

**MEMORANDUM
DEPARTMENT OF FACILITY SERVICES
COUNTY OF PLACER**

To: BOARD OF SUPERVISORS

Date: MAY 3, 2011

From:  JAMES DURFEE / WILL DICKINSON 

Subject: SEWER MAINTENANCE DISTRICT 1 WASTEWATER TREATMENT PLANT COMPLIANCE: PROPOSAL FROM CITY OF LINCOLN

ACTION REQUESTED/RECOMMENDATION: Direct staff to exclusively focus on the Plant 1 Upgrade and Expansion Project as the method for achieving regulatory compliance and capacity expansion in Sewer Maintenance District 1.

BACKGROUND: On February 8th, staff updated your Board regarding progress on two potential sewage treatment compliance projects for Sewer Maintenance District 1 (SMD 1). Attached as Exhibit E is the memo prepared for that meeting. Representatives from the City of Lincoln also attended the meeting and provided an overview of their proposal to design, construct, operate and own all the equipment and structures needed to transmit and treat SMD 1 and Auburn sewage.¹ The City proposal includes an Agreement that establishes a deadline of March 31, 2011, for transfer of approximately \$1.9 million as an initial down payment for design and environmental review work.² In order to provide your Board with the opportunity to respond to Lincoln's proposal in a timely manner, staff has prepared this memo and the attached Exhibits.

The basic structure of the proposal is described in Exhibit A. Staff has devoted many hours to reviewing and discussing this unusual and innovative proposal with representatives from the City of Auburn and the City of Lincoln. Much of this discussion took place via emailed questions and answers, many of which were answered to Staff's satisfaction. Questions or concerns that are not completely resolved are documented in Exhibit B1, B2 and B3.

A Regional approach to treating sewage from the Auburn area has been discussed for over ten years. Possible advantages to regionalization include:

- Economies of scale resulting from constructing and operating one treatment plant rather than three.
- Reduction in the potential for accidental discharges of untreated wastes or harmful chemicals into small streams.
- It is likely to be less expensive to adapt the modern treatment plant in Lincoln to new regulatory requirements.
- State regulator support for regionalization.
- Availability of Federal grants for regionalization that are not available for upgrading existing treatment plants.

City staff and Stantec Engineering deserve credit for packaging a proposal from Lincoln that could bring many of these advantages to fruition. They have worked diligently to put

¹ On February 8th the Lincoln City Council authorized staff to submit the proposal. City Manager Jim Estep forwarded the proposal on 2/10/11 requesting placement of this item on the 2/28/11 Board of Supervisor's agenda.

² Article 3 of the Agreement for Environmental Review and Design. The total cost of design and environmental review if Auburn is not a participant would be \$5,580,000.

together a project that allows for reduced cost estimates and creative financing. They have also worked cooperatively to draft agreements that attempt to anticipate concerns that may arise during design, environmental review, construction and operation of a large, multi-agency conveyance and treatment facility.

Exhibit C consists of a chart comparing the two projects from several perspectives. On balance, Staff feels that the Upgrade and Expansion Project remains the best choice for SMD 1 customers for the following primary reasons:

1. Cost – in spite of Lincoln’s best efforts to cut capital costs and develop innovative financing plans, staff believes the monthly sewer fee charged to SMD 1 customers with a Regional Project will likely exceed Upgrade and Expansion Project fees by \$10-20 per EDU per month. This differential will be higher if Lincoln has significantly underestimated final project capital and operating costs. Unfortunately, Federal grant funds are not as available as once expected and our ability to use them on this project is questionable due to the tight timeframe proposed for project completion³. [See Exhibits B-1 and D]
2. Local control – with the proposed governance structure, SMD 1 customers would have very little ability to influence decisions regarding design, construction or operation of facilities used to convey their sewage. Even with a more representative governance structure, as owner of the facilities and largest contributor to flow, Lincoln will always be the dominant partner. Experience with other Joint Powers Authorities has shown that decisions that affect allocation of millions of dollars in cost between agencies can lead to protracted negotiations, gridlock and lawsuits. [see Exhibit B2, Comment 1h]
3. Project feasibility – Lincoln’s proposal is based on planning level information, with many optimistic assumptions regarding construction costs, schedule, financing, operation costs, ability to finance expansions, regulatory agency cooperation, reduction of inflow and infiltration (I&I), etc. The Upgrade and Expansion Project has reached the 90% design level and retains conservative contingencies for cost and schedule. [see Exhibit B3]
4. Capacity to accommodate growth – the Regional Project proposed by Lincoln includes constructing treatment capacity for SMD 1 customers to handle the current dry weather flow of 1.7 million gallons per day (MGD). For a slightly lower capital cost, the Upgrade Project provides treatment capacity for 2.7 MGD of dry weather flow. Staff has concerns that Lincoln may incur unanticipated costs and delays when they attempt to finance future expansions. [See Exhibit B3, Comment 2-4]

Over the last nine months, Staff has thoroughly reviewed and analyzed various Regional Project proposals. Approximately \$273,000 has been spent on consulting support for the Regional Project during the same time period. Staff recommends devoting all future SMD 1 compliance effort toward expeditiously completing the Upgrade Project.

³ The \$2.5 million remaining in current appropriations can be used more effectively for regionalization of Plant 3, located on Auburn Folsom Road. The outlook for additional future appropriations is not good.

ADVISORY COMMENTS: On March 8th, the North Auburn Municipal Advisory Council voted to recommend that the Board of Supervisors: "...upgrade the SMD 1 waste water treatment plant and keep control within Placer County." On March 24th, the Placer Nevada Wastewater Authority voted to: "...recommend that the Placer County Board of Supervisors and the Auburn City Council proceed with the Mid-Western Placer Regional Sewer Project recognizing that there needs to be further definition of the confidence levels of the cost estimates and further refinement of governance issues."

ENVIRONMENTAL CLEARANCE: The City of Lincoln planned to complete an EIR and EIS for their regional proposal by March of 2012. A mitigated Negative Declaration for the Upgrade Project was released to the public on April 25, 2011.

FISCAL IMPACT: Capitol Public Finance Group (CPFG) has prepared three ranges of fee projections for the Regional and Upgrade projects (see Exhibit D). The ranges are denoted as Low End, Mid-Range and High End, reflecting different combinations of assumptions for each project. The High End cost is not a "worst case" analysis. Other combinations of factors could change which would require fees higher than either of the High End scenarios. For example, each of the Regional projections utilizes the Firm Price cost as proposed by Lincoln, without any adjustment for potential upward movement of the Firm Price. The projections also do not include any contingency for future regulatory changes as such changes are difficult to predict and quantify⁴.

The CPFG projections generally agree with past staff estimates showing monthly user fees for the Regional Project exceeding the Upgrade Project by \$12 to \$20 per EDU per month. The new projections do show connection fees for the Upgrade Project exceeding those for the Regional Project under all scenarios.

Every attempt has been made to make these projections as realistic and comparable as possible; however, these projections are not sufficient for establishing fees because they rely on too many assumptions. For this reason, we would not plan to hold rate hearings until fall 2011, when solid information about construction costs and financing should be available.

ATTACHMENTS:

EXHIBIT A SUMMARY OF LINCOLN REGIONAL SEWER PROJECT PROPOSAL
EXHIBIT B1: UNRESOLVED QUESTIONS & CONCERNS - COST
EXHIBIT B2: UNRESOLVED QUESTIONS & CONCERNS - CONSTRUCTION AND OPERATIONS AGREEMENT
EXHIBIT B3: UNRESOLVED QUESTIONS & CONCERNS - FEASIBILITY
EXHIBIT C: COMPARISON OF UPGRADE PROJECT VS. REGIONAL PROJECT
EXHIBIT D: CPFG PROJECTIONS
EXHIBIT E: BOS MEMO FEBRUARY 8, 2011

JD:WD:LM

CC: COUNTY EXECUTIVE OFFICE

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⁴ Costs for future regulatory compliance would likely occur ten years or more into the future, and would probably impact the Upgrade projections more than the Regional projections.

EXHIBIT A

Summary of Lincoln Regional Sewer Project Proposal

1. Project concept - City of Lincoln to design, construct, operate and own all the equipment and structures needed to transmit and treat SMD 1 and Auburn sewage. New physical structures applicable to SMD 1 include:
 - Equipment and structures sufficient to treat current 1.7 million gallons per day of sewer flow from SMD 1 at the Lincoln wastewater treatment plant
 - Large sewage pump station at the Plant 1 site on Joeger Road
 - 12 miles of sewer pipeline (some under pressure, some gravity) to connect the new pump station to the Bickford pipeline
 - Completion of a 1200 foot pipeline segment abandoned by Bickford developers
2. "Firm Price" proposal - Lincoln proposes to construct and operate the new sewage conveyance and treatment system for costs that are defined within certain parameters. Higher or lower costs may apply if these parameters change. The capital cost includes a portion devoted to reimbursing Lincoln for costs incurred in oversizing their treatment plant and trunk lines to handle regional flows. A separate (more expensive) cost schedule applies if the City of Auburn does not participate. Operating costs are "Firm" for the first five years of operation. Parameters that can change costs to SMD 1 customers include:
 - (a) Project capital costs in excess of \$71,700,000 (for County only option)
 - (b) Inflation
 - (c) Delays caused by County, including commencement later than March 31, 2011
 - (d) Changes to the draft construction and operating agreements that may be necessary when more design and financing information becomes available
 - (e) New regulations
3. Lincoln has drafted an Environmental Review and Design Agreement that would require SMD 1 to pay to Lincoln a total of \$5,580,000 (SMD 1 only option) for preparation of design and environmental documents sufficient to bid and build the project. Most of the work would be performed by Stantec Consulting Inc.
4. Lincoln has drafted a Construction and Operations Agreement which is the basis for their Firm Price proposal. The Board of Supervisors cannot sign this agreement until completion of environmental review, so it will remain a draft until that time. Changes to this agreement are necessary and could result in increased costs to SMD 1 customers.¹

¹ See Exhibit B-2 of this Board memo for more information regarding concerns about the draft Construction and Operations Agreement.

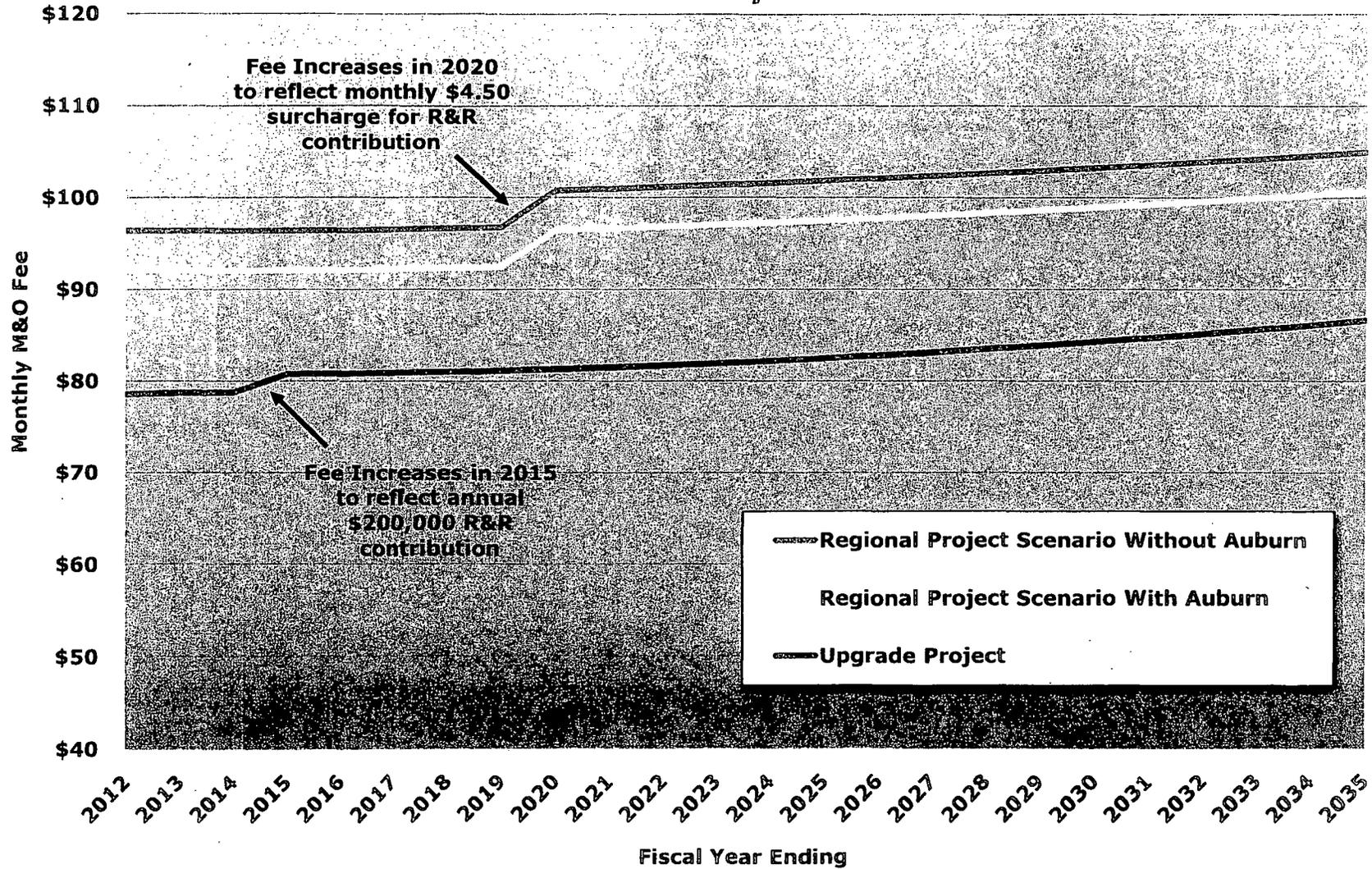
EXHIBIT C

Comparison of Upgrade Project vs. Regional Project

Issue	Upgrade Project	Regional Project with Lincoln
Capacity to accommodate growth	Phase 1 is sized for average dry weather flow of 2.7 million gallons per day, which equates to 64% of General Plan buildout. Many parts of the plant will have capacity beyond 2.7 mgd, so future expansion to 4.2 mgd (Phase 2) is estimated to cost only \$10.30/gallon.	Lincoln treatment plant will build 1.7 mgd for current SMD 1 customers and have 1.4 mgd of excess capacity available on a first-come-first-served basis for all users. Lincoln plant is easily expandable beyond that point, for additional cost estimated at \$20/gallon. Pipeline and pump station sized for average dry weather flow of 4.2 million gallons per day.
Local control over operational decisions and fees	County maintains control over all decisions.	County would have very little control over operation of the treatment plant, Plant 1 pump station, equalization ponds, pipeline, or future plant improvements. Fees would be set by Board of Supervisors, but much of the cost would be determined by the City of Lincoln.
Compliance with regulatory requirements	Will be designed to comply with current permit requirements. Should be adaptable to reasonably foreseeable future requirements with some additional cost.	Complies with current permit. Has a large site to accommodate new treatment processes. Should be in good position to meet future regulatory requirements with some additional cost.
Cost to customer	Monthly fee is expected to be lower than Regional for 10-20 years. Uncertain in longer term due to potential for expensive regulatory compliance projects. Connection fee will increase and be higher than Regional Project.	Monthly fee is expected to be higher than Upgrade for 10-20 years. May be more cost-effective in long term due to economies of scale and adaptability. Connection fee will increase less than Upgrade Project.
Financial stability	The positive aspect of constructing excess capacity for growth now while construction costs are low is partially offset by concern for financial stability if growth does not occur. If reasonable growth continues, financial stability is good. If growth is slower than expected, borrowing from dedicated reserves is necessary to avoid raising monthly fees.	It is not clear whether the proposed design is feasible and if the project can be delivered at the proposed Firm Price. Future expansion of the Lincoln plant beyond 1.7 mgd is reliant on developer financing, which may not be available when SMD 1 customers need it.

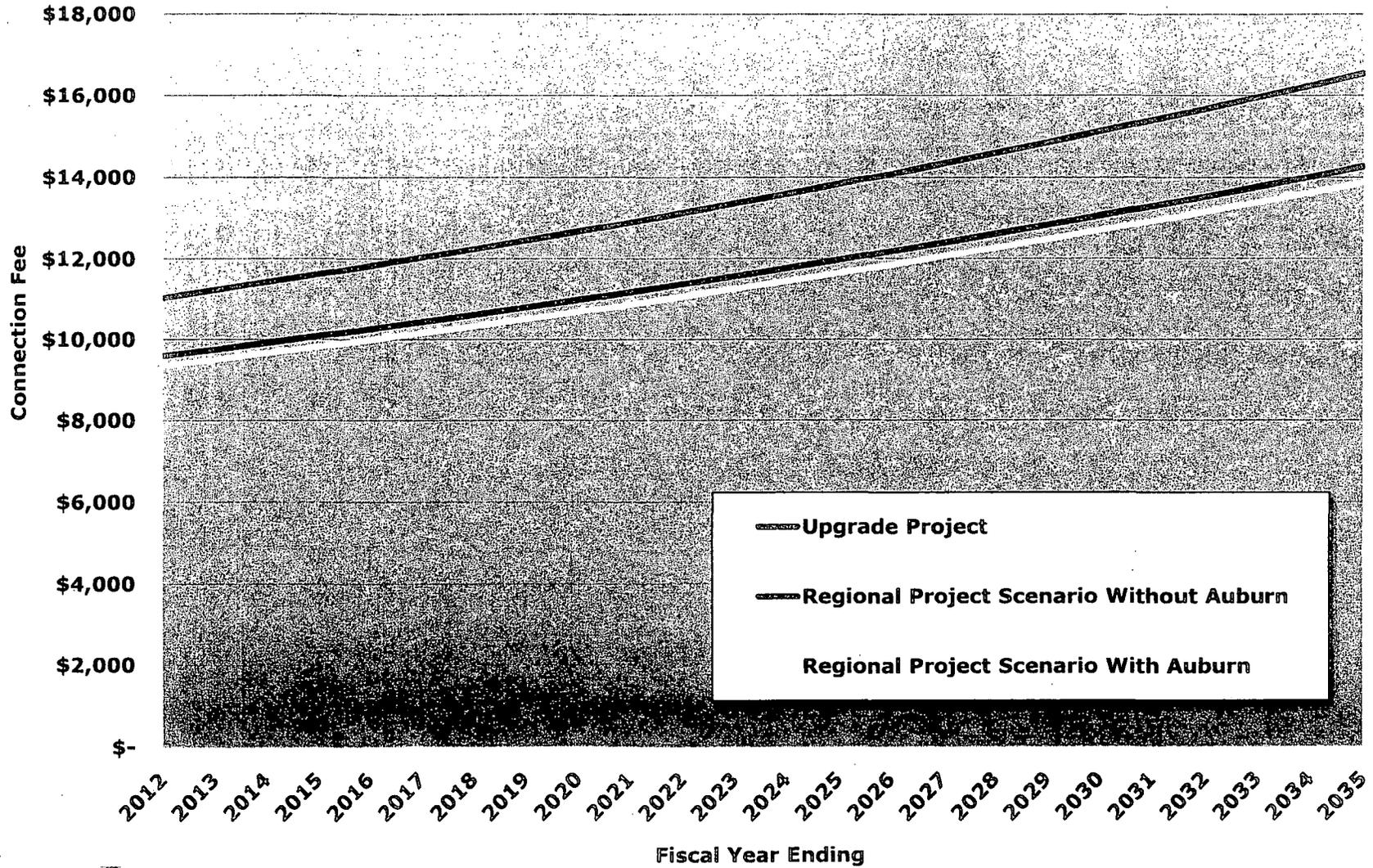
Issue	Upgrade Project	Regional Project with Lincoln
Risk	Lower risk of construction cost delays and cost overruns. Lower risk of failing to obtain environmental approvals. No risk of failing to reach agreement with regional partners.	Lower risk of failing to meet future permit requirements. Lower risk for accidental discharges of untreated sewage, although this is still possible.
Liability	County remains liable for treatment plant operations, including potential accidental discharges to Rock Creek.	Liability primarily shifted to Lincoln, although cost impacts would be passed on to SMD 1 customers.
Environmental impacts	Short-term construction impacts and long term addition of tertiary treated wastewater to creek.	Short-term construction impacts due to construction and long term reduction of creek flow.
Environmental benefits	Adds capacity to handle high I&I flows. Meets all current treatment requirements. Keeps flow in Coon Creek for fish and wildlife use and irrigation.	Adds capacity to handle high I&I flows. Meets all current treatment requirements. Provides treated wastewater for irrigation to farmers near Lincoln.
Schedule	New plant estimated to be partially functional in 2013 and fully functional by December 2014.	Lincoln staff predicts connection by 2013, with completion of treatment plant expansion by 2014/2015. This schedule appears overly optimistic.
Availability of grant funds	None available.	\$2.5 million in grant funds currently available. Use of grant funds might delay project completion, so no decision yet on whether to use these funds. Grant funds may also be used on the SMD 3 Regionalization Project.
Staffing needs	Same as at present.	Reduction of 2-4 full time equivalent County positions expected at Plant 1.

Mid-Range Scenario: Comparison Between Upgrade and Regional Projects Estimated Monthly M&O Fees

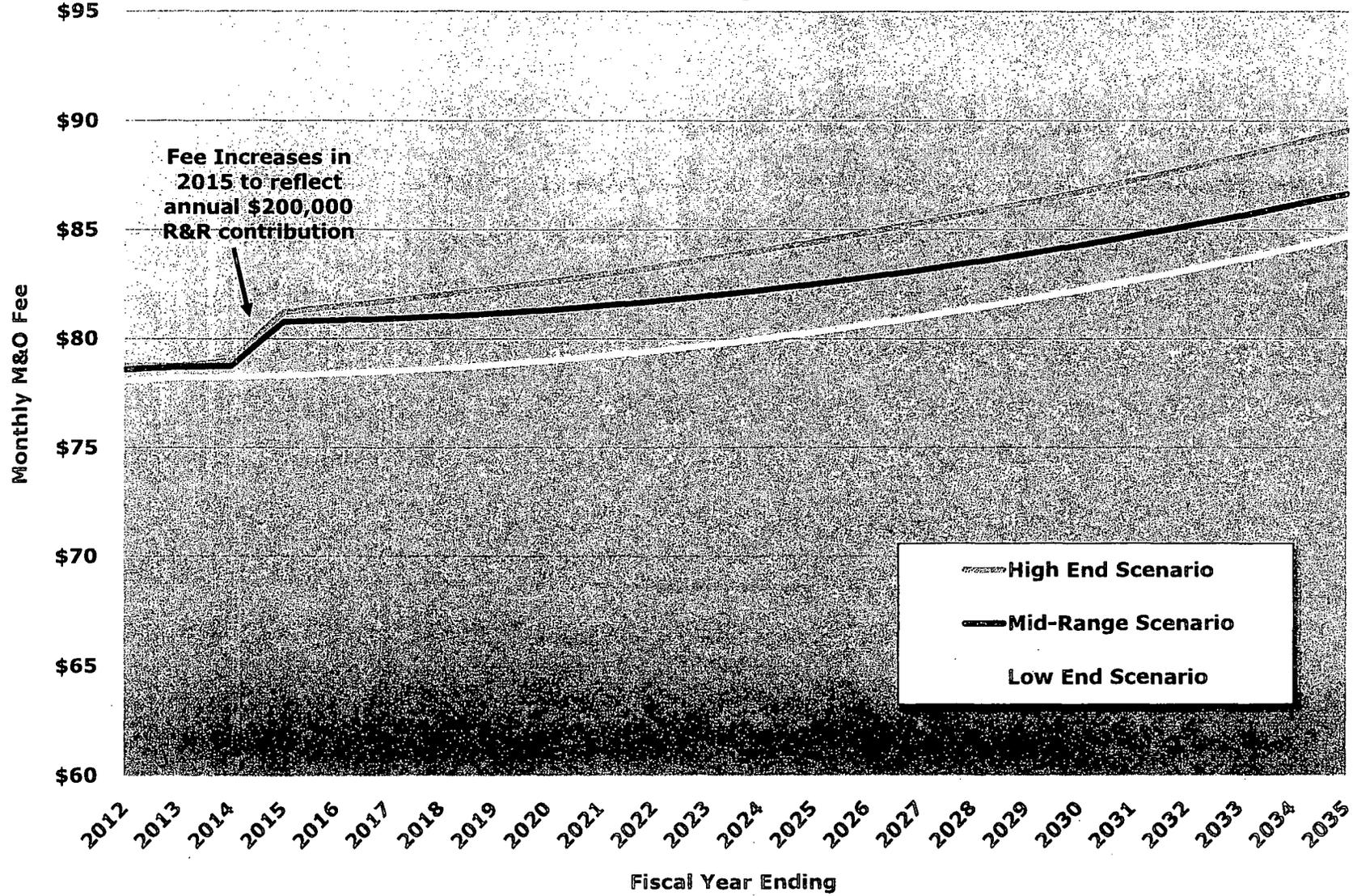


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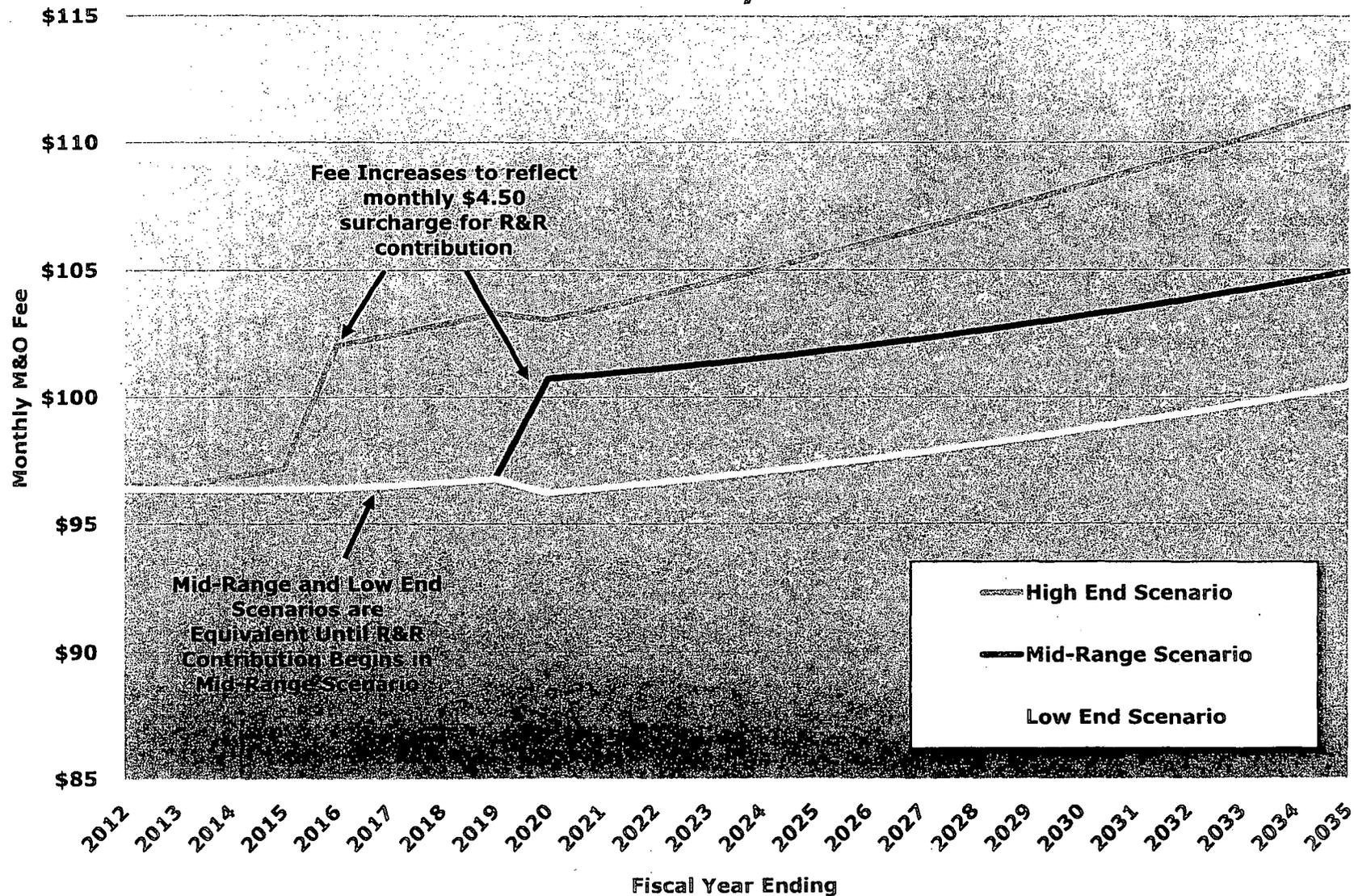
Mid-Range Scenario: Comparison Between Upgrade and Regional Projects Estimated Connection Fees



Upgrade Scenarios: Estimated Monthly M&O Fees



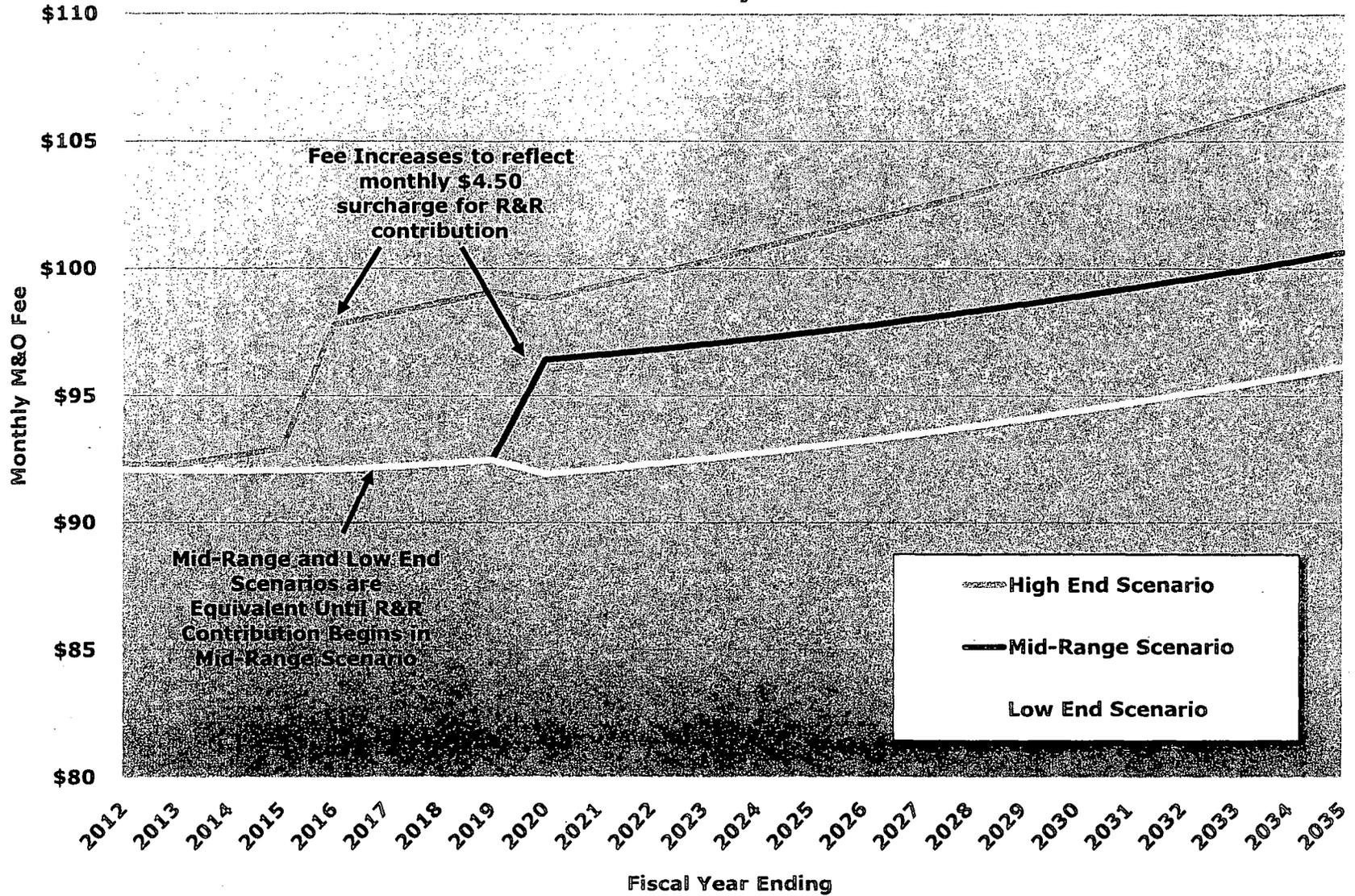
Regional Scenarios Without Auburn: Estimated Monthly M&O Fees



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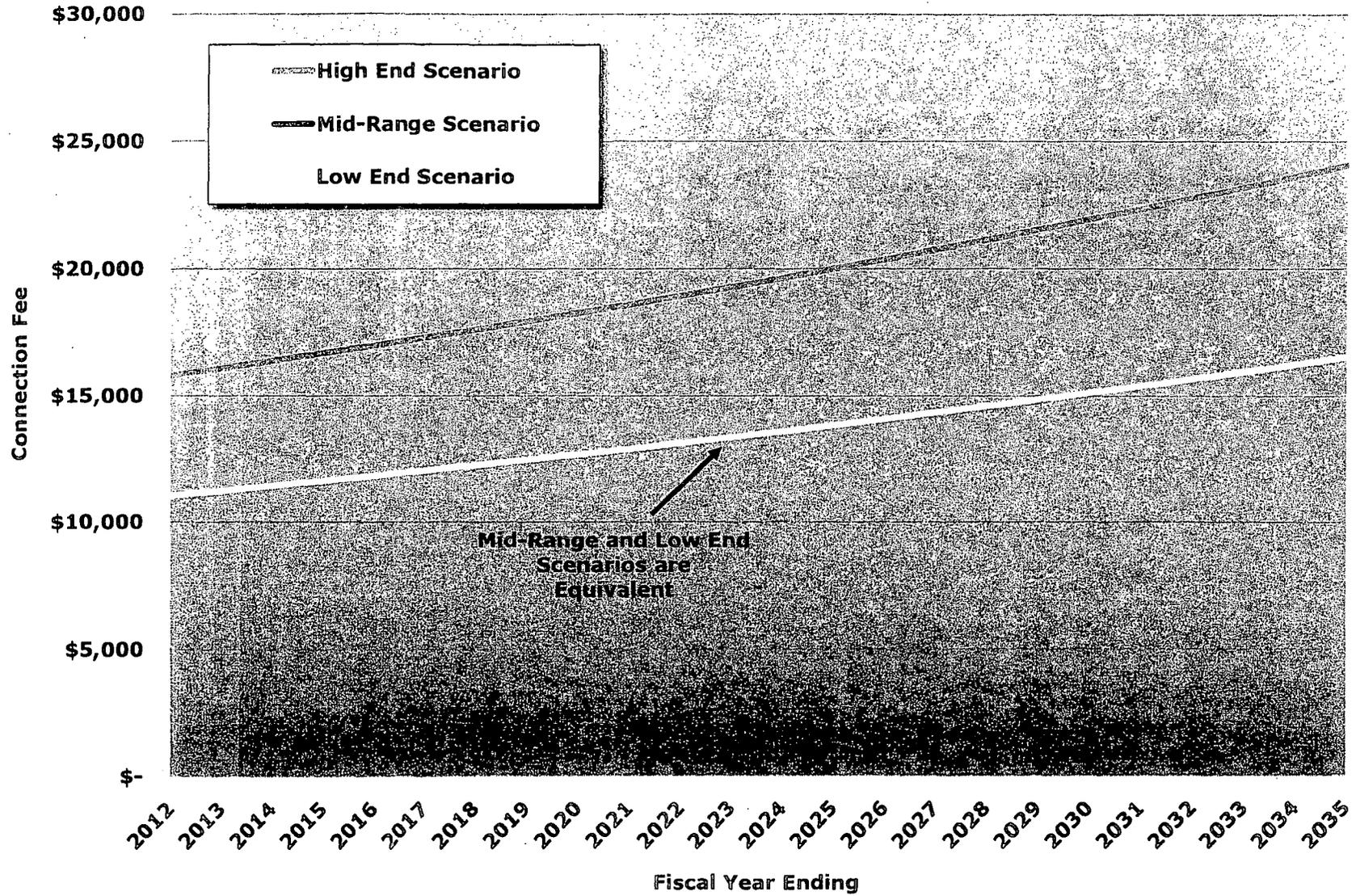
Regional Scenarios With Auburn: Estimated Monthly M&O Fees



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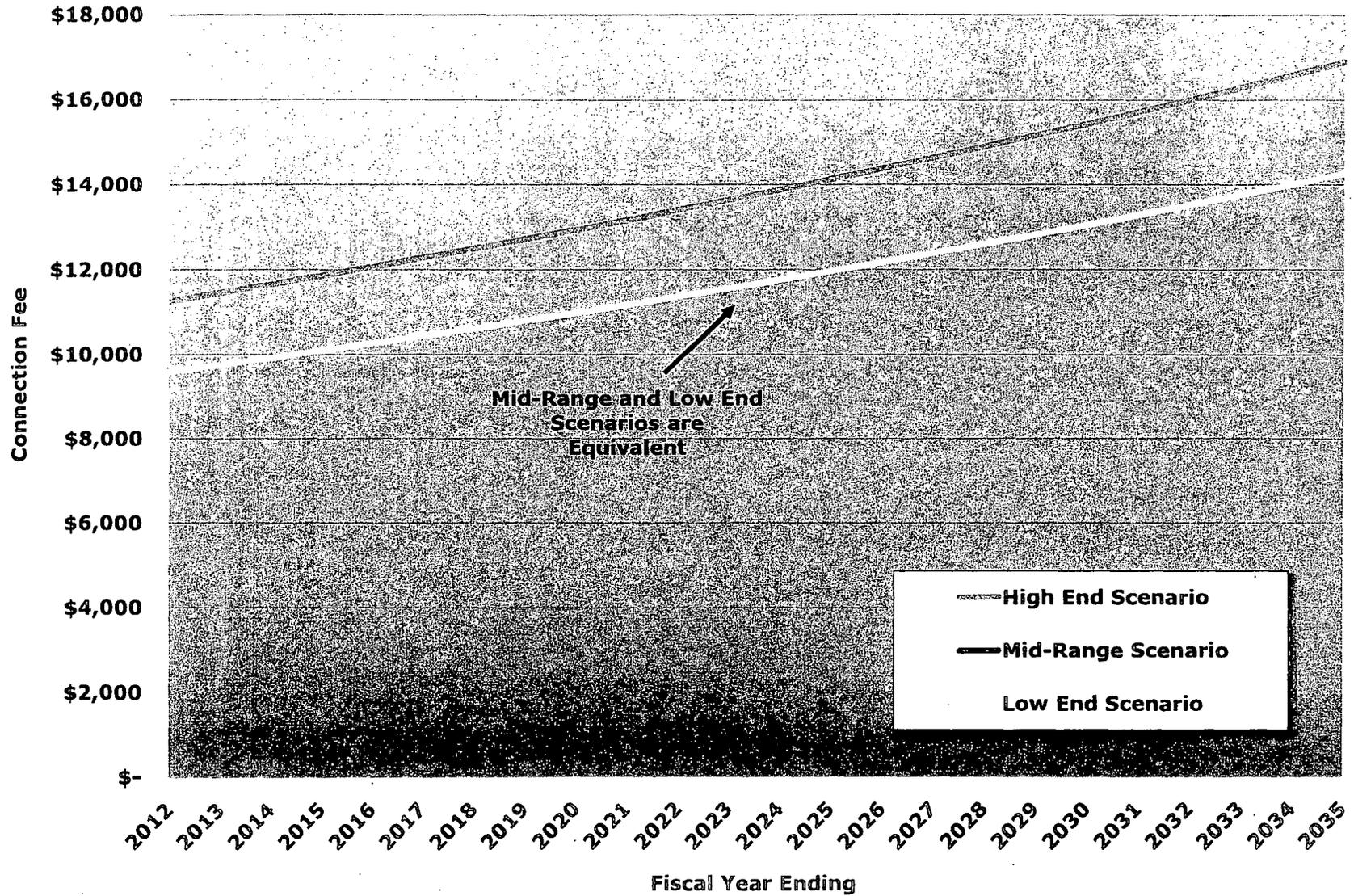
Upgrade Scenarios: Estimated Connection Fees



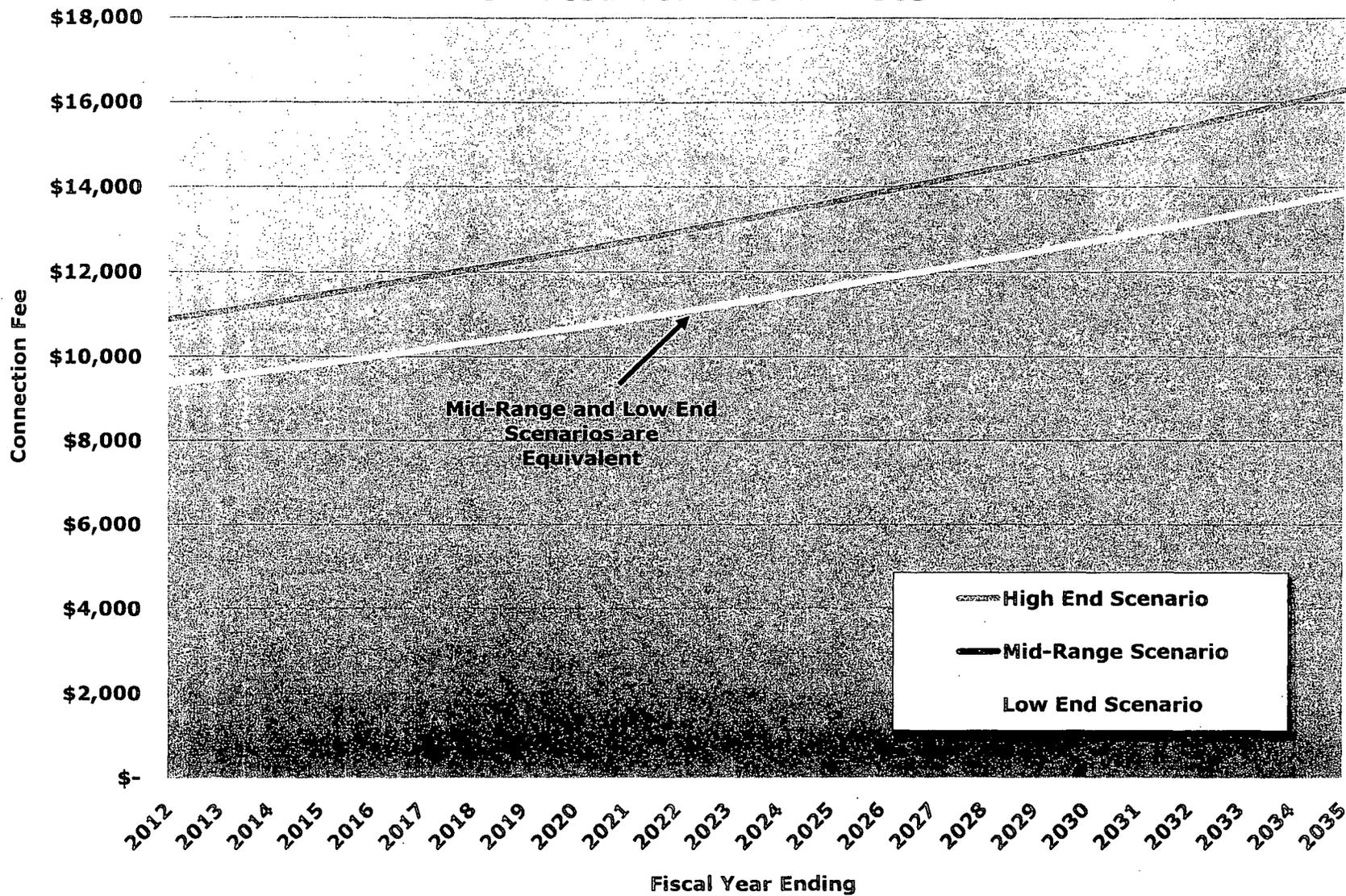
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Regional Scenarios Without Auburn: Estimated Connection Fees



Regional Scenarios With Auburn: Estimated Connection Fees



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**MEMORANDUM
DEPARTMENT OF FACILITY SERVICES
COUNTY OF PLACER**

To: BOARD OF SUPERVISORS **Date:** FEBRUARY 8, 2011

From: JAMES DURFEE / WILL DICKINSON

Subject: SEWER MAINTENANCE DISTRICT 1 WASTEWATER TREATMENT
PLANT COMPLIANCE PROJECT UPDATE

ACTION REQUESTED/RECOMMENDATION: No action requested. This item is for information only.

BACKGROUND: Sewer Maintenance District 1 (SMD 1) provides sewer service to approximately 7,900 Equivalent Dwelling Units in the North Auburn area. The SMD 1 Wastewater Treatment Plant (Plant 1), constructed in 1961, uses biological and filtration processes that cannot meet regulatory standards included in its current discharge permit with the Regional Water Quality Control Board (RWQCB). Compliance schedules that provided the County protection from fines and third party lawsuits expired on March 1, 2010. Staff anticipates fines of approximately \$180,000 per year from now until September 2015, when monthly fines could total \$2,500,000 per year until compliance is achieved. Plant 1 is also nearing the limit of its capacity to effectively treat sewage generated in SMD 1 and must be expanded to serve future customers.

Two options have been pursued in parallel to achieve compliance at Plant 1:

- Option 1 - Upgrade and expand Plant 1.
- Option 2 - Regionalize sewage treatment by building a pump station and pipeline to the Lincoln wastewater treatment plant and expanding the Lincoln plant to handle SMD 1 flows.

On May 18, 2010, your Board approved an Agreement with Owen Psomas (Psomas) for final design (\$3,173,700) and construction management (\$4,710,800) of the Upgrade Project. By February 1, 2011, Psomas will have billed approximately \$1,750,000 for design work. With this funding they have conducted a value engineering study and completed 60% design documents. Per your Board's direction on May 18, 2010, we are also proceeding through the application process for a State Revolving Fund loan for the Upgrade Project.

On September 22, 2010, SMD 1 received a new discharge permit and Cease and Desist Order that requires the County to:

- Complete final design and environmental clearance of the Upgrade Project by July 31, 2011;
- Award the construction contract by December 31, 2011; and
- Complete construction by December 31, 2014.

The Upgrade Project is on schedule to meet these deadlines.

The SMD 1 Regional Sewer Project has been considered in conjunction with a similar project proposed for the City of Auburn. Placer County, City of Lincoln and City of Auburn staff and elected officials have been meeting for several years under the umbrella of the Placer Nevada Wastewater Authority (PNWA) to determine the feasibility and cost of regionalization. Although there has been considerable staff and consulting resources devoted towards fine tuning planning level cost estimates for the Regional Sewer Project (there is no existing design), the most recent estimated capital and life cycle costs of regionalization were still significantly higher than the Upgrade Project.

Last November the City of Lincoln put forward a new regionalization concept whereby the City would design, construct, operate and own all the equipment and structures needed to transmit and treat all Auburn-area sewage. The County and Auburn would pay Lincoln for capital improvements, treatment and conveyance costs. On November 23, 2010, your Board approved a Memorandum of Understanding with the City of Lincoln and City of Auburn to fund \$70,000 of additional engineering work needed to enable the City of Lincoln to bring forward their proposal for the regional project by February 2011. Staff from the City of Lincoln is present today to update your Board on their progress.

ENVIRONMENTAL CLEARANCE: Environmental consultants for the County are on schedule to have a Mitigated Negative Declaration evaluating the Upgrade Project ready for approval by early May. The City of Lincoln plans to complete an EIR and EIS for their regional proposal by March of 2012.

FISCAL IMPACT: Staff now estimates the total cost of the Upgrade Project at \$64.3 million, of which \$2.3 million has been spent to date. The remaining project costs total \$62.0 million, including all remaining engineering and environmental work, administration and construction.

Costs for pursuing regionalization will depend on the proposal put forward by the City of Lincoln.

JD:WD:LM

CC: COUNTY EXECUTIVE OFFICE

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EXHIBIT B1

CITY OF LINCOLN REGIONAL SEWER PROPOSAL UNRESOLVED QUESTIONS & CONCERNS

Cost

1 - Likelihood of Costs Exceeding the Firm Prices

There are many different ways in which the cost paid by SMD 1 customers could exceed the Firm Price. The product delivered under the Firm Price proposal could also change. Use of the term Firm Price may be confusing for the following reasons.

- a. **Comment:** The contingency provided by the oversizing cost buffer of \$12 million is only 12% of the SMD 1 project cost as estimated by Lincoln. Beyond that point, SMD 1 pays for overruns.

Lincoln Response¹: *"The contingency provided by the \$12 of oversizing paid for by Lincoln over the last 10 years is 15% of the \$80 million new project cost. If the new project cost exceeds \$92 million, Lincoln would receive no reimbursement for its investment, SMD 1 and Auburn would receive the use of the oversizing at no cost and SMD 1 and Auburn share the extra costs if the total new project cost exceeds \$92 million."*

Remaining Concern: Without Auburn's participation the oversizing reimbursement paid to Lincoln decreases to \$7.1 million, which is 12% of the project cost. The oversizing contingency is possibly less than stated above because Lincoln agreed to absorb additional costs for emergency storage and decommissioning of Plant 1 after submitting their Firm Price.² SMD 1 customers will pay for all costs in excess of the Firm Price.

- b. **Comment:** Lincoln maintains the right to increase the Firm Price estimate by 5% if the Board of Supervisors does not sign the agreement by March 1, 2011 and make an initial payment of \$1.9 million by March 31, 2011 (see Article 3 and Exhibit C of Design Agreement and Article 13 of Construction and Operation Agreement).

Lincoln Response: *"If the Board of Supervisors and Auburn Council do not execute the regional sewer agreement by the end of March 2011 the project construction will likely slip one construction season and Lincoln may need to increase the costs approximately 5% (\$4 million) to account for the cost increases and increased risk associated with the delay."*

Remaining Concern: An agreement was not reached by March 31st, so a 5% cost increase remains at Lincoln's discretion per the proposal.

¹ All City of Lincoln responses are direct quotes.

² Lincoln is also obligated to pay Del Webb \$2.25 million for oversizing over a five year period after they expand their treatment plant to 4.5 mgd (which will happen if the Regional Project proceeds). Lincoln staff has stated that they intend to repay this commitment through the oversizing reimbursement, but will use other City funds if necessary.

- c. **Comment:** Lincoln maintains the right to increase the Firm Price estimate if “County and Auburn choose to incur additional costs or delay the Project to pursue the use of outside funding sources...” Utilizing Federal grant funds for this project would likely delay the aggressive schedule proposed by Lincoln.

Lincoln Response: “...the County and Auburn would be responsible for the extra costs associated with pursuing outside funding sources. Utilizing Federal grant funds for this project could delay the project schedule and increase project costs. The County and Auburn would need to assess the risk of pursuing such funding compared to the value of the potential funding.”

Remaining Concern: Use of Federal grant funds on this project does not appear feasible following the schedule proposed by Lincoln.

- d. **Comment:** How much interest will Lincoln have in continuing the Project if it becomes apparent during the design, financing and environmental review phase that capital cost overruns will result in little or no oversizing reimbursement for the City?

Lincoln Response: “Lincoln is committed to the legally binding agreement even if it becomes apparent during the design and environmental review phase that capital cost overruns will result in little or no oversizing reimbursement for the City. The long term operational cost savings to all agencies are still substantial.”

Remaining Concern: A recent outside audit of the City of Lincoln finances seems to indicate that recovery of the entire oversizing reimbursement is necessary to remove a negative balance of \$8.7 million in their Wastewater Fund³. The City may have less ability and interest in pursuing the Regional Project if they cannot recover all of the expected oversizing reimbursement.

- e. **Comment:** Lincoln’s Firm Price for operating costs extends for five years only. After that, Lincoln can raise fees as they feel appropriate. Because the Firm Price was developed without design, financing or environmental review, it may not fully reflect long-term costs.

Lincoln Response: “...At the treatment plant Lincoln is limited to cost increases that its residents will also share. The conveyance facilities have been redesigned to be very cost effective to maintain and the very minor operation and maintenance costs will be reviewed and shared by the County and Auburn. Lincoln is obligated to review all cost details with the County and Auburn. The elected officials from the County and Auburn will have direct access to the Lincoln City Council to express arrangements that appropriately address responsibility, costs and rate setting arrangements. At one point Lincoln proposed a three agency Board that would make rate adjustment decisions; however, Lincoln was concerned that one of the participating agencies may not approve rate increases required for compliance with regulatory requirements thereby putting Lincoln in an unacceptable position of having its operations out of compliance. Extensive design and analysis work has been completed and Lincoln is confident in the firm prices contained in the agreement.”

³ Richardson & Company audit of Fiscal Year 2009/10, page 7 “Deficit Cash Balances in Funds”.

Remaining Concern: County staff agrees that operations at the existing treatment plant are stable and costs relatively predictable. However, Lincoln has never treated and conveyed SMD 1 or Auburn wastes, and these waste streams are different (particularly since Auburn's wastes will be partially treated). In addition, the County has concerns regarding Lincoln's plans to fit SMD 1 flows of 1.7 mgd into Lincoln capacity of 1.4 mgd for 2-3 years. This concept has not been thoroughly explored or designed. Staff does not agree that extensive design and analysis work has been completed, particularly for the pipeline and pump station, and does not share confidence in the firm prices. Lincoln has consistently favored optimistic assumptions regarding costs and has cut contingencies in many places.

- f. **Comment:** Lincoln maintains the right to increase charges to all customers on a fair share basis at any time if "new regulations affecting conveyance, treatment and disposal" change.
- g. **Comment:** The agreement for construction and operation attached to the design agreement is a rough draft at this time. There are many critical points yet to be negotiated that have cost implications for either SMD1 or Lincoln. Lincoln staff has stated that any changes to the agreement that result in cost increases to them will be passed on to SMD 1 customers.

Lincoln Response: *The Draft Construction and Operation Agreement is the basis for the firm costs provided in the proposal. If there are no changes to the draft agreement required by the County, then the firm prices remain firm. If the changes required by the County increase costs associated with the project then these increased costs will be defined, to the extent possible, and provided to the County prior to the decision on whether or not to incorporate the change. If a firm estimate is not feasible due to the nature of the required change, the range of costs will be discussed prior to the change being made. Changes to the draft agreement not required by the County will not affect the firm price to the County. Lincoln believes that the draft agreement is a solid general definition of the provisions that are necessary for this project to proceed in a fair and reasonable manner. Lincoln has been and will continue to be open to reasonable changes to the draft agreement. Changes that significantly increase cost will be openly addressed. We hope that everybody can understand that Lincoln is taking on a significant risk associated with this firm price proposal and in doing so has carefully examined the upside and downside to the risks determining that the proposal as submitted contains risks that are acceptable to Lincoln. To limit these risks, Lincoln needs to carefully evaluate any change to the documents and assign extra costs where appropriate for changes required by the County.*

Remaining Concern: Lacking an environmental document and design, it is difficult to develop complete and comprehensive agreements for construction and long-term operation of a project of this size and complexity. Cost increases seem a likely outcome of future negotiations if the County requests changes necessary to protect our customers.

2 - Deferred Replacement and Rehabilitation Expenses

Comment: During TAC discussions, Lincoln agreed to include a cost of \$4.50/EDU/month for future replacement and rehabilitation of the treatment plant and pipeline/liftstation. To develop the firm price offer they propose to defer this cost until Year Six of operations. This deferral will result in the loss of five year's funding (\$1.7 million) for important projects in the future and/or the need to increase the fee more than \$4.50 per month at Year Six.

Lincoln Response: *"The purpose of a Replacement and Rehabilitation (R&R) fund is to avoid spikes in customer rates. With the current economy, Lincoln has proposed that the build-up of the R&R reserve not start until at least the sixth year of operations. The most costly portions of the treatment plant and pipeline are designed to last at least 50 years (pipeline and concrete structures). The most likely financing will come from the State Revolving Fund (SRF) which provides financing over a 20 year period. The best approach to rate stabilization may be to build most of the R&R reserve after the capital debt service is paid off in 20 years. Replacing all or a portion of the debt service payment with R&R reserve allocations starting in 20 years could very rapidly build up a substantial reserve for R&R. The smaller equipment that needs replacement before the end of the 20 year financing period could be funded through the operations budget with minor adjustments to the rates as needed (5% range)."*

Remaining Concern: Lincoln's existing treatment plant has been in operation for 7 years. Per Lincoln's proposal, the SRF financing repayments would not end until 2036, which is 25 years from now. It seems likely that major R&R on the existing plant will be needed prior to that time.

3 – Environmental Mitigation Costs

Comment: Environmental review for this project has not begun, so mitigations are unknown. Mitigations can affect both construction costs and operating costs. Stantec has estimated that one anticipated mitigation measure – make up water to replace water taken from creeks – could cost from \$0-\$250,000/year. What contingency did Lincoln include in their operating costs for mitigations?

Lincoln Response: *"The project construction is almost exclusively in existing wastewater treatment plants or in County roads so very little environmental mitigation is expected. The treated wastewater that is to be removed from the creeks is the most significant potential from possible mitigation. Stantec's research reveals that if mitigation is required for removal for the wastewater from the creeks, the cost of this water would range from \$0 to a maximum of \$250,000 if all of the removed water had to be replaced (a very unlikely scenario). Even if this very unlikely scenario occurred, Lincoln would absorb this cost in the savings it will accrue from sharing treatment plant operations and maintenance with the County and Auburn."*

Remaining Concern: There has not been sufficient progress on this project to provide confidence regarding mitigation costs. Dealing with State and Federal environmental agencies is a very complicated and time-consuming process. It may be that Lincoln will be willing to absorb unanticipated costs temporarily; in the long run, though, the costs must be passed along to SMD 1 customers.

4 – SMD 1 Site Decommissioning Costs

Comment: The previous value engineering cost estimate prepared by the TAC included \$1,500,000 for decommissioning the existing structures at Plant 1. Lincoln's original cost proposal assumed that no decommissioning would take place at Plant 1. At the 2/15/11 TAC meeting Lincoln agreed to include the decommissioning as part of the project. Will Lincoln be adjusting the Firm Price cost proposal to incorporate this cost?

Lincoln Response: *"The previous estimate to decommissioning the SMD 1 plant was for a different approach to decommissioning. The approach described in Gabe Aronow's email message included leaving specific structures for overflow and removing specific structures to below ground level. This approach will have a much lower cost and has been confirmed with a demolition contractor. This estimate assumes that the County will empty its sludge and waste materials from the structures as a part of the plant shut down. Lincoln's contractor would then come in and demolish the selected structures after all processes are offline. This lower cost approach is included in the firm price proposal."*

Remaining Concern: Demolition of more than half of the existing WWTP 1 structures will add a significant cost that was not accounted for in Lincoln's original firm price estimate. Adding these costs will further reduce the available contingency funds for the Regional Project.

5 – Emergency Storage Costs

Comment: The previous VE cost estimate prepared by the TAC included \$4.4 M for 10 MG of emergency storage (\$0.44/gallon). Lincoln's original cost proposal assumed no storage at Plant 1. In Bruce Burnworth's 2/15/2011 e-mail (confirmed at the 2/15/2011 TAC meeting), Bruce agreed to include 3 MG of emergency storage in the Lincoln proposal. What is the cost of this storage and will Lincoln be adjusting the Firm Price cost proposal to incorporate this cost?

Lincoln Response: *"Gabe Aronow's addendum and email describe the approach we propose for establishing 3 million gallons of emergency overflow volume. It includes using selected existing structures and an earthen basin with a low berm. We are confident that this much lower cost approach (less than \$100,000) is included in Lincoln's firm price proposal."*

Remaining Concern: County staff does not believe that the Lincoln storage plan is sufficient to prevent overflows and future regulatory actions (see Exhibit B3, Comment 8). More storage should be designed into the project now and the estimated project cost increased accordingly.

6 - Firm Price Based on Only 18% Hard Rock (Not 27% per Geotech)

Comment: The Placer Nevada Wastewater Authority Technical Advisory Committee (TAC) hired Brown and Caldwell in 2010 to estimate the amount of hard rock anticipated along the pipeline alignment. Brown and Caldwell subcontracted its geotechnical to Fugro geotechnical engineers. The Fugro report indicated the Baxter Grade Rd. pipeline alignment option included approximately 27% hard rock (by volume), based on

the assumption that rock with seismic refraction velocities over 4,000 feet per second (ft/sec). Stantec did not agree with Fugro's 4,000 ft/sec assumption. Stantec hired Blackburn geotechnical engineers. Blackburn produced a report that indicated on both pages 3 and 4 that "an excavatable velocity boundary of 4,000 ft/sec is generally consistent with [our work]." Based on that report, Stantec completed its TM 1 which says that "additional geotechnical exploration revealed that a substantial portion of the pipe alignments are considered excavatable without rock blasting." This leads one to the conclusion that the Stantec report supports the conclusions of the Brown & Caldwell report.

Lincoln Response: *Stantec retained Blackburn Consultants, Inc. (BCI) to perform supplementary subsurface geotechnical evaluations in areas identified as having shallow hard-rock. BCI utilized a relatively small excavator (Caterpillar 312C) as a means to better correlate sound velocity and rippability. Stantec has made no representations as to the adequacy of either the Fugro or Blackburn explorations or the accuracy of their conclusions. Rather, Stantec supports supplying bidding contractors with as much information as possible in an effort to obtain as close to bid level construction estimates as possible.*

The pipeline contractors reviewed all of the available data and independently, including the Fugro Report, the BCI report and their own study of the alignment and concluded that the pipeline trench could generally be excavated using conventional equipment with only minimal spot blasting required. The contractors also noted that they would be using a larger excavator than Blackburn used for the test excavations as well as a special rock bucket as appropriate. They were confident that based on their experience in the area and the appropriate equipment, they would be able to excavate through all but isolated spots with very hard rock.

Remaining Concern: See Comment 7 below.

7 - Pipeline Excavation Estimate Includes Costs for Hard Rock (Q1)

Comment: Section 1.2.3 of the Stantec report states: "The contractors provided their opinion on the costs they generated with respect to the inclusion of contingency, level of conservatism, and their perception of the estimate as a bid or a budget." Section 1.2.3 goes on to state: "These values represent an interpretation of possible near bid costs without allowances for change orders or contingency. Allowances for change orders, additional contingency, and soft costs are added summarily to the total near bid level project cost estimates separately with City of Lincoln direction." What are the allowances that were directed by the City of Lincoln and how were they determined? How do these allowances compare to the information provided by the contractors? Does Stantec stand behind the overall estimates?

Appendix B includes pipeline cost estimates from 2 contractors, Syblon Reid and Teichert. Syblon Reid's cost estimate memo recommends Stantec include a "rock clause." The County does not typically use rock clauses in its contracts. Rock clauses basically state that the contractor is not responsible for increased costs based on rock excavation costs. The County does not want to shift the cost overrun risk from the contractor to Auburn/SMD 1. Syblon Reid's estimated construction cost assumed no hard rock. How much contingency for hard rock was included in Stantec's costs presented in TM 1?

Lincoln Response: Both of the pipeline contractors were provided the geotechnical information prepared by Fugro for Brown and Caldwell's TM3, along with the supplemental information prepared by Blackburn Consulting for the Value Engineering and Price Refinement Report. Based upon this information, both contractors independently concluded that the pipeline trench could generally be excavated using conventional equipment with only minimal spot blasting required.

Section 7.2 of Technical Memorandum No. 7, Pipeline Installation and Geotechnical Evaluation states, 'The Contractors who assisted in producing closer to bid level estimates for the Project Team indicated they do not anticipate any blasting on this Project other than spot blasting or at low spots like creek crossings. They indicated for that reason, the most cost effective method of getting lower bids on the Project is to include a rock clause with a definitive amount, ranging from \$250,000 to \$500,000 for the total pipeline project. Syblon Reid included \$500,000 in their estimate and Teichert assumed \$250,000 in their estimate. By including a rock clause, the contractors bidding the job would assume less risk, which would reduce overall bid costs.

Using the logic presented by the two contractors, and the understanding that significantly more geotechnical exploration would be performed during the Phase 2 – Design portion, providing bidders with even more subsurface geotechnical information, the design team conservatively included a Rock Contingency of \$250,000. (See Line Item No. 9 in the Estimate of Probable Wastewater Pipeline Construction Costs tables contained in Technical Memorandum No. 13 – Evaluation of Various Pipeline Alignment Alternatives).

Stantec indicated in an email that it is "usually establishing not to exceed planning level budgets for clients, not estimating actual current bidding costs as we're trying to do here. The mark-ups were stripped off with [the estimating contractor's] knowledge to represent a current near-bid price. [The estimating contractor] did not think anything was left out."

Remaining Concern: Insufficient geotechnical work has been performed to accurately determine the amount of rock that would need to be blasted to facilitate pipeline construction. Brown & Caldwell estimated that 27% of the trench volume would require blasting at a cost of approximately \$2,500,000. Current estimates included in the Stantec report include only \$250,000 for blasting along the pipeline alignment and recommend a rock clause be included in the construction contract to pay for additional rock encountered during excavation. Any required blasting beyond \$250,000 will exceed Lincoln's estimated construction cost and reduce the available contingency for Lincoln's Firm Price.

EXHIBIT B2

CITY OF LINCOLN REGIONAL SEWER PROPOSAL UNRESOLVED QUESTIONS & CONCERNS Construction and Operations Agreement

1 – Concerns with Draft Construction and Operation Agreement

Although Lincoln staff has agreed to make many changes to their original draft Construction and Operation Agreement, there are several sections remaining to which County staff has objected, including the following:

- a. **Comment:** Article 4. The requirement is to spend \$500,000 per year (adjusted for inflation) on Inflow & Infiltration reduction activities until "...the Peak Wet Weather Flow is less than 3.5 times the Average Dry Weather Flow." County staff agrees that some level of spending on I&I reduction is necessary; however, the County should have the flexibility to adjust the amount and goal as time goes on. 3.5:1 is a standard that the City of Lincoln has not achieved in its own collection system, and may never be possible in SMD 1.

***Lincoln Response¹:** Lincoln is open to changes to the requirements associated with reducing I&I. We already made some changes that the County requested (performance goal was changed to spending level, spending level was reduced from current \$600,000 per year to \$500,000 per year). What other changes are desired? Would the County prefer a goal of 4 times the ADWF (Lincoln's current I&I ratio)? Would the County prefer to continue this level of expenditure until regulatory agencies that currently require the County to reduce I&I indicate that sufficient effort has been made to reduce I&I? Lincoln's main concern is that appropriate steps be taken over time to reduce I&I so that the current peaks that adversely affect operations of the WWTRF are reduced.*

Remaining Concern: This is a difficult issue to resolve at this time while protecting the interests of both parties. County staff has made several suggestions to which Lincoln does not agree. These include building storage to address peaks and raising the ratio to 4.5. Other possibilities include ending the requirement after 5 years or simply relying on the County to take appropriate action. County has spent an average of \$500,000 per year for the last three years without dramatically reducing I&I. Future efforts may require ordinance changes to address I&I from private homes, which will be a contentious issue for the Board of Supervisors.

- b. **Comment:** Article 5 provides Lincoln the opportunity to assess additional costs for "significant changes" in the SMD 1 wastestream that "may result in additional costs". This Article requires further definition as the possibility exists for unreasonable

¹ All City of Lincoln responses are direct quotes.

application of costs. In addition, Exhibit B is currently blank in regards to defining County constituents.

Response: *Lincoln is open to reasonable changes to requirements that the County to pay reasonable costs caused by significant changes in the County's waste stream constituents. What changes does the County propose? Having the County pay reasonable costs caused by significant changes in the County's waste stream is Lincoln's objective. We would appreciate having the County provide a through description of the levels of constituents in the County's waste stream as a baseline against which to measure significant changes.*

Remaining Concern: This is another issue that is difficult to quickly resolve.

- c. **Comment:** Article 6 allows Lincoln to use the higher of two different methods for calculating EDU capacity and connection charges in SMD 1. The first method simply tracks EDU growth through connections to the system. The second is based on changes in Average Dry Weather Flow metering data. As Lincoln states in response to a question from County, "Variation in flow rates is somewhat common as flow varies throughout the year and from year to year even without changes in connections." If an adjustment is allowed for changes in Average Dry Weather Flow, the adjustment should apply to increases and decreases equally.

Response: *Lincoln agrees that this section can change as a result of other changes in the agreement. This section now only applies to capacity since the TAC agreed to prorate operations expenses based on a combination of BOD load and flow. Lincoln can accept a reasonable tracking of EDUs as the sole determination connection charges.*

Remaining Concern: No concern if the change is accepted.

- d. **Comment:** Article 12 requires the County to turn over facilities worth several million dollars for \$1. The concepts surrounding ownership, rights of future users (e.g. Bickford Ranch) and collection of connection fees are still murky.

Response: *The draft agreement requires that the County allow Lincoln to use the part of the SMD 1 site needed for regional wastewater uses for \$1 per year. The County maintains ownership of the site. If the County and Lincoln agree that a portion of the site is not needed for current or future regional wastewater uses then the County would use that portion for whatever uses they desire. If the County has a strong desire to maintain ownership of the Bickford sewer line which will mostly be in the City, how does the County propose to address ownership, rights of future users and collection of fees? We are awaiting a description of how the County calculated a \$300 per EDU connection charge for the Bickford pipeline that was touted as a benefit to the regional sewer project and paid for by Bickford Ranch. For comparison, the City calculated a connection charge of \$152 for the incremental cost of capacity for 3.5 miles of pipeline across the City that the City paid the developer to*

oversize for the regional sewer project. On the surface this does not appear fair and we look forward to reviewing the County's calculations. The County needs to be able to establish a clear nexus for the connection fee, so that Lincoln can collect the connection fee from developers within the City.

Remaining Concern: County may not need to own the Bickford line, but rights for capacity in the line and payment of reimbursements must be defined.

- e. **Comment:** Article 13 sets out an unrealistic project schedule and then requires a 5% increase "in all fixed charges and fees" if the schedule is not met.

Response: Article 13 of the draft agreement was prepared before the Environmental Review and Design Agreement. Specifics that are in the Environmental Review and Design Agreement (Obligations of Lincoln and County/Auburn) override provisions in the draft agreement. The schedule was modified in the Environmental Review and Design Agreement to address County concerns. Lincoln understands that the County does not feel that Lincoln can deliver the project on the schedule we have provided. Lincoln is confident that it can complete the project on the schedule provided as long as the County and Auburn keep to the schedule defined for their actions. If the County and Auburn meet the schedule dates defined for their decisions (two main decision dates) then all delays and resulting extra costs that may be incurred by Lincoln are the responsibility of Lincoln in accordance with the provisions of the agreement. If the County or Auburn do make decision prior to the schedule dates, then it does not seem fair for Lincoln to be saddled with the costs associated with delays caused by the County or Auburn's action or inaction. If the County and Auburn approvals are delayed past March 30, 2011, a cost increase on March 30th is not an absolute certainty. We may be able to work together to mitigate the risk of a possible 5% cost increase. Lincoln foresees an increase in risk after March 30 and the 5% estimate is a number we have assigned to the increased risk. If Auburn and the County are interested in pursuing the project and desire the lowest possible cost, we may be able to work out arrangements that share this risk or avoid it altogether. For example, design and environmental review could be started with an incremental commitment of funds prior to March 30. We would be glad to discuss the options further.

Remaining Concern: When drafting the agreements, Lincoln apparently had a serious concern that delays past March 30th would expose them to cost increases of 5%. In spite of repeated requests by Staff to extend that deadline to allow more time for discussion of issues, Lincoln would not agree to an extension. If we accept this proposal, it will be important to understand what new deadline Lincoln would accept and at what additional cost. Also, the draft Agreement states that Lincoln will credit the County if fines are paid by the County after December 31, 2014. Where will Lincoln obtain the funds to cover these fines? Would Lincoln also agree to cover the County's exposure to lawsuits stemming from a failure to complete the improvements on time?

- f. **Comment:** Article 17 requires that all connection fee charges be remitted to Lincoln quarterly. County prefers to hold these fees in reserve until needed for future expansions.

Response: *Whether the County or Lincoln hold the connection charges paid for future expansions is not as important as the controls associated with the amounts paid. Either way, the amounts paid must be fully accounted for quarterly and all interest added to the amounts deposited so that the amounts paid increase with interest over time until they are needed for the purpose for which they were collected. If the County would prefer to bank the funds collected within the unincorporated area for future expansions, account for them and separately assign interest to the accounts, Lincoln would be receptive to such an arrangement.*

Remaining Concern: No concern if the change is accepted.

- g. **Comment:** Article 20 default provisions are not acceptable.

Response: *Lincoln has proposed default provisions that appear reasonable and protect the City against non-payment of charges by the County. The provisions do not come into effect unless the County or Auburn defaults for more than 60 days. Lincoln is agreeable to adding a provision that provides that the 60 day period does not start until Lincoln notifies the County or Auburn that it is in default. Such a default notice must be in writing and contain specifics regarding the default and what actions Lincoln request be completed to cure the default. Lincoln is also agreeable to adding mediation and arbitration clauses related to defaults and disputes if these are desired by the County or Auburn. Lincoln must be clearly protected from defaults and nonpayment. Default provisions associated with the financing through SRF will also be required by SRF. Does the County have suggestions on how to protect Lincoln from defaults and nonpayment by the County or Auburn?*

Remaining Concern: This is an issue for County Counsel.

- h. **Comment:** Article 22 governance provisions may not be acceptable and require further discussion at the elected official level. As proposed, County will only have an advisory role in decisions affecting this project. County will have no control over operations, cost allocations, connection fee setting, expansions, etc.

Response: *“As currently proposed in the agreement, both the County and Auburn will be on an oversight committee that will review all budgets, operating programs and possible rate increases. This committee will be made up of elected officials and have a significant influence over operations, cost allocations, charges, connection fees and methods of compliance with regulatory requirements. Lincoln is open to considering other forms of governance. Lincoln will retain responsibility for compliance with regulatory requirements. The project with one agency responsible for design and operation could transform into a Joint Powers Authority in the future if desired by all agencies.”*

Remaining Concern: If Auburn participates, County staff has suggested a Joint Powers Authority with a five person Board containing two County representatives, one of whom serves the Lincoln area and one the Auburn area. Responsibilities of the JPA would require considerable discussion. Staff feels that governance discussions must take place with elected officials directly involved, and should be resolved prior to accepting Lincoln's proposal.

- i) **Comment:** Article 23 (Bickford Ranch) - The Lincoln proposal assumes SMD 1 customers will pay all the cost of completing the Bickford line, with the further assumption that SMD 1 customers will get a reimbursement from Bickford developers or customers sometime in the future to make them whole. What is the justification for this approach? Wouldn't it be more equitable for Auburn and SMD 1 to contribute to the cost of completing the Bickford line (and all new shared lines) on a pro-rata basis and share any future reimbursement from connection fees on the same basis? Is Lincoln willing to adjust their proposal in this manner and is this acceptable to Auburn?

Response: *"The County has an agreement with Bickford Ranch to complete the sewer pipeline up to Sierra College Blvd. Neither the City of Auburn nor Lincoln have the ability to enforce the requirement that Bickford pay for completion of the pipeline. Lincoln can assist the County in the collection of the money by refusing to allow the Bickford Ranch to hook-up to the City sewer until they comply with the County requirements to reimburse the County. However, if Bickford complies with all of the terms of Lincoln's agreement with Bickford, we will have to allow them to hook up. If in the future the County negotiates a deal with Bickford where Bickford does something else for the County in return for not being required to pay for the sewer pipeline, then the residents of SMD#1 and Auburn would be out of luck. It seems like the County should consider paying for this section of sewer line – not even SMD#1 – and then obtaining reimbursement from Bickford Ranch. If the County and Auburn both want to make an arrangement for paying for this section of pipeline, Lincoln will cooperate in implementing such an arrangement. The challenge we see is that Auburn has little capacity in its sewer rate increases to pay for extra costs. Lincoln does not want to see the costs of the Bickford Ranch pipeline break the proverbial back of the Auburn rate payers. Auburn has no connection to Bickford Ranch, so their involvement financially appears inappropriate."*

Remaining Concern: It is not reasonable to expect the County to front the entire cost of the Bickford pipeline if Auburn will also use the pipeline. SMD 1 customers should not subsidize Auburn customers. Auburn staff supports changing this section of the draft agreement.

- h. **Comment:** Article 24 (Creek Water for Endangered Species) describes a procedure that must be worked out during environmental review.

Response: Article 24 is very clear regarding Lincoln providing for necessary creek flows as part of the O&M charge. The only areas that would change this Lincoln commitment is if the County or Auburn took some action that caused Lincoln to have to pay more than Lincoln would if the County or Auburn had not adversely affected the situation. For example, if the County took some action that damaged its relationship with NID and NID refused to provide any water to the Creek (even continue the existing flows) then it seems unfair for Lincoln to have to any more to address the creek water solution because of the actions of the County. If the draft language for Article 24 remains the same and the County complies with the draft provisions then Lincoln will perform as stated in the draft provision.

Remaining Concern: Article 24 is unclear and needs further discussion.

Conclusion: Many parts of the draft Construction and Operations Agreement require further negotiation. County staff has extensive experience with regional partnerships and understand that it is important to maintain an equal footing with the partner agencies in order to adequately represent our customers. If the County discontinues design and construction of the Upgrade Project in favor of the Regional Project, we will have greatly reduced our ability to effectively negotiate outstanding issues with Lincoln.

EXHIBIT B3

CITY OF LINCOLN REGIONAL SEWER PROPOSAL UNRESOLVED QUESTIONS & CONCERNS Feasibility

1 - Financing the Current Project

Comment: On 1/28/11 Lincoln removed the financing component of their offer, which has been an integral component of the deal. SMD 1 will have no collateral with which to finance if Lincoln (as proposed) owns the new infrastructure. Lincoln is actively working on a new financing proposal, but there has been no resolution yet.

Lincoln Response¹: *“Lincoln remains agreeable to arranging financing for the regional project through SRF once a financing plan is cooperatively developed. If the County desires to arrange for its own financing, the County financing expert has indicated that there are ways to address the need for the County to have the necessary collateral. Lincoln will cooperate in the assigning of collateral as necessary.”*

Remaining Concern: Our financing consultant does not agree that there would be an easy way to find the necessary collateral for the County to finance the project as proposed.

Lincoln has, subsequent to their formal proposal, submitted a financing and fee structure concept that County staff and our financial consultant would not recommend utilizing. The plan relies on escalating fees beyond what is needed to keep up with inflation in order to keep fees lower in the early years of the 20-year loan repayment period. It appears that some agreement with Lincoln for financing would be possible, however.

2 - Financing of Future Capacity at the Lincoln Treatment Plant

Lincoln plans to expand their plant by 1.7 mgd if SMD 1 regionalizes and Auburn doesn't. Lincoln has stated that this will leave 1.4 mgd of unused capacity in the plant.

- a. **Comment:** How was this surplus financed? Does this have any relationship to the Lincoln Utility Fund shortfall that has been part of the justification for the oversizing costs?
- b. **Comment:** Is any of the 1.4 mgd committed to future users? Was any of it pre-purchased?
- c. **Comment:** To finance the next expansion, Lincoln plans to collect connection fees from all future customers. We understand that the most cost-effective expansions take place in sizes of at least 2.1 mgd; therefore, connection fees collected before the next expansion (from granting less than 1.4 mgd of new connections) will fall short of what is needed for a cost-effective expansion. Lincoln is hoping to bridge this shortfall with developer financed pre-purchases of capacity. This seems to assume that it is acceptable to sell the pre-purchased capacity to other users while a

¹ All City of Lincoln responses are direct quotes.

development is building out, with the hope that Lincoln can bring new capacity on-line in time to meet the commitments to developers. In any event, it appears there will be a chronic shortage of financing that could lead to construction of inefficient, small-scale capacity projects. Wouldn't it make more sense to finance and build a larger expansion of the WWTRF now and recover those costs through future connection fees?

Lincoln Response: *“At the present time Lincoln has 1.4 MGD of wastewater treatment capacity available for new development. This extra capacity is available due to the slower than anticipated recent growth in Lincoln. Other wastewater projects in Lincoln have been deferred to pay for this current capacity. This capacity is not committed to any particular development but is available for any development to use as the development is completed. With the proposed agreement, SMD#1 and Auburn development will, after payment of connection charges, be allowed to use this capacity. To finance the next expansion, Lincoln proposes to collect connection fees from all future development in Lincoln, SMD 1 and Auburn. The most cost-effective expansions take place in sizes of approximately 2.1 mgd. Connection fees collected before the next expansion (from granting less than 1.4 mgd of new connections) will fall short of what is ideal for the most cost-effective expansion. Lincoln is proposing to possibly increase the incremental expansion to closer to 2.1 MGD with developer financed payments for capacity. This allows the use of existing capacity for smaller developments in Lincoln will finance part of the capacity in future expansions. Lincoln can bring new capacity on-line in a timely manner to meet the commitments to developers due to its master planned treatment plant layout. Smaller or larger increments can be constructed with minimal impact of long term capital costs.”*

Remaining Concern: This plan is heavily dependent on developer financing and utilization of capacity that may already be committed. See comment below.

3 - Estimated Value of Lincoln's Pre-Paid Sewer Connections

Comment: At the 2/15/11 TAC meeting Bruce Burnworth stated that there were some uncompleted developments that had pre-paid for some of the 1.4 mgd of capacity at the WWTRF and therefore would not be paying a connection fee when they hooked up. Can you quantify the number of EDUs associated with pre-paid connections? If that is difficult, can you provide an estimate with some defined degree of accuracy plus or minus, or a range? E.g., “Prepaid connections could represent between 40-60% of the existing capacity”.

Lincoln Response: *“No developers have ownership of any capacity in the Lincoln WWTRF. No developers have pre-paid for the existing 1.4 mgd of capacity in the WWTRF. Some developers have prepaid connection charges. Pre-payment is often required for larger developments to provide funds to build future capacity. PHI-Twelve Bridges, Del Webb, CA Sun Holdings and Bickford Ranch have prepaid connection charges. These prepaid connection charges total approximately 0.5 mgd of capacity. This does not mean that they control in any way the 1.4 mgd of capacity. It does mean that when they develop over the next twenty or more years they will not have to pay connection charges for a portion of their EDUs.”*

Remaining Concern: Future financing for expansion is dependent on revenue from new connections. Per the response, 35% of the existing 1.4 mgd of capacity could be considered encumbered by commitments to developers. Although it is true that the developers do not have ownership or control of the prepaid capacity, they do have a right to connect without paying connection fees. This makes future expansions dependent on obtaining developer financing - which is more difficult now than in previous years, or additional borrowing - which would drive up costs. As a worst case scenario, revenue for expansions may not be available to serve future development in a timely manner, resulting in sewer moratoriums until financing becomes available.

4 - Lincoln Treatment Plant Connection Fee

Comment: Lincoln has proposed charging SMD 1 customers a lower connection fee for wastewater treatment capacity than they currently charge their own customers. How can this be acceptable to Lincoln residents?

Lincoln Response: "Lincoln has proposed a connection charge of \$4,300 per EDU for treatment plant capacity. This fee would apply to all connections to the plant and provide for future expansions of the plant to meet community needs. The current Lincoln connection charge currently includes a financing fee which is proposed to be eliminated with the developer financing approach for large development projects."

Remaining Concern: The proposal is based on an approach that has not yet been approved at a public hearing. If approved, reducing the connection fee by approximately \$1,000 will result in less revenue for future capacity expansions, thus worsening the potential shortfall noted in Comment 3.

5 - Cost and Time Contingency

Comment: An accelerated schedule is likely to result in a greater than average number of flaws in the design documents resulting in change orders. Shouldn't a larger contingency (both cost and time) be maintained to cover these potential overruns?

Lincoln Response: "Lincoln is proposing a normal schedule for completion of bid documents with 12 months for completion of final bid documents. The approach of completing design and environmental review in parallel will result in fewer potential changes than normal. If Lincoln proposed a larger contingency, then the County and Auburn would end up paying more before any cost overruns are absorbed by Lincoln's oversizing reimbursement."

Remaining Concern: County staff does not agree that "completing design and environmental review in parallel will result in fewer potential changes than normal". The standard recommended approach is to have 30% design completed before beginning environmental review to insure that the project description is accurate and complete. County staff remains concerned that the project does not include adequate contingency to resolve unforeseen issues during the design, environmental and construction phases of the project.

6 - Likelihood of Meeting Proposed Schedule

Comment: Lincoln's schedule used in public presentations is unrealistic. The actual commitment for completion is one year longer than their published schedule. Even with the extra year, County staff believes the schedule is very optimistic. For example, the

schedule assumes that a federal agency will take lead agency responsibility on Day 1, and that environmental review can start before design work has begun. These assumptions are not realistic in our experience. Also, Stantec's report notes that the water rights lawyers "highly recommend" (p.16-3) that the Petition to Change Discharge (which is necessary for the Regional Project) be initiated only after CEQA/NEPA is completed. It is our understanding that SRF will not review the application for funding until this Petition process is complete. According to the Stantec report (p.16-4), the Petition process can take 1-3 years. Construction cannot begin until after the SRF loan is approved. We recommend that Lincoln revise their schedule to recognize these comments and the cautionary statements included in Section 16 of the Stantec report, titled "Environmental Constraints and Permit Streamlining".

Lincoln Response: "Lincoln has thoroughly researched the schedules included in the proposed agreement. It is confident that an Environmental Impact Report (EIR) for the project can be completed in one year. There are events that could delay this date and the schedule commitment included in the agreement allows for a one year delay in completion of the EIR. Lincoln's confidence in the one year schedule for completion of the EIR is reflected in its firm price that is based on construction starting in July 2012. If Lincoln takes longer than the one year to complete the EIR then it has the risk that their delay in completion of the EIR will result in higher costs that will reduce its reimbursement of oversizing. The design for the project is sufficiently complete at this point to define a project for environmental review. The pump station, pipe and treatment plant locations and sizes are all analyzed to the extent needed for environmental review. The environmental review will include some possible alternative pipeline alignment segments. The pipeline design details will be refined during the environmental review process to address any environmental concerns that may arise. This approach of concurrent design development and environmental review expedites both the environmental review and design processes resulting in an overall better project in a shorter period of time. If either the design or environmental review is completed first, then whatever is done first runs the risk of requiring changes to address issues raised. The timing of the Petition to Change Discharge has been further researched. The petition can be noticed concurrently with the EIR. After CEQA certification the petition review by staff takes 30 days followed by management review and final approval. More than 30 of these Petitions to Change Discharge from wastewater treatment plants have been approved quickly by the State Board in recent years. Only one such petition has received a protest from a party with the required legal standing. With appropriate timely action, Lincoln is confident that approval of the Petition to Change Discharge will not delay the project."

Remaining Concern: Lincoln's proposed 12 month schedule to complete CEQA/NEPA documentation is very aggressive. One of the many complex issues includes an analysis of reducing or eliminating effluent discharge on the receiving water ecosystem. In order to evaluate seasonal effects, an analysis of this nature would normally require a minimum of 12 months of flow data followed by data analysis and the development of appropriate mitigations as necessary. Failure to properly analyze such impacts increases the potential for challenges to the CEQA/NEPA documents. Delay in approval or resolution of a challenge of the CEQA/NEPA documentation will delay construction and could result in the loss of an entire construction season.

Additionally, Lincoln's proposed schedule has inconsistencies between the proposed schedule and the technical documents included in the Stantec report, and proposes several tasks being completed in parallel which must be completed sequentially. Examples include:

- Beginning the CEQA/NEPA process before completing preliminary design and having a detailed project description adequate for environmental review.
- Bidding projects before completion of the CEQA/NEPA process and certification of the environmental documents.
- Completing SRF funding approval before completion of the water rights petition process. SRF funding approval requires completion of the water rights petition process.
- Beginning construction of the project before completion of the water rights petition process.

Correcting Lincoln's project schedule to place these tasks in their proper sequence results in a realistic construction start date of March 2014 versus the June 2012 date shown in the current schedule.

7 – Limited Control on Quality of Project

Comment: Lincoln controls the design and construction project, so the County has no guarantee of the quality of the final project. Lincoln has already removed several safety features of the Brown & Caldwell conceptual design to reduce cost estimates. Examples include removing storage and reducing force main trench size and depth, decreasing pipe size, changing pipe specs, etc. This could be a concern both in terms of service delivery through the first twenty years and ultimate responsibility for the ownership and operation of the conveyance infrastructure beyond twenty years.

Response: *“During design and operations, Lincoln is obligated to continue to review project designs, operations and costs with the County and Auburn. The County and Auburn will have the ability to raise any issue related to design and operations to elected officials for resolution. Lincoln has modified several features of the Brown & Caldwell conceptual design to make the project cost effective and efficient while increasing reliability. Examples include appropriately balancing storage and conveyance capacity, reducing force main trench size and depth to accommodate a more efficient pipe size, exploring more robust, longer lasting and cost effective pipe materials, etc. The County should continue to review the design and provide input as the project is implemented to be comfortable with cost effective service delivery over the next 50 plus years.”*

Remaining Concern: County staff remain concerned that the design concessions made by Lincoln to lower the project cost leave the project with inadequate operational and emergency storage and excessive flow velocities combined with potentially less robust pipe material that are more prone to scour and damage. These design concessions are not consistent with either County or Lincoln design standards, carry an excessive amount of risk and result in a project that is more prone to failure. Changing the project design to correct these deficiencies will increase the project cost.

8 – Emergency Storage

Comment: The Stantec design concept eliminates emergency storage included in an earlier design. If the pipeline is punctured or blocked, how much time will there be to repair the break before raw sewage spills into Rock Creek?

Lincoln Response: *“The Stantec design concept includes a conservative design of conveying all flows that would arrive at the County SMD 1 Plant site. Emergency overflow volume was included to address unlikely overflows. In response to County concerns, Lincoln has agreed to expand the emergency overflow volume to 3 million gallons. With the conservative pump and pipe design, backup power and a robust pipeline, future use of this emergency overflow volume is very unlikely but it will be there just in case.”*

Remaining Concern: During the Value Engineering process with Brown and Caldwell and the TAC, the pipeline design was revised from dual pipes to a single pipeline to convey SMD 1 flows. The pipeline diameter was also reduced from 24 to 20 inches (30% reduction in capacity). County staff agreed to these changes and the associated factors of safety they provided because the project as then proposed included additional safety features, specifically a 10 million gallons emergency storage basin that offset the need for dual pipelines and 4 million gallons of operational storage that would allow pipeline velocities to remain within the recommended 2 to 8 ft/sec range during heavy rain events. The Lincoln proposal has removed the operational and emergency storage from the project, eliminating factors of safety they provided. Under Lincoln’s proposal, the pump station would have approximately 10 minutes of operational storage during a high flow day. This does not provide the ability to manage pipeline velocities within an acceptable range resulting in increased potential for scour and/or pipeline failure. For comparison, current County design standards require a minimum of 8 hours of operational storage which would allow pipeline velocities to be effectively managed.

The inclusion of 3 million gallons of emergency storage provides approximately 5 hours of emergency storage. Without the redundancy provided by dual pipelines, failures at either the pump station or along the pipeline will need to be identified, located and repaired within the 5 hour window.

9 - Limited Nature of Hydraulic and Surge Analyses

Comment: The County’s previous consultants recommended the County keep the pressure pipeline full to prevent unplanned surge pressures. Stantec indicated it is not designing the pipeline to be full. When the fluid travels down the hill toward Lincoln, there is a potential for violent changes in flow energy, like when water runs down a lake spillway. Engineers design the spillways to cause the violent change (hydraulic jump) to happen just before the end of the spillway, and design the structure around that area of the spillway to withstand the forces. This case is a little different. Air above the spillway can move around. In a closed conduit like the pipeline, it is harder for the air to move around the water, and sometimes it will send an explosive jet of air and water up the pipeline. It is also much harder to predict where the hydraulic jump will occur. Extensive hydraulic modeling is required and Stantec did not do extensive modeling. The hydraulic jump could cause pipeline failure. Stantec has proposed using only existing structures at SMD 1 for storage, which only affords the County 3-4 hours of peak flow storage. That is only 3-4 hours to detect a problem somewhere along the 17-mile long pipeline, locate the problem, dispatch crews to fix the problem, obtain repair

materials to complete the repair, and turn the pump station back on. Isn't this very risky?

Stantec's TM 1 says that detailed hydraulic and surge analyses were completed and resulted in the ability to reduce some pipe segment diameters. TM 4 has some hydraulic analysis, but does not contain a surge analysis?

Lincoln Response: *Detailed hydraulic analysis including surge analysis was completed for the pump station and pipeline. The purpose of the surge analysis was to confirm the nature and cost of project features that are needed for operation of the pipeline. The analysis is summarized in TM4 and final design will include a fully documented surge analysis.*

The surge analysis confirmed that air release valves located approximately every 1,000 feet along the pipe profile and large air and vacuum valves at all major high points (all with odor control) along the profile are generally sufficient to avoid surge problems. If Ductile Iron Pipe is used a surge tank may be required at the SMD 1 pump station. The air and vacuum valves significantly reduce surge amplitudes in the pipeline. The details associated with these valves and possible surge tank will be adjusted as appropriate during a detailed design phase and included in the project.

Remaining concern: No surge analysis has been provided for County staff's review. Typically wastewater pipelines are designed to operate within a flow range of 2 feet per second (ft/sec) to 8 ft/sec due to operating costs and pressure considerations. Velocities in Lincoln's proposed pipeline will range between 0.5 to 10.6 ft/sec (potentially up to 18 ft/sec depending on the County's ability to reduce future inflow and infiltration). Velocities lower than 2 ft/sec deposit solids in the pipeline which, over time, can reduce the ability of the pipeline to convey the liquid and, if not cleaned, cause a sewer spill. Velocities greater than 8 ft/sec can send surging pressures through the pipeline, dislodge pipeline components, scour through the pipeline wall, or break the pipeline.

The TAC value engineering conceptual design utilized a pressurized pipeline. That approach provides more predictable design pressures and reduced odor generation. With a full pipeline, the County could automatically monitor for leaks in the pipeline using pressure sensors and radio communication, allowing sewage spills to be immediately detected and the pump station turned off until repaired. This will not be possible with the Lincoln proposal.