used for liners or covers (e.g., membrane liners or other materials) are subject to eventual deterioration, and although this might not occur for 10, 20 or more years, it eventually occurs and, when it does,

leachate will migrate out of the facility." [pg. 11128]

"Unfortunately, at the present time, it is not technologically and institutionally possible to contain wastes and constituents forever or for the long time periods that may be necessary to allow adequate degradation to be achieved." [pg. 11129]

"Consequently, the regulation of hazardous waste land disposal facilities must proceed from the assumption that migration of hazardous wastes and their constituents and by-products from a land disposal facility will inevitably occur." [pg. 11129]

More than a year later, on July 26, 1982, the EPA again put its opinions into the FEDERAL REGISTER, emphasizing that all landfills will inevitably leak:

"A liner is a barrier technology that prevents or greatly restricts migration of figuids into the ground. No liner, however, can keep all figuids out of the ground for all time. Eventually liners will either degrade, tear, or crack and will allow liquids to migrate out of the unit." [pg. 32284]

\*Some have argued that liners are devices that provide a perpetual seal against any migration from a waste management unit. EPA has concluded that the more reasonable assumption, based on what is known about the pressures placed on liners over time, is that any liner will begin to leak eventually.\* [pgs. 32284-32285]

In the FEDERAL REGISTER May 26, 1981, pgs. 26314 through 28328), the EPA argued forcefully that all landfills will eventually leak. Another EPA quole:

"Many organic constituents are stable (degrade very slowly); other hazardous constituents (e.g., toxic metals) never degrade. Yet the existing technology for disposing of hazardous wastes on or in the land cannot confidently isolate these wastes from the environment forever.

"Since disposing of hazardous wastes in or on the land inevitable [inevitably?] results in the release of hazardous constituents to the environment at some time, any land disposal facility creates some risk." [pg. 28315]

EPA went on to estimate that the duration of the hazard from a landfill would be "many thousands of years." [pg. 28315] And the Agency said, "The longer one wishes to contain waste, the more difficult the lask becomes. Synthetic liners and caps will

degrade; soil liners and caps may erode and crack ....EPA is not aware of any field data showing successful long-term containment of waste at facilities which have not been maintained over time." [pg. 28324]

"Ultimately, waste reduction and resource recovery probably provide the best allemative to land disposal," said the EPA [pg. 28325], though it has never begun any programs to make this happen.

Also Courtesy of Peter Montague and RACHEL'S ENVIRONMENT & HEALTH WEEKLY:

A 1992 report from a California engineering-consulting firm, G. Fred Lee & Associates, has examined recent scientific studies and has confirmed once again why modern "dry tomb" landfill technology will always fail and should always be expected to poison groundwater.[1]

The new report, authored by Fred Lee and Anne Jones, reviews recent evidence—much of it produced by government-funded research—that landfill liners leak for a variety of reasons; that leachale collection systems clog up and thus fail to prevent

landfill leakage; that landfill leachate will remain a danger to groundwater for thousands of years; that even low-rainfall areas are not safe for landfill placement; that gravel pits and canyons are particularly dangerous locations for landfills; that maintaining a single landfill's cap for the duration of the hazard would cost hundreds of billions, or even trillions, of dollars; that groundwater monitoring cannot be expected to detect landfill leakage; that groundwater, once it is contaminated.

cannot be cleaned up and must be considered permanently destroyed; and that groundwater is a limited and diminishing resource which modern societies grow more dependent on as time passes.

A 1990 examination of the best available landfill liners concluded that brand-new state-of-the-art liners of high density polyethylene (HDPE) can be expected to leak at the rate of about 20 gallons per acre per day (200 liters per hectare per day) even

if they are installed with the very best and most expensive quality-control procedures.[2] This rate of leakage is caused by pinholes during manufacture, and by holes created when the seams are welded together during landfill construction. (Landfill

liners are rolled out like huge carpets and then are welded together, side by side, to create a continuous field of plastic.) Now examination of actual landfill liners reveals that even the best seams contain some holes.

In addition to leakage caused by pinholes and failed seams, new scientific evidence indicates that HDPE (high density polyethylene, the preferred liner for landfils) allows some chemicals to pass through it quite readily. A 1991 report from University

of Wisconsin shows that dilute solutions of common solvents, such as xylenes, toluene, trichloroethylene (TCE), and methylene chloride, penetrate HDPE in one to thirdeen days. Even an HDPE sheet 100 mils thick (a tenth of an inch)—the thickness used in

the most expensive landfills) is penetrated by solvents in less than two weeks.

Another problem that has recently become apparent with HDPE liners is "stress cracking" or "brittle fracture." For reasons that are not well understood, polyethylenes, including HDPE, become brittle and develop cracks. A 1990 paper published by the

American Society for Testing Materials revealed that HDPE liners have failed from stress cracks in only two years of use. Polyethylene pipe, intended to give 50 years of service, has failed in two years. Lee and Jones sum up (pg. 22), "While the long-term stability of geomembranes (flexible membrane liners) in landfills cannot be defined, there is no doubt that they will eventually fail to function as an impermeable barrier to leachate transport from a landfill to groundwater. Further, and most

importantly at this time, there are no test methods, having demonstrated reliability, with which to evaluate long-term performance of flexible membrane liners."

Recent scientific studies of clay indicate that landfill liners of compacted clay leak readily too. For example, a 1990 study concludes,

"[i] a naturally occurring clay soil is compacted to high density, thereby producing a material with very low hydraulic conductivity, and if it is maintained within the same ranges of temperature, pressure, and chemical and biological environment, it

would be expected to function well as a seepage barrier indefinitely. In waste containment applications, however, conditions do not remain the same. The permeation [penetration] of a compacted clay liner by chemicals of many types is inevitable, since no

compacted clay or any other type of liner material is either totally impervious or immune to chemical interactions of various types."

The 1992 study by Lee and Jones is an excellent resource for anyone wanting to understand why landfills always fail. In their

footnotes, they cite 18 other studies of landfill problems that they themselves have authored, so their expertise is unquestionable, their Information reliable, their arguments solid.

There has been sufficient scientific evidence available for a decade to convince any reasonable person that landfills leak poisons into our water supplies. \* \* \*

[1] G. Fred Lee and Anne R. Jones, MUNICIPAL SOLID WASTE MANAGEMENT IN LINED, "DRY TOMB" LANDFILLS: A TECHNOLOGICALLY FLAWED APPROACH FOR PROTECTION OF GROUNDWATER QUALITY (EI Macero, Calif.: G. Fred Lee & Associates, March, 1992). Available from: G.

Fred Lee & Associates, 27298 East El Macero Drive, El Macero, CA 95618-1005. Phona (916) 753-9630. 67 pgs.; free.

[2] Rudolph Bonaparte and Beth A. Gross, "Field Behavior of Double-Liner Systems," In Rudolph Bonaparte (editor), WASTE CONTAINMENT SYSTEMS: CONSTRUCTION, REGULATION, AND PERFORMANCE [Geotechnical Special Publication No. 26] (New York: American Society of Civil Engineers, 1990), pgs. 52-83.

### QUANTIFICATION OF BASELINES AND IMPACTS:

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#### \* 508 - LANDFILLS.

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If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

### Landfill Basics

WHAT IS A LANDFILL? A secure landfill is a carefully engineered depression in the ground (or built on top of the ground, resembling a football stadium) into which wastes are put. The aim is to avoid any hydraulic [water-related] connection between the

wastes and the surrounding environment, particularly groundwater, Basically, a landfill is a bathtub in the ground; a double-lined landfill is one bathtub inside another. Bathtubs leak two ways: out the bottom or over the top.

WHAT IS THE COMPOSITION OF A LANDFILL? There are four critical elements in a secure landfill: a bottom liner, a leachate collection system, a cover, and the natural hydrogeologic setting. The natural setting can be selected to minimize the possibility of

wastes escaping to groundwater beneath a landfill. The three other elements must be engineered. Each of these elements is critical to success.

THE NATURAL HYDROGEOLOGIC SETTING: You want the geology to do two contradictory things for you. To prevent the wastes from escaping, you want rocks as tight (waterproof) as possible. Yet if leakage occurs, you want the geology to be as simple as possible

so you can easily predict where the wastes will go. Then you can put down wells and capture the escaped wastes by pumping. Fractured bedrock is highly undesirable beneath a landfill because the wastes cannot be located if they escape: Mines and quarries

-should be avoided because they frequently contact the groundwater.

WHAT IS A BOTTOM LINER? It may be one or more layers of clay or a synthetic flexible membrane (or a combination of these). The liner effectively creates a bathlub in the ground, If the bottom liner fails, wastes will migrate directly into the environment. There are three types of liners; clay, plastic, and

WHAT IS WRONG WITH A CLAY LINER? Natural clay is often fractured and cracked. A mechanism called diffusion will move organic chemicals like benzene through a three-foot thick clay landfill liner in approximately five years. Some chemicals can degrade

WHAT IS WRONG WITH A PLASTIC LINER? The very best landfill liners today are made of a tough plastic film called high density polyethylene (HDPE). A number of household chemicals will degrade HDPE, permeating it (passing though it), making it lose its

strength, softening it, or making it become brittle and crack. Not only will household chemicals, such as moth balls, degrade HDPE, but much more benign things can cause it to develop stress cracks, such as, margarine, vinegar, ethyl alcohol (booze).

shoe polish, peppermint oil, to name a few.

WHAT IS WRONG WITH COMPOSITE LINERS? A Composite liner is a single liner made of two parts, a plastic liner and compacted soil (usually clay soil). Reports show that all plastic liners (also called Flexible Membrane Liners, or FMLs) will have some leaks.

It is important to realize that all materials used as liners are at least slightly permeable to liquids or gases and a certain amount of permeation through liners should be expected. Additional leakage results from defects such as cracks, holes, and

faulty seams. Studies show that a 10-acre landfill will have a leak rate somewhere between 0.2 and 10 gallons per day.

WHAT IS A LEACHATE COLLECTION SYSTEM? Leachate is water that gets badly contaminated by contacting wastes: It seeps to the boltom of a landfill and is collected by a system of pipes. The bottom of the landfill is sloped; pipes laid along the bottom

capture contaminated water and other fluid (leachate) as they accumulate. The pumped leachate is treated at a wastewater treatment plant (and the solids removed from the leachate during this step are returned to the landfill, or are sent to some other

landfill). If leachate collection pipes clog up and leachate remains in the landfill, fluids can build up in the bathlub. The resulting liquid pressure becomes the main force driving waste out the bottom of the landfill when the bottom liner fails.

WHAT ARE SOME OF THE PROBLEMS WITH LEACHATE COLLECTION SYSTEMS?

Leachate collection systems can dog up in less than a decade. They fail in several known ways: 1, they clog up from silt or mud; 2, they can clog up because of growth of microorganisms in the pipes; 3. they can clog up because of a chemical reaction

leading to the precipitation of minerals in the pipes; or 4. the pipes become weakened by chemical attack (acids, solvents, oxidizing agents, or corrosion) and may then be crushed by the tons of garbage piled on them.

WHAT IS A COVER? A cover or cap is an umbrella over the landfill to keep water out (to prevent leachate formation). It will generally consist of several sloped layers; clay or membrane liner (to prevent rain from intruding), overlain by a very permeable

layer of sandy or gravelly soil (to promote rain runoff), overlain by topsoil in which vegetation can root (to stabilize the underlying layers of the cover). If the cover (cap) is not maintained, rain will enter the landfill resulting in buildup of leachate to the point where the bathtub overflows its sides and wastes enter the environment.

WHAT ARE THE PROBLEMS WITH COVERS? Covers are vulnerable to attack from at least seven sources: 1. Erosion by natural weathering (rain, hail, snow, freeze-thaw cycles, and wind) 2. Vegetation, such as shrubs and trees that continually compete with

grasses for available space, sending down roots that will relentlessly seek to penetrate the cover, 3. Burrowing or soildwelling mammals (woodchucks, mice, moles, voles), reptiles (snakes, tortoises), insects (ants, beetles), and worms will present

constant threats to the integrity of the cover; 4. Sunlight (if any of these other natural agents should succeed in uncovering a portion of the umbrella) will dry out clay (permitting cracks to develop), or destroy membrane liners through the action of ultraviolet radiation; 5. Subsidence-an uneven cave-in of the cap caused by settling of wastes or organic decay of wastes, or by loss of liquids from landfilled drums-can result in cracks in clay or tears in membrane liners, or result in ponding on the surface, which can make a clay cap mushy or can subject the cap to freeze-thaw pressures; 6. Rubber tires, which "float" upward in a landfill; and 7. Human activities of many kinds.

Prepared by: Environmental Research Foundation, P.O. Box 5036. Annapolis, MD 21403-7036 phone (410) 263-1584, fax (410) 263-8944

QUESTIONS ABOUT LANDFILLS It is important to have a basic understanding of a proposed landfill.

How big will the landfill be in acres?

What is the depth of the landfill in feet, and what will be the height of the highest point of the cap after the landfill is closed?

How much of the acreage will be filled with garbage?

How much of the acreage will be used for the buffer zone?

How much of the acreage will be unused?

What is the maximum tons per day they will accept?

Does the contract have a minimum tons per day quota (often called put or pay clauses)? If it does who is responsible for finding the additional tonnage or the money in lieu of the tonnage?

What type of garbage will it be filled with: municipal solid waste, medical waste, hazardous waste, low level radioactive waste, below regulatory concern (brc) waste, special waste (often incinerator ash), incinerator ash, industrial solid waste. demolition debris, other waste?

Will they be putting recyclables in the landfill (glass, aluminum, tin, paper, etc.)?

Will they be putting clean organic compostables in the landfill (for example, yard wastes)?

If they are putting recyclables and organic compostables in the landfill will they be putting them in separate cells?

In tons per day, how much of the garbage will come from your town, county, state, out-of-state?

How many years will the landfill be in operation?

Federal Law requires all landfills to be lined. Will it be lined and capped? If so what will these be made of?

How long will the operators be responsible for it once it is closed, often referred to as the post-closure period?

Who will be responsible for it once the post-closure period is

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant. Founded in 1998, H.O.P.E. is a non-profit, tax deductible, public interest group protecting our Monterey Peninsula's natural land,

air, and water ecosystems and public participation in government, using science, law, education, news alerts and advocacy. Printed On 35% Post-Consumer Recovered Fiber.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Landfills.
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- \*509 LANDFILLS GENERATE METHANE GAS.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Landfills Generate Methane Gas.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Landfills Generate large amounts of Methane Gas, enough that when the gas is used as a fuel for a methane generator to provide all the power needed to electrify the entire landfill at Marina, California and enough left over to sell at a profit.

# QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Landfills Generate Methane Gas.
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- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
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- Please list all potential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE Impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or miligation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.

- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITTGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 510 NOISE CAUSING DEATH.
- The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Noise causing Death.
- If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.
- Noise can kill at 180 dBA. Living in The Environment by G. Tyler Miller pg 320, Wadsworth Publishing 1998
- QUANTIFICATION OF BASELINES AND IMPACTS:
- This impact appears to be potentially significant.
- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Noise causing Death.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.

- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- 10. Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- 12. Please state the most extreme values which could be encountered
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
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- Please list, describe and quantify all potential compound and synergetic impacts.
- Please list, describe and quantify all Construction impacts related to this one.
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- 35. Please list, describe and quantify all Indirect impacts related to this one.
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- 40. Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
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- 46. Please provide the reverse of this impact as Mitigation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 511 NOISE CAUSING PERMANENT HEARING LOSS.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Noise causing Permanent Hearing Loss.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Ringing in the Ears NIPTS, or noise induced permanent threshold shift, is just that -- the minimum level at which a person can perceive sound permanently shifts to a higher level. In tayman's terms, a person incurs a permanent hearing loss of some

degree. It is hypothesized that years of incurring a daily temporary threshold shift (TTS) may eventually lead to an NIPTS of similar magnitude.

- \*Sound pressure becomes damaging at about 75 dbA." Living in The Environment by G. Tyler Miller pg 320, Wadsworth Publishing 1998
- OSHA maximum noise level is 90 dBA.
- Shouting in the ear can reach 110 dB. Scientific American July 2002
- QUANTIFICATION OF BASELINES AND IMPACTS:
- This impact appears to be potentially significant.
- 1a. Please clearly Identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Noise causing Permanent Hearing Loss.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly,
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- 6. Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria fisted above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.

- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
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- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
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- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
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- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
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- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.
- 33. Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantity all indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- 40. Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.

- 42. Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.

## \* 512 - TEMPORARY THRESHOLD SHIFT.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Temporary Threshold Shift.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

A temporary reduction in hearing acuity, which is referred to as temporary threshold shift (TTS)

A temporary threshold shift is a common effect of noise on hearing in noisy industrial and entertainment situations. When an individual is tested for hearing acuity, an audiometer is used to establish the lowest levels of sound that person can perceive

at different frequency bands. After exposure to high noise levels for a short time, or moderate noise levels over a long time, the minimum level that the person can perceive may shift to a higher level. Temporary shifts of 20 to 30 dB are usual in

healthy ears in noisy situations with a typical eight-hour exposure. This shift is only temporary, however, a 100% recovery of the pre-noise exposure hearing acuity usually occurs within several hours. TTS is also known as "auditory latique."

\*Sound pressure becomes damaging at about 75 dbA.\* Living in The Environment by G. Tyler Miller pg 320, Wadsworth Publishing 1998

Shouting in the ear can reach 110 dB. Scientific American July 2002

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Temporary Threshold Shift.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.

- .4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- 12. Please state the most extreme values which could be encountered
- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18. Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- 19. Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other Impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
- 25. Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.

- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 27. Please state whether the MARGIN of ERROR is measured or assumed.
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
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- 30 Please describe all potential CUMULATIVE impacts related to this one.
- Please quantify all potential CUMULATIVE impacts related to this one.
- 32. Please list, describe and quantify all potential compound and synergetic Impacts.
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- 35. Please list, describe and quantify all Indirect impacts related to this one.
- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this Impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- 40. Please state whether the margin of error is measured or assumed.
- 41. Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- 44. Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Mitigation.
- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 513 NON-HEARING-LOSS NOISE HARM TO HUMAN HEALTH.

The Document appears to have ignored this potentially significant impact. Please carefully analyze and disclose the potential impacts of Non-Hearing-Loss Noise Harm to Human Health.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

Annoying noise can cause \*... stress, migraine headaches, gastric ulcers, insomnia, elevated blood pressure and psychological disorders including increased aggression.\* Living in The Environment by G. Tyler Miller pg 320, Wadsworth Publishing 1998

The World Health Organization asserts that noise exceeding 45 decibels can interfere with healthful sleep.

### QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Non-Hearing-Loss Noise Harm to Human Health.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
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- Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- 12. Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.

- Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
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- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
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- Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.

# \* 514 - HIGH FREQUENCY ULTRASONIC NOISE.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of High Frequency Ultrasonic Noise.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

### QUANTIFICATION OF BASELINES AND IMPACTS:

This Impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of High Frequency Ultrasonic Noise.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
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- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.

- 33. Please list, describe and quantify all Construction Impacts related to this one.
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- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 515 LOW FREQUENCY INFRASOUND NOISE.

The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Low Frequency Infrasound Noise.

If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.

High Volume - Low Frequency Noise Human Harm

\*The lower end of the audible acoustical spectrum is approximately 20 Hz. Below this frequency people cannot generally hear sound but can easily sense vibrations in their bodies. Intense sound in this frequency range can also excite resonances in various

body cavities causing a feeling of nausea or discomfort. Intense infrasound can also cause walls and floors to vibrate, rattling windows and household items. The effects of this low frequency sound are discussed in this chapter."

"Low frequency sound can be directly absorbed through the surface of the body and can excite sense organs other than the ears. The effect is similar to the effect of mechanical vibration on the body, causing the internal organs to vibrate and disturbing

the nervous system, digestion and sight. Very intense low frequency noise (0-20 Hz) can cause a sensation of vibration, disequilibrium, motion sickness, speech disturbance, and

blurring of vision, just to name a few. Frequencies from 5-9 Hz have been

shown to affect the liver, spleen, and stomach, while somewhat higher frequencies may result in mouth, throat, bladder or rectal pain."

"Workers in extremely noisy situations complain of distraction from nausea, disequilibrium, disorientation, headache, lassitude, and bluming of vision. French workers have reported disorders of the circulatory and nervous systems as a result of exposure

to infrasound... Industrial equipment often produces inaudible vibrations which, after prolonged exposure, cause specific complaints of giddiness, nausea, and anxiety not found after similar exposure to noise in the audible range." - AVIATION NOISE

EFFECTS, FEDERAL AVIATION ADMINISTRATION, WASHINGTON, DC; MAR 1985, U.S. DEPARTMENT OF COMMERCE

"Whale Songs lengthen in response to Sonar." Nature, Vol 405 22 Jun 2000

"The Growler" is a mobile sound unit that emits such "unholy shrieks and roars" that every human being within a radius of ten city blocks is paralyzed with unbearable pain: they collapse in their tracks and curl up losing all control of their bowets

and bleeding from the ears." Scanlan's Monthly, June 1970

QUANTIFICATION OF BASELINES AND IMPACTS:

This impact appears to be potentially significant.

- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Low Frequency Infrasound Noise.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repeatable, falsifiable, credible and defensible.
- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria.
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- 8. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria fisted above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.

- Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- Please quantify the length of time this impact would last.
- Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- 18, Please state the THRESHOLD number at which the impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing Input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- 24. Please state whether the MARGIN of ERROR is measured or assumed.
- 25. Please state whether this total PERCENT maximum change is an AVERAGE amount, a worst case expected or a best case expected.
- 26. Please quantify the ABSOLUTE MAXIMUM AMOUNT, to which the impact would raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.
- 28. Please state whether this total maximum change amount is an AVERAGE amount, a worst case expected or a best case expected.
- 29. Please list all polential CUMULATIVE impacts related to this one.
- 30 Please describe all potential CUMULATIVE impacts related to this one.
- 31. Please quantify all potential CUMULATIVE impacts related to this one.
- Please list, describe and quantify all potential compound and synergetic impacts.
- 33. Please list, describe and quantify all Construction impacts related to this one.
- 34. Please list, describe and quantify all Growth impacts related to this one.
- 35. Please list, describe and quantify all Indirect impacts related to this one.

- 36. Please list and quantify every OTHER IMPACT this impact or mitigation could increase.
- 37. Please describe the EXISTING USABLE limit of the RESOURCE this impact affects.
- 38. Please state the METHOD of measurement used to determine the limit of the RESOURCE this impact affects.
- 39. Please describe the MARGIN of ERROR or confidence level used to measure how much of this resource is left.
- Please state whether the margin of error is measured or assumed.
- Please quantify what is the maximum amount (in AMOUNT of existing) of this resource that can be lost and still be restored.
- Please quantify what is the MAXIMUM amount (in PERCENTAGE of existing) of this resource that can be LOST and still be restored.
- 43. Please name each EXPERT who prepared and reviewed this impact.
- Please cite each expert's training, and peer reviewed, validly published articles specific to this impact.
- 45. Please provide AVOIDANCE MITIGATION for this impact.
- 46. Please provide the reverse of this impact as Miligation.
- 47. Please provide an ALTERNATIVE which avoids this impact.
- 48. Please list all other studies initiated by the applicant related to this impact, including subject matter breadth, author's names and dates and where they can be examined.
- \* 516 NOISE ANNOYANCE.
- The Document appears to have ignored this potentially significant Impact. Please carefully analyze and disclose the potential impacts of Noise Annoyance.
- If you claim the document contains proof of no-significantimpact for this impact please explicitly state the page number and paragraph.
- "Outdoor yearly levels on the Ldn [DNL] scale are sufficient to protect public health and welfare if they do not exceed 55 dBA in sensitive areas (residences, schools, and hospitals)." (EPA Publication #319, "Protective Noise Levels," 1978).
- EPA describes 55 Ldn as a "significant noise Impact." Hank Medwin, Past President, Acoustical Society of America.
- \*.. 55 dB is the protective level, with a safety margin against annoyance.\* (Environmental Protection, Emil Chanlett 1979)
- \*U.S. Navy standards limit continuous exposure to shipboard noise to 60 dB.\* Scientific American, July 2002
- QUANTIFICATION OF BASELINES AND IMPACTS:
- This Impact appears to be potentially significant.
- 1a. Please clearly identify by NAME and describe each of the objective (non-subjective) CRITERIA used to determine the impact significance of Noise Annoyance.
- 1b. If no objective criteria are used please state that clearly.
- If no objective criteria are used please clearly describe how the threshold of significance chosen is scientifically testable, repealable, falsifiable, credible and defensible.

- 3a. Please state the NAME of the MEASUREMENT UNITS (numbers) used to determine the significance for EACH criteria
- 3b. Please quote the definition used.
- 4. If no measurement units are used please state that clearly.
- 5a. Please state the METHOD of measurement used to determine the significance for each criteria.
- 5b. If no method of measurement was used please state that clearly for each criteria and explain thoroughly how the data was obtained.
- Please quantify the existing or current BASELINE measurement (level) for each criteria.
- 7. Please state its MARGIN of ERROR or a confidence level and whether the MARGIN of ERROR is measured or assumed.
- B. Please state the VARIANCE or fluctuation, assumed or expected for each of the criteria listed above.
- Please state the variance's MARGINS of ERROR or confidence level.
- Please state whether this MARGIN of ERROR is measured or assumed.
- 11. If an average is used, please state which kind of average.
- Please state the most extreme values which could be encountered.
- 13. Please describe and quantify which criteria and ASSUMPTIONS the Impact Significance predictions are most SENSITIVE.
- 14. Please analyze and quantify how sensitive those predictions are to reasonably foreseeable varying criteria and assumptions.
- 15. Please provide a graph of HISTORICAL measurements.
- 16. Please quantify the length of time this impact would last.
- 17. Please quantify how this impact would vary over that time period. Please use a graph for clarity.
- Please state the THRESHOLD number at which the Impact changes from significant to less-than-significant and the clear criteria and rationale for that number.
- Please provide the MARGIN of ERROR used (in percent and absolute amount) for measuring the Significance THRESHOLD Level.
- 20s. Please state whether this MARGIN of ERROR is measured or assumed.
- 20b. If no margin of error is used please state that clearly.
- 21. Please disclose all threshold numbers at which the impact changes from LEGAL to ILLEGAL for ALL related and potentially relevant local, state and federal laws.
- 22. Some Impacts increase in a LINEAR RELATIONSHIP with increasing input, other impacts have complex non-linear relationships. Please provide a graph that shows whether the relationship is linear or otherwise when at and near the significance threshold values.
- 23. Please quantify the total PERCENT MAXIMUM CHANGE, to which the IMPACT could raise or lower the baseline number and its MARGIN of ERROR or confidence levels.
- Please state whether the MARGIN of ERROR is measured or assumed.