

**COUNTY OF SONOMA
AGENDA ITEM
SUMMARY REPORT**

Clerk of the Board Use Only
Meeting Date **Held Until**
 ___/___/___ ___/___/___
Agenda Item No: **Agenda Item No:**

Department: Permit and Resource Management
 Department/Transportation and Public Works

() 4/5 Vote Required

Contact:
 Jennifer Barrett

Phone:
 (707) 565-1947

Board Date:
 August 4, 2009

Deadline for Board Action:

AGENDA SHORT TITLE:

Aggregate Road Mitigation Fee

REQUESTED BOARD ACTION:

Approve the Technical Report prepared by Economic and Planning Systems entitled "Aggregate Hauling Impacts on County Roads" and adopt a resolution updating the cost allocation methodology and required mitigation fee for aggregate operators pursuant to the Aggregate Resources Management Plan.

CURRENT FISCAL YEAR FINANCIAL IMPACT

EXPENDITURES

ADD'L FUNDS REQUIRING BOARD APPROVAL

Estimated Cost \$

Contingencies \$
 (Fund Name:)

Amount Budgeted \$

Unanticipated Revenue \$
 (Source:)

Other Avail Approp \$
 (Explain below)

Other Transfer(s) \$
 (Source:)

Additional Requested: \$

Add'l Funds Requested: \$

Explanation (if required):

Prior Board Action(s): In 1981, the Board adopted the Aggregate Resources Management Plan and EIR that established the Aggregate Mitigation Fund. An update of the ARM Plan was completed and adopted by the Board in 1994 which modified the mitigation fund to separate the Road Mitigation Fund from the Russian River Mitigation Fund. In 2006, the Board authorized the contract with Economic and Planning Systems to develop a methodology for updating the costs associated with excessive road impacts and to allocate those costs among the aggregate operators.

Alternatives - Results of Non-Approval:

County will not be able to make needed improvements to maintain the aggregate haul routes.

Background:

In 1981, the Board adopted the Aggregate Resources Management (ARM) Plan and EIR, which established a mitigation fund to address adverse impacts from mining operations, including hydrology impacts from instream mining operations and impacts related to excessive road damage and repairs caused by heavy aggregate trucks. All aggregate operators, including vested operators, were required to contribute annually to the fund based on their annual production. The ARM Plan was updated in 1994 and the mitigation program was revised to require separate mitigation funds for instream impacts and for road mitigation.

Since the 1994 ARM Plan was adopted, the methodology for calculating the fee amount has been in dispute with industry representatives. In 2006, the Board approved a contract with Economic and Planning Systems (EPS) to evaluate the impacts of aggregate hauling on County roads and to calculate a uniform per-ton fee to be applied to all aggregate operations to repair excessive road damage. In December 2008, EPS completed the Draft Technical Report entitled "Aggregate Hauling Impacts on County Roads" which calculated the costs associated with the aggregate industry and presents options for allocating those costs.

The attached staff report provides an overview of the Background, Technical Report and comments received by industry representatives, along with recommendations for adjustments to the cost analysis. Key issues are also analyzed and alternative policy options are presented for the Board's consideration.

Attachments:

Draft Resolution

Staff Report, Aggregate Road Mitigation Fee, August 4th, 2009

- A. EPS, Technical Report, Aggregate Hauling Impacts on County Roads, December 8, 2008
- B. EPS, Memo, Impact of Hauling Distance on Aggregate Production Costs, December 11, 2008
- C. Road Impact Mitigations in Other Jurisdictions
- D. Major Haul Routes for Aggregate Mining and Importation Sites in Sonoma County

On File With Clerk:

CLERK OF THE BOARD USE ONLY

Board Action (If other than "Requested")

Vote:

COUNTY OF SONOMA
PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403
(707) 565-1900 FAX (707) 565-1103

DATE: August 4, 2009 at 9:30 a.m.

TO: Board of Supervisors

FROM: Department of Transportation and Public Works (DTPW)
Permit and Resource Management Department (PRMD)

SUBJECT: Aggregate Road Mitigation Fund

BACKGROUND:

In 1981, the Board adopted the Aggregate Resources Management (ARM) Plan and EIR, which established a mitigation fund to address adverse impacts from mining operations, including hydrology impacts from instream mining operations and impacts related to excessive road wear and damage caused by heavy aggregate trucks. All aggregate operators, including vested operators, were required to contribute annually to the fund based on their annual production. Once the program cap of \$500,000 was reached, collections were suspended until an update of the ARM Plan and Program EIR was completed. In 1994, the update to the ARM Plan was adopted which revised the mitigation program to require separate mitigation funds for instream impacts and for road mitigation. Mitigation Measure 8.9-1 and 8.14-1 of the ARM Plan Program EIR required that the gravel industry provide an appropriate level of funding to an Aggregate Road Mitigation Fund to be used by the County for the maintenance and improvement of local roadways which receive a cumulatively significant impact from aggregate haul trucks. Since 1981, Use Permits and Reclamation Plans for aggregate operations have included conditions that require compliance with the ARM Plan standards and the County mining ordinance, which requires payment of the fee. In addition, permit renewals and new permits issued since the 1994 ARM Plan also include specific conditions requiring payment of fees to the Road Mitigation Fund.

In 1996, the Department of Transportation and Public Works (DTPW) calculated the fee at \$.25 per ton and brought the updated fee amount to the Board for consideration. Subsequent discussions among industry representatives and staff led to a refined proposal that reduced staff's recommendation to a flat rate of \$0.18 per ton. Despite the revised recommendation, industry representatives continued to express concerns over the amount of the fees. Meetings with industry representatives continued to be held in an attempt to further refine the proposed program, however, the operators and DTPW could not reach agreement on the fee amount. In 1999, an ad hoc committee of the Board directed DTPW to bring back an alternative for Board consideration which considered site specific factors of each operation to arrive at a fair share amount that was proportional to each operation's impacts. Since that time, safety related impacts of aggregate hauling operations that require mitigation such as, shoulder widening, turning lanes and traffic signals, have been assessed separately from the road wear impacts

for each aggregate operation and incorporated into their conditions of approval.

DTPW attempted to develop a site-specific methodology for assessing road wear impacts in 2000, but found the variables in market conditions made it difficult to assess without looking at the long-term cumulative impact on a more comprehensive basis. Industry operators also expressed a preference for a uniform fee providing a “level playing field” for all operators. In response, DTPW and PRMD staff recommended that the County hire a qualified consultant to prepare a fee study using a methodology similar to traffic mitigation fees based upon the standard engineering practices for estimating road wear. In 2006, the Board approved a contract with Economic and Planning Systems (EPS) to calculate a uniform per-ton fee to be applied to all aggregate operations.

In February 2007, County staff hosted a meeting with industry representatives to review preliminary assumptions and methods for estimating the cost of the road impacts from aggregate hauling and presented estimated unit costs. The main concern expressed by the operators at that meeting was the need to include the import operators to maintain a level playing field. During the review of mining permits, the Board asked industry representatives to collectively evaluate their impacts and try to come up with a proposal for the Board’s consideration. After several months of industry meetings, there was no consensus among the operators, primarily pivoting around the issue of addressing import operations.

As part of the County’s Strategic Plan adopted in February 2008, the Board made several findings that the County’s roads and bridges had reached a point where the cost to maintain and replace the assets exceeded revenues from the current funding strategies. The Board adopted a recommendation to proactively address the failing infrastructure so that it can be maintained and operated to provide safe, reliable and accessible movement of people and goods throughout the county. Updating the Aggregate Road Mitigation Fund is considered one of the priority implementation strategies from the ARM Plan that is aligned with the strategic planning objectives. In December 2008, EPS completed the Draft Technical Report entitled “Impacts of Aggregate Hauling on County Roads” and another meeting was held with industry operators to review the cost analysis and allocation methods.

TECHNICAL REPORT

The Draft Technical Report utilizes the Equivalent Single Axle Load (ESAL) method developed by Caltrans to estimate the wear of heavy aggregate trucks. The annual average aggregate demand from 1995-2005 is then used to calculate the cumulative road wear impact of aggregate trucks. The ESAL method quantifies the amount of road wear on pavement thickness based on truck weight and then estimates the costs of the required pavement overlays needed to mitigate the impacts. The calculation is based on one-way fully loaded trips from all aggregate sources, including the estimated annual import tonnage from out-of-county sources. This analysis provides a strong “nexus” between the impact of heavy trucks from aggregate hauling alone and estimates only the actual cost of the additional pavement thickness needed to mitigate that impact, over and above normal wear and tear.

The methodology for calculating the costs attributed to aggregate hauling is summarized on page 13 of the report and Table 5. Based on the average annual aggregate demand between 1995-2005 of 4,675,000 tons (including imports estimated in 2004 and 2005) and an average of 21.25 tons hauled in each load, the total number of truck trips generated by aggregate hauling would be 220,000 round trips per year. The average round-trip is estimated at 15.0 miles of which half is fully loaded or 7.5 miles. In accordance with estimates in the ARM Plan PEIR approximately one-third of each trip is on county-maintained roads, an average of 2.5 miles per trip. Assuming 70 percent of the trips are 5-axle trucks (carrying 25 tons of aggregate) and 30 percent are 3-axle trucks (carrying 12.5 tons of aggregate), the corresponding ESAL's of 4.03 and 2.18 were applied to the truck trips, resulting in an estimated total annual impact of 764,500 ESAL's generated by aggregate hauling. A typical arterial road is designed to withstand only 371,000 ESALs over a 20-year period. Thus, the impact of aggregate trucks is equivalent to using up the entire 371,000 ESAL design life of 2.5 miles of county arterial road every six months - equivalent to the cost of overlaying 5 miles of arterial roadway every year.

Given an overlay cost per mile of \$677,390 per mile estimated by DTPW (in 2006 dollars) the total cumulative impact to the County roadways from aggregate hauling is estimated to cost approximately \$3.4 million as shown in Table 5 of the Technical Report. The allocation of \$3.4 million in costs over the average annual demand of 4,675,000 tons provides a unit cost of \$.72 per ton. This amount is then adjusted by the \$.05 cents derived from fuel and registration taxes to arrive at a unit cost of \$.67 per ton. This reflects the unit cost of the road improvements required to mitigate road wear impacts from aggregate hauling.

Alternatives: The Technical Report provides an estimate of the total costs per ton of road repairs related to aggregate hauling. However, the Board may determine an appropriate fee level that is reasonable and proportional to the impact, but could not set a fee that would exceed the amount of the cost analysis (\$0.67/ton).

Staff Recommendations: In response to comments received from the operators, staff re-evaluated the cost assumptions related to the overall width of county haul routes and adjusted the cost projections accordingly as discussed in Issue #2 below. Staff also recommends adjusting the 2006 cost analysis provided in Table 6 of the Technical Report by the Caltrans Price Index for the past two years (see Issue #10 below), which declined 9.9 percent, resulting in a total cost allocation of \$.57 per ton in 2008 dollars or \$2.9 million in annual costs incurred after adjustments for the cost assumptions and price index.

REVENUE PROJECTIONS

Based on the adjusted cost of \$.57 per ton and the past 5-year average annual production levels, the Road Mitigation Fund would generate an estimated \$1.5 to \$1.8 million annually. These figures assume full participation in the Road Mitigation Fund by all in-county aggregate operators, including vested operations and new import operators based in the County as discussed below. The estimate does not include approximately \$.9 million in annual costs incurred due to approximately

700,000 tons in out-of county imports that are part of the overall estimated demand, but may not be captured as discussed in Issue #3 below.

INDUSTRY INPUT

As part of the process for updating the fee amount, PRMD and DTPW held several workshop meetings with local industry representatives and the Construction Materials Association of California (CMAC) to review the methodology and results of the impact analysis. The industry representatives have expressed concerns over the fee methodology and legal issues including:

- Operators already pay registration and fuel taxes intended for road maintenance
- Cost assumptions for road width should recognize some haul roads do not provide 36-foot width
- Potential to create a competitive advantage for operations located outside the County
- Imposing road mitigation requirements only on the aggregate industry without including impacts from other heavy industries
- Sonoma County fees should be comparable to other County practices and fees
- A provision in the Vehicle Code adopted in 1991 that prohibits “a fee for the use of a road”

The issues raised by industry representatives are discussed below. In response to the concerns expressed at the workshops, the Cost Analysis included in the Technical Report has been amended to include estimated average annual tonnage of aggregates from import facilities and adjustments for fuel and registration taxes.

DISCUSSION

Issue #1: Fuel and Registration Taxes

One of the concerns raised by industry representatives is that operators already pay registration fees and fuel taxes that are intended for road maintenance. An analysis of the contribution from fuel taxes and registration fees is provided in Appendix C of the Technical Report. Although total fuel taxes on diesel fuel are currently 51.5 cents per gallon, less than 4 cents is returned to the County for road maintenance and improvement. Based on the total estimated mileage of aggregate hauling in Sonoma County, an estimated \$33,000 in fuel taxes is returned to the County from the aggregate industry. An additional contribution of \$186,000 is derived from registration fees on trucks and trailers registered in Sonoma County. The combined contribution of \$219,000 in registration and fuel taxes with an average annual demand of 4,675,000 tons is the equivalent contribution of 4.7 cents per ton.

Recommendation: Staff recommends that the local contribution of fuel and registration taxes be deducted from cost analysis. This deduction is shown on Table 6 of the Technical Report and reduces the fee by \$.05 per ton. Staff recommends additional adjustments in the cost assumptions (discussed in Issue #2 below) and by the Caltrans Price Index to reflect current 2008 dollars (discussed in Issue

#10 below).

Issue #2: Cost Assumptions

Input from the November 17, 2008 meeting with operators questioned the assumption that the average pavement width for county arterial roads should be 36-foot wide. In response DTPW staff analyzed the primary haul routes and major arterial and collector system and estimates that approximately 20 percent of the primary haul roads have an average 28-foot width, primarily in the outlying areas of the County. Using this adjusted pavement width provides an overlay cost per mile of \$527,789 in 2006 dollars. Applying this cost to 20 percent of the road miles would reduce the annual cost by \$.03 per ton.

On the other hand, the pavement structure of many of these roads evolved over time and were never built to engineered arterial standards so they will cost substantially more to fix than the cost of the additional overlay used in the cost analysis. Those roads may require complete reconstruction in order to provide adequate pavement strength. Staff has assumed that these major reconstruction costs would be assessed separately from repair and maintenance costs. Costs associated with major reconstruction or safety related improvements, such as shoulder widening, channelization or signalization are one-time capital costs that would need to be completed and funded separately in a Capital Improvement Program.

Some operators suggested that there are methods of pavement maintenance, other than overlays, that could be used to extend the life of roads that are much less costly. While slurry seals and other surface treatments are used to extend the life of roads, these measures do not address the issue of pavement strength needed to support heavy truck traffic. The overlay costs include only the additional amount of pavement thickness required to support the aggregate trucks that is over and above the other treatments that are part of the normal 20-year maintenance cycle and the structural deterioration from other traffic. Thus, the normal wear and tear, routine maintenance and interim pavement treatments are assumed to be part of the baseline and are not included in the cost analysis, but are utilized in the County's overall pavement management program.

Alternatives: The Board may review the cost analysis and adjust the assumptions used as deemed appropriate. The estimated road mileage directly affects the per ton cost. The cost analysis is based on the need to overlay 5 miles of roadway every year to replace the wear from 764,500 ESAL's.

Recommendation: Staff recommends that the assumptions used in the Cost Analysis in the Technical Report be adjusted to reflect the adjusted pavement width as noted above. A further reduction by the Caltrans Price Index to reflect 2008 dollars is recommended as noted in Item #10.

Issue #3: Import Operations

The 1994 ARM Plan called for phase out of the terrace mining operations by 2006, reducing production from in-stream operations to a sustainable yield basis, and increasing production from quarry operations to meet future demands. At the time, major import operations were not envisioned to be economically viable. However, since 2004 import operators have become competitive in the marketplace and are now estimated to provide over 700,000 tons of aggregate annually. Import operations in 2004 were estimated to provide 750,000 tons and 775,000 tons were estimated in 2005. The total aggregate demand figures for 2004 and 2005 were adjusted to reflect these total import amounts. The average annual aggregate demand between 1995-2005 used in the Cost Analysis is 4,675,000 tons, including importation that occurred in 2004 and 2005. Thus the cost analysis includes the impact from import operators and the costs allocated on a per ton basis include estimated tonnage from the import operators.

Although the first import operation (Shamrock/Petaluma) that was approved in 2004 did not include a road mitigation condition, staff believes that they have essentially the same impact to County roads and should be included in the ARM Plan mitigation program as part of the aggregate industry in the event that this facility's use permit is subject to review in the future.

All import facilities require a use permit to operate and it is through the County's use permit authority that the import facilities may be required to participate in the road mitigation program. New operations that have been proposed for major import or processing operations (Shamrock/Todd Road and Dutra/Petaluma) have included this condition to pay annual contributions to the Road Mitigation Fund. If the road mitigation program is not implemented, then the use permits for most aggregate facilities should be reviewed and modified to incorporate alternative mitigation measures.

There are also some operators that are located out-of-county that bring material in directly to a job site or to other processing facilities inside the cities jurisdictions. The costs associated with these out-of-county operations are included in the cost analysis as part of the overall import tonnage noted above, but would not be captured by the County's ARM Plan policies because construction site deliveries from out-of-county operators are not subject to County regulations.

Recommendation: Staff recommends that all new import facilities based in the County be required to participate in the Road Mitigation Program as a condition of approval of their use permits. This would provide equity between the local producers and the import operators.

Issue # 4: Competitive Disadvantage

Another concern raised by the operators is the potential to create a competitive advantage for producers from outside the County. Their primary concern is that producers from outside the County are not required to contribute to the Road Mitigation Fund and would have a competitive advantage over in-county producers. The impact of hauling distance on aggregate production costs was evaluated by EPS as described in a memo dated December 11, 2008 (provided in Attachment B). EPS estimated the current competitive market area for producers is from 30 to 50 miles from the production site. Using California Construction and Industrial Materials Association (CalCIMA)

estimates of transportation costs at \$.15 per-ton-mile, the analysis concludes that with a recommended fee level at \$.57 per ton, out-of-county operators could travel 3.8 miles further and still be competitive. This would expand the market area for some nearby producers, but would not create additional competitive pressure from new suppliers. Currently, two producers import aggregates from outside the County to processing and distribution facilities located in the County, but within jurisdiction of the cities. These two operations are the sole producers of PCC-grade aggregate materials in the County, and both operations entail local instream mining and import operations. These suppliers compete with each other in the local aggregate supply market but do not compete with other County aggregate producers because they are supplying a different market product. The competitive advantage gained by these two import operators would be offset.

The report concludes that because of costs associated with transportation, County producers are unlikely to face increased competition from import operations from outside the County. Circumstances in which importers are able to overcome the transportation costs would result from other production cost variables and would not be attributable in isolation to the imposition of the road mitigation fee.

Recommendation: Staff believes there is no substantial competitive advantage from the existing import operators, who primarily compete with each other. However, staff recommends requiring new import operators that locate within the County to contribute to the Road Mitigation Fund.

Issue #5: Other Heavy Industries

Another concern raised by the aggregate suppliers is that other industries, such as wineries, are not paying a similar fee and that the aggregate industry is being singled out. However, staff notes that the program is to mitigate impacts that were identified in the ARM Plan and to implement long-standing conditions of their use permits. Other industries do not have substantial impacts that approach the magnitude of aggregate hauling.

The most significant factor that causes damage to the supporting structure of the roadway is the number of trucks with maximum legal loads the roadway experiences over time. When determining the thickness of the roadway section, all traffic is taken into consideration, but the major factor for design of pavement strength is the volume of heavy truck traffic. One fully loaded 80,000-pound truck causes as much pavement wear as 10,000 automobiles. The impact of the heavy trucks increases exponentially with weight as shown in Figure 1 of the Technical Report. Thus the lighter trucks have much lower impact than the fully loaded trucks on pavement wear.

The industries that generate predominantly maximum legally loaded vehicles include: aggregate suppliers and processing (i.e. concrete or asphalt plants), waste haulers, logging, water tankers, and bus transit operators. Other industries utilize a wide variety of trucks with much less frequency of maximum legal loads. For example, the grape growers produced an annual average of 207,390 tons of grapes in 2006 and 2007. If all the grapes were transported on County roads using the maximum loaded trucks, it would generate 10,784 truck trips annually or 34,253 ESAL's compared to 764,500

ESAL's by aggregate hauling. At maximum, the grape industry would have less than 4.5% of the impact of aggregate hauling. The actual impact of grape hauling is much less, since many growers process on-site and only a fraction of grapes are transported with maximum legal truck loads.

The aggregate fee imposed upon aggregate suppliers is a mitigation measure adopted by the 1981 ARM Plan and revised in the updated 1994 ARM Plan. Similar fees could be developed for other non-aggregate industries which is a policy option for the Board. However, this fee study focused solely on the impacts directly attributable to aggregate hauling based on their average annual production levels. The methodology uses the Equivalent Single Axel Load (ESAL) method developed by Caltrans which accounts solely for the road wear by aggregate hauling as reported in the County's Annual Report on Aggregate Production. This methodology could be used to estimate the impacts and costs from other heavy industries or assessed on individual operators through the discretionary review process.

Recommendation: Staff recommends that the Board implement the current fee proposal for aggregate operations pursuant to the ARM Plan and provide direction to staff if the Board would like other industries similarly evaluated.

Issue #6: Other County Practices

Operators requested that the County look at establishing a fee that is "fair" and comparable to what is typical for other jurisdictions. Staff gathered information from 18 different jurisdictions which have attempted to address the issue of mitigating road damage caused by heavy trucks. It is clear from these discussions that the problems of excess road deterioration from heavy trucks and under funding of road maintenance are broadly recognized. A brief summary of the surveyed jurisdictions is discussed below. A table summarizing the various jurisdictions is provided in Attachment C.

All jurisdictions address and condition road impacts when conducting project specific CEQA review and use permit conditioning. Some jurisdictions go no farther than assessing each situation on a case by case basis, identifying roads impacted by the project and appropriate mitigations be they actual road improvements, on-going or lump sum fee contributions, road repair obligations, in-kind fee contributions, etc. Many of these counties enter into agreements and may require a security to help assure that the needed mitigations or contributions are carried over the life of the permit.

Several jurisdictions have imposed a mining tax or a resource depletion tax ranging from \$.04 to \$.69 per ton (adjusted annually for inflation) which is collected and used in part to fund needed road repairs and maintenance. Others have imposed a flat traffic, road or general mitigation fee per ton ranging from \$.05 to .45 per ton. Rather than charge a tax or fee by the ton on the suppliers, some jurisdictions have established a road impact fee which is paid at the time of building permit which generally range from one-half to one percent of the building permit valuation. One jurisdiction charged a flat \$2.50 charge per truck trip. Several jurisdictions have imposed road maintenance fees on refuse haulers as part of franchise agreements.

When reviewing the fee rates of other jurisdictions it is important to note that all jurisdictions have a different number of miles of roadways that are impacted so the fee that is sufficient for one jurisdiction could be more or less than what is needed in another jurisdiction. The extent of roadways directly impacted by the County aggregate operators is over 100 miles, compared to another city which may have only a few operators affecting 10 miles of city roads.

Recommendation: The ARM Plan policies call for mitigation of the impact of excessive road wear through establishment of this Mitigation Fund and conditions adopted for existing use permits require the payment of these costs through a per ton fee, annual contribution or other method. Staff recommends implementing the fee at the full cost recovery as envisioned in the ARM Plan and use permit conditions.

Issue #7: Vehicle Code Provision

Following a workshop with County staff on the cost analysis and allocation methodology, several operators submitted a legal argument that the proposed fee is prohibited by Section 9400.8 of the vehicle code which states:

“Notwithstanding any other provision of law, . . ., no local agency may impose a tax, permit fee, or other charge for the privilege of using its streets or highways, other than a permit fee for extra legal loads, after December 1, 1990, unless the local agency had imposed the fee prior to June 1, 1989.”

While the Vehicle Code may limit the establishment of a new fee, the Mitigation Fund has been established since the 1981 ARM Plan and mining ordinance was adopted. All mining and reclamation plan permits issued by the County since adoption of the 1981 ARM Plan include conditions that require compliance with the ARM Plan standards and ARM Plan Mitigation Fund Program. In fact, all operators, including vested operators, made payments to the Mitigation Fund until a cap of \$500,000 was reached and an update of the ARM Plan was initiated. Thus the fee was imposed prior to the adoption of the Vehicle Code provision restricting the imposition of fees. The 1994 ARM Plan Program EIR continued to rely on the Mitigation Fund Program to mitigate impacts from aggregate hauling. All mining permits issued since adoption of the updated 1994 ARM Plan include specific conditions requiring contributions for road impacts and these conditions have never been challenged. The conditions of approval on many of the mining permits require payment of the costs for road impacts from the date operations began.

If the Vehicle Code provision is determined to preclude the County's ability to collect the road mitigation funds, then most past mining permits would need to be reviewed to modify the mitigation measures/conditions related to road impacts.

Recommendation: Since the Mitigation Fund was established in 1981, staff believes the Vehicle Code Section does not apply. The fee was imposed and collected and all permits adopted pursuant to the ARM Plan since the mitigation program was originally established have included conditions

requiring the payment of the road mitigation fee. If the Road Mitigation Fee is not implemented, then the mining permits should be called up for review and modified to incorporate alternative mitigation measures.

Issue #8: Economic Impacts

One of the primary concerns involved in allocating costs to aggregate operators is the potential effect that the additional cost burden could have on the economy, including local jobs, as well as the cost of construction activities carried out by both the public and private sector. If the projected mitigation costs were allocated on a per ton basis at \$.57/ton, the cost for PCC aggregates (currently selling at \$20/ton) would increase by 2.9%; while the cost for road base aggregates (currently \$10/ton) would increase by 5.7%. The current economic decline in the construction industry may make these cost increases more difficult to absorb for operators, however, these costs most likely would be shifted to consumers. The economic impact of these cost increases on the operators could be mitigated by phasing in the increase over a period of time.

On the other hand, deferred maintenance on County roads can increase the cost of repairs ten-fold. Deferred maintenance drives up long-term costs by shortening the cycle for rehabilitation, which often leads to pavement failure and eventually complete reconstruction at ten times the cost. Preventive maintenance is the key to controlling these long-term costs. The California Department of Transportation estimates that every dollar of preventative maintenance saves six dollars in rehabilitation and twenty dollars in major reconstruction costs. Deferred maintenance costs attributed to aggregate hauling are estimated at \$3.4 million per year.

Another concern is the effect of this cost increase on construction costs. DTPW estimates that at \$10 per ton, aggregate materials account for approximately 9% of total construction costs for pavement overlays, and approximately 1% of the cost of a single family home (based on average prices of \$400,000). An increase of 5.7 percent on the aggregate materials costs would increase the cost of pavement overlays by less than one-half of one percent (0.5%) and the cost of a single family home by less than one-tenth of one percent (0.1%).

Recommendation: Staff believes that the cost burden would be passed through from the operators to consumers and that the economic impact on the cost of construction is not significant being less than one-half of one percent. The federal stimulus package is expected to substantially benefit the aggregate industry. Staff recommends that the Board update the fee level to full cost recovery.

Issue #9: Proposed Improvements

One of the concerns raised at the first meeting with operators has been whether there was any assurance that the County would actually spend the money from the road mitigation fee on the needed roadway improvements to support aggregate hauling and others were interested in knowing which roadways would be maintained. Any fees collected by the County would be allocated to the Road

Mitigation Fund that was specifically established for the purpose of repairing damage to County roads. This fund cannot be used on other road improvement projects or for any other purposes. DTPW will program the funds collected to address the pavement needs throughout its arterial and collector system of roads, as these are the roads those that are mostly impacted by trucks hauling aggregates and aggregate products.

DTPW will appropriate these funds through their annual road maintenance budget and in some instances where major reconstruction is planned, through the 5-year Capital Projects Planning budget. The Road Mitigation Funds may be coupled or leveraged with other road maintenance funds from other state or local (Measure M) monies to maintain the primary haul routes, Metropolitan Transportation System network and the remaining arterials and collectors on an as needed basis as funding is available. DTPW will develop a 5-year Pavement Preservation Plan which will be used to guide the use of these funds. DTPW will prioritize the use of the funds on the industry's major haul routes (116.6 miles of County road segments) giving consideration to the more severe impacts of the aggregate trucks on the County's road system and the needs of the aggregate industry for adequate serviceability of those roads for their operations, Secondly, the funds will be generally prioritized to the remaining roads in the County's MTS (Metropolitan Transportation System) designated roads, and finally its remaining arterial and collector roads. A map showing the primary aggregate haul routes and other major routes that could be maintained is provided in Attachment D.

Recommendation: Staff recommends appropriating funds through the annual road maintenance budget focusing on the roadways identified in Attachment D.

Issue # 10: Index and Periodic Updates

Most fees are indexed to adjust for inflation or reduction in pricing on an annual basis. Indexing of the fee is an important feature that allows the costs to be adjusted for inflation and insures that the mitigation can keep pace with the needs/impacts of the industry. The Engineering News Record (ENR) Construction Cost Index is used to adjust the Traffic Mitigation Fees and the Affordable Housing Fees. DTPW recommends the "Caltrans Price Index for Selected California Construction Items - Exhibit A" as more closely aligned with road maintenance and repair costs. (http://www.dot.ca.gov/hq/esc/oe/contract_progress/).

The cost analysis prepared by EPS is based on 2006 cost estimates. Caltrans' Price Index from 2006 through 2008 went down 9.9 percent (from 280.6 to 252.7). If the fee were adjusted based on the adjusted cost assumptions noted above and the Caltrans Index, the cost per ton would be \$.57 per ton.

Additionally, a periodic fee update should also be conducted when there is a significant change in the potential impacts. A fee update is not recommended for annual review of the fee because of the administrative cost and because other accurate sources of relevant cost data provided by the indices are readily available. However, if the fee is initially established below the cost analysis, a periodic fee update would enable the Board to adjust the fee level to full cost recovery at that time the fee is

updated. The per ton fee is also sensitive to production/demand trends. For example if production levels decline over several years, but construction costs increase, then the per ton fee could also substantially increase.

Recommendation: Staff recommends that the Caltrans Price Index be used to adjust the fee annually and that the initial fee be adjusted by the current 2008 index.

Issue # 11: Cost Allocation Approaches

While the cost per ton can be calculated using standard engineering methods, there are various approaches to recovering the cost of road impacts or funding these costs. The ARM Plan had determined that since these costs are incurred gradually over time, a per unit fee would be the best approach for both the operators and the County. The various approaches listed below are not necessarily mutually exclusive and may be used in combination.

Use Permit/Reclamation Plan Conditions

The County has consistently included a condition on all mining and reclamation permits that requires contribution towards the Road Mitigation Fund. More recently the County has also included these requirements on major import operations or processing facilities that generate similar heavy truck traffic. Continued application of permit conditions using the updated cost estimates and cost allocation method is recommended regardless of other approaches employed.

If the per ton fee cost allocation method is not utilized, then the use permits which rely upon this fee approach for mitigation of impacts should be reviewed and modified to reflect an alternative mitigation approach.

Benefit Assessment District

A Benefit Assessment District is another method for financing costs among various property owners based on the benefits derived from the improvements. Assessment district formation requires a majority of the property owners affected to voluntarily agree to assess themselves. There are additional costs for engineering, bonding and administration that increase the overall costs. Benefit Assessment Districts usually include all properties benefitting from a capital improvement, where these costs are spread based on an estimate of the benefits accruing to each parcel. It is uncertain whether a Benefit Assessment District could be formed with only production sites that are scattered throughout the County to finance mitigation costs. According to the Auditor-Controllers office, the amount financed must be large enough to warrant the cost of administering the district.

Resource Depletion Tax

A Resource Depletion Tax is a method used in Yolo County to require all operators, including vested operations to pay for road and other impacts associated with aggregate hauling. A Resource Depletion Tax would require that the Board initiate a ballot measure that requires two-thirds voter approval. A resource depletion tax would apply to local production sources and vested operations, but would not apply to import operators. The revenue would accrue to the General Fund and the Board would need to appropriate those funds to the necessary road improvements.

In-Kind Road Mitigation Requirement

An alternative approach to recovering the per ton cost of the mitigation would be to require each operator to improve and maintain an equivalent share of the County road system as a condition of permit approval. This approach does not lend itself to leveraging the mitigation funds with other local and state funding sources and also may not provide a level playing field for all aggregate operators. However, if the per ton approach is not determined feasible, the use permits which rely on the Road Mitigation Fund should be reviewed and modified to incorporate this approach.

Building Permit Fee

Another alternative that many jurisdictions have used is to apply a road impact fee to the end user of the products by applying a fee to a building permit. This approach would require a revised cost analysis and allocation method, which does not necessarily address the impacts of aggregate hauling. Most cities do not have large aggregate operations, but may have impacts related to construction activities associated with the aggregate industries and therefore a building permit fee is more appropriate. It should be noted that the majority of construction activity occurs within cities and on public roads which would not be subject to a county building permit in any event. Staff does not recommend this approach because it does not address the impact of aggregate hauling or the intent of the ARM Plan Program EIR. A building permit fee may be considered to address impacts of heavy construction vehicles which is in addition to the impact of aggregate hauling.

Recommendation: Staff recommends that the County continue to require contributions to the Road Mitigation Fund as a condition of use permit or reclamation plan approval for all aggregate operators including new import and/or processing facilities.

STAFF RECOMMENDATION

Staff requests direction from the Board on the various policy options discussed above and recommends the following:

Fee Level: Approve a resolution establishing the per ton cost allocation based on the cost analysis in the EPS Technical Report, adjusted for the revised cost assumptions and Caltrans Price Index as noted above to \$.57 per ton.

Phase In: Do not phase-in the mitigation to capture full cost recovery of impacts.

Effective date: Apply the fee prospectively to aggregate production commencing January 1, 2010.

Index: Adjust the fee annually on January 1st of each year by the change in the Caltrans Price Index for the previous 12-month period as published in the third quarter of each year. Review and update the fee in 5-years, if necessary.

Approach: Require all aggregate operators (including import and/or processing facilities) to participate in the Road Mitigation Fund prior to use permit or reclamation plan approval as required in the ARM Plan.

ALTERNATIVES

The Board has discretion to consider a range of alternative approaches based on the options described above, including any combination of fee level and phase-in period. Two alternatives have been defined by staff below that would reduce the potential impact on the industry during the current economic downturn.

Alternative A Phase-in the fee level over a 3-year period. The fee level would begin at \$.19 per ton, increase by \$.19 annually as adjusted by the Caltrans Price index until full cost recovery is reached.

Alternative B Establish a lower fee level at \$.25 per ton and phase-in to full cost recovery over a 5-year period from 2010 to 2015, increasing \$.05 per year annually as adjusted by the Caltrans Price index, until full cost recovery is reached.

Alternative C Establish the initial fee level at approximately 1/5th the cost analysis at \$.10 per ton for a two-year period and increase fee level by \$.10 per ton annually as adjusted by the Caltrans Price index until full cost recovery level.

List of Attachments:

- EXHIBIT A EPS, Draft Technical Report, Aggregate Hauling impacts on County Roads, December 8, 2008 (Previously provided to Board members)
- EXHIBIT B EPS, Memorandum, Impact of Hauling Distance on Aggregate Production Costs, December 11, 2008
- EXHIBIT C Summary of Fees in Other Jurisdictions
- EXHIBIT D Major Haul Routes