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City of San José transportation and education committee. [ Roll call ]

>> Councilmember Liccardo: All right, we have a quorum, thank you. So we'll start with the review of work plan. Hi Ed.

>> Ed Shikada: Thank you, Mr. Chair, members of the committee. As stated, we have two items recommended for deferral. The storm water permit would be deferred to February rather than January. So that would be on February 2nd, 2010. Also just note as stated the second item, regional transportation activities will go to January 11th. Just note for the committee's information that that is a special meeting date, given the new year holiday, we'll be meeting on the second Monday rather than the first. And so staff is continuing work on development of the spring work plan so I believe that will be coming to you shortly.

>> Councilmember Liccardo: Great. I suspect we'll have a great to -- February 1st --

>> Ed Shikada: Thank you.

>> John Stufflebean: Monday, February 1st.

>> Councilmember Liccardo: Thank you. I suspect we'll have a lot to discuss on regional high speed rail. I know there's a lot going on now.

>> Motion to approve.

>> Section.

>> Councilmember Liccardo: All in favor? That passes unanimously. On to the consent calendar. The terminal area improvement quarterly report, would anyone like to pull that item? Then we'll have a motion. All in favor? That passes unanimously. As well. Let's move on then to item number 1 the claim action plan.

>> John Stufflebean: Thank you. John Stufflebean.

>> Councilmember Liccardo: Hi John.

>> John Stufflebean: We have a proposal for you today, and Kerrie Romanow will make a short presentation. She's the assistant director of ESD.

>> Hi. So, why propose new greenhouse gas goals, new climate targets? Well, we're working on the general plan update, and the way that's working now, with the advent of AB 32, is that the state attorney's office actually reviews general plan updates for climate activities. So we need to have a strong climate plan to move the general plan forward. We also, as we continue to talk about, want to be an environmental leader. The general plan task force has been consistent in that regard as well. They want to see us move beyond the minimum requirements. And if you look at that chart to the right over there we already are a leader. So there was a survey by the Brookings Institute which says the San José metropolitan area, which includes much of the Silicon Valley, is already the seventh lowest emitter in the United States of the top cities that they looked at. So we already are moving in that direction. We need to set the goals so we can direct the general plan task force to come up with plans that meet that objective, and the way we're going to get there is through the Green Vision. So the Green Vision is really going to be our road map towards hitting these climate targets, and -- but the green vision only gets us to 2022. The general plan gets us to 2040, so we need to move a little bit beyond that. So these are the targets that we're proposing. We are recommending that we adopt community greenhouse gas targets and recall in 2007 the council adopted municipal goals. The municipal goals were only for municipal operations. This is community wide. So we need targets to move the entire community forward. And again if you look, we get a little bit better each year. The percentages are smaller than the municipal goals but that's because it's a broader base. It's the entire community moving forward. These are better than AB 32 requirements but they are also things that we believe are feasible as an organization. And you can see, we get to 80% below 2005 levels. We've moved to 2005 as the baseline because there's actually data available for that. And a revised scoping plan allowed us to change our initial baseline year from 1990 to 2005. I don't know that many ever us can find records of our own from 1990, and finding those electricity and other bills just weren't feasible so they made exceptions to move in that direction. So move on to Green Vision. The energy conservation or energy efficiency and the renewable energy goals, if we do those we'll get to the 2020 targets. So that's pretty clear. The goal 4 certified green buildings, green buildings have 33% fewer emissions, that will help in that regard. And then our general services group is work on goals for the municipal fleet. That will also help us move in that direction. Again, we're not creating new things. We just need this to move the general plan forward. This chart shows you a comparison between where AB 32 goals are, the yellow council adopted is, remember, just municipal. And then the blue is what we're proposing for the entire community. At 2015 we get to goals that are more aggressive than AB 32. And you know, we think -- again, we think these are reasonable

expected goals for the community. And -- yes. So we we did an inventory of the greenhouse gases in the San José area. We used ICLEI software, which is the International Council for Local Environmental Initiatives, which has over 1100 participants. And they have some software that helped us estimate the emissions in the San José Asia area. And that's where we're coming from. So again, if you look at the Green Vision, it hit all three of those major -- those major buckets will help get us in that direction. So again, because it's kind of wordy, we thought we'd throw up the recommendation again to make it a little easier. As I said we need this to move the general plan forward.

>> John Stufflebean: I guess I would just add that one thing I think that really jumps out is how well in alignment these three things are. The climate action plan is very well aligned with our Green Vision goals and where Envision 2040 seems to be going, and so it just fits right in.

>> Councilmember Liccardo: Great, thanks, John. Thanks, Kerrie. Okay, any questions?

>> Councilmember Herrera: On the slide, two slides back where it was showing -- the next one. Yes, the one with the pie chart. So -- maybe it was the one before. How does the Green Vision, again, is this pretty much -- no I guess this was the one before. Go to your bar chart, I guess. So council adopted San José proposed, and where does the Green Vision, is that pretty much in line? Where would the Green Vision fit into this?

>> Right, so when we -- the Green Vision isn't on this chart. So when we extrapolate out even if we only did goal 2 and 3 we'd get to the 2020 number, we'd be there no problem. But there's enough flexibility in all the things we're looking on that when staff looked at kind of the effective outcomes over the period of the Green Vision, these all fit as achievable. You know, we can probably beat these targets but again the attorney general is arrive them as part of the general plan update so we would be held accountable to them. We want to be an environmental leader, we want to respect the guidance of the general plan task force, but we don't want to set something that's just completely not feasible.

>> John Stufflebean: And just everybody may know, may have these goals memorized, Goal 2 is that we will reduce our per capita energy use by 50%, citywide, and goal 3 is that we will get all of our energy from renewable sources.

>> Councilmember Herrera: So this ties to goal 2 and 3?

>> And also, goal 4 is fleet reduction, goal 10 is the trails. So getting people out of their cars an into trails. That's our -- yes, that's 10 and then goal 7 is the sustainablable general plan.

>> Councilmember Herrera: Okay.

>> I just wanted to point out for the purposes of AB 32, that if the goals that have been laid out for you are what we move forward with, if that's the council's decision, there does have to be more study in terms of the attainability of those goals. They're in a sense being established for the purpose of looking at them through the prism of the general plan update. Because there does feed to be work to make sure they are attainable because they are enforceable if they are attainable as part of general plan update. It is a little difficult to translate them to AB 32 because AB 32 is stated in terms of 1990 levels. So I think there's still some ongoing work at the state level from moving from 1990 to 2005. And all of that can occur concurrently with looking at the attainability of these through the general plan process.

>> Right. And the 2008 AB 32 scoping plan, that was released in actually last December of 2008, allow requested local governments to act in this area. Because AB 32 is rally really a state guideline. It doesn't have a mandate for local governments and it does allow some credits for cities to take a 15% credit and then sets their own baseline year. So they have come up with some language to enable cities to come up with reasonable goals.

>> Councilmember Liccardo: Judy?

>> Councilmember Chirco: I think that's an important point. When could we expect devaluation of the chiefability of these goals?

>> Mary Ellen Dick, the manager of sustainable from environmentalist services. The process that will happen next when these are adopted, the climate action team will take this information and start putting together with the draft climate action material that will come to the council with the draft general plan update in -- next -- they're looking at August of 2010. Then the following year we'll go through CEQA process and you will have the final with the whole analysis which will come then for a final adoption to the council in the fall of 2011.

>> Councilmember Chirco: And then, to Sam, is this when the general plan anticipates getting this kind of data as we look at our 2040 general plan update?

>> Councilmember Liccardo: Thanks for the question. I'm -- as I understand it, we are hoping to have a proposed text by June of next year. I'm assuming that's the same target you guys are looking at, as well.

>> Right.

>> Councilmember Chirco: Thank you for the clarification. When I'm hearing August of 2010 and the following year, I'm going, look at this, this time line looks like it's really stretching out.

>> We are working to help the general plan department to put this together and we're working on the general plan's time line.

>> We wanted to make sure that the time line sounded to the council as something that makes sense before we put the task force around them.

>> Councilmember Liccardo: That's a good idea.

>> Councilmember Chirco: I always liked the dart's proposal to setting goals. Because I have some feeling that this is kind of what this is. I look forward to the data that supports this. thank you.

>> Councilmember Liccardo: okay? And just to clarify, in terms of environmental clearance, the EIR in the general plan will clear this as well, is that right? So we expect to do this in all one fell swoop?

>> Correct. I mean, in a sense, this is kind of like setting the preferred project for them to study for the general plan. That's really what it is.

>> Councilmember Liccardo: The other issue I know on timing, I know we're all shooting at moving targets here. You have Copenhagen around the corner. I know we don't expect any kind of binding agreements out of Copenhagen, but probably thereafter we all like to believe there's going to be some kind of global treaty. I assume we may be coming back revising these again whenever we get the word from above in a year or two.

>> Well, we could, but we need to get the general plan certified. So to move that vehicle forward and of course if there's compelling reason to revisit it and set new targets, we can do that. Those new targets may be outside of the general plan.

>> Councilmember Liccardo: Okay, sounds good. Well, thank you. We have one member of the public, Mark Boyd, who'd like to speak. Mark. Good afternoon.

>> Good afternoon.

>> Councilmember Liccardo: Feel free to pull it up.

>> I'm really lukewarm about this proposal. And I barely support it. And I've been following this clearly since 2005 (inaudible) I appreciated the Green Vision, and this plan is basically half of what the Green Vision originally proposed which was like 35% below 1990 levels by 2020. And at the time I thought that, you know, I didn't think that was achievable, I thought that was overstated. But this is going too far -- it's more of a political document than a document that reflects the science. Scientists are saying that we need to reduce greenhouse gas pollutions by 40% by 2020 to avoid the worst case scenario. Okay? And that -- that is a fact. There's no politics, mother nature doesn't deal with politics. And so my concern is that there is not going far enough and it's backtracking. It's going to wrong way. Because since the Green Vision has gone out, scientists have been ringing the alarm bells with more fervor, saying that we're now entering a worst-case scenario. And just recently the climate action team report which was prompted by AB 32, stated that Santa Clara County is going to face \$7.5 billion worth of cost related to -- just for one impact: sea level rise. So I think we need to go beyond the original -- we need to stay with the original goals and not backtrack. And my concern I have, see, now just to state -- if I could just take another minute -- that we lost a company, Harris Stratecs Network because San José does not have green energy. They moved to Santa Clara. That should be kind of an embarrassment, we Los a company to Santa Clara because we do not have green energy. Basically what I'm asking you is to reconsider the plan we have to spend \$50 million by using recycled water for drinking water. We're talking about a \$500 million investment to turn wastewater to drinking water. And I think that's a radical idea. We're only going to reduce our water supply by 10% due to climate change --

>> Councilmember Liccardo: Mark, I'm sorry.

>> We've seen water levels go up and down for decades. So I think we're overreaction. We should take that money and build a solar thermal power plant, 20 megawatts, starting today.

>> Councilmember Liccardo: Thank you, Mark. I don't ordinarily ask this of staff, but do you want to respond in any way to the concern that we're not being aggressive enough?

>> Sure. You know, the original council-adoped plan was 35% from 1990 levels for municipal operations only. We do need to set these goals to ensure that our general plan passes the scrutiny of the attorney general, and I think we do have a very green general plan as it's shaping up. And I think that we need to be prudent from a legal stand about where we set our goals and objectives, given where we are. And certainly I do hope that the state and the local communities come together to beat those targets.

>> Councilmember Liccardo: Thanks, Kerrie. I would just point out, and I think Mr. Boyd's concerns are well placed. But when we look at the way the city's growing, we have a million people now, by the end of the general plan period we'll have a million and a half. By my calculations, we would expect that the greenhouse gas emissions under this plan would be one fifth per capita what they are in 2005, which is a pretty remarkable accomplishment if we are able to pull that off. I know that we all want to do more, but this is a heavy lift. Anyway, thank you very much. Okay, with that, unless there other comments?

>> Motion to approve.

>> Second.

>> Councilmember Liccardo: Okay, all in favor. [vote]

>> Councilmember Liccardo: That passes unanimously, thank you very much. We're now on to number 2, the plant master plan update. Welcome.

>> John Stufflebean: Again, John Stufflebean, director of environmental services. And we have a presentation on the plant master plan. I'm going to do the first half and then Bhavani is going to present the second half. And we're going to take it through where we are at this point with respect to the process, it's a three-year process, and where we're going over the next few months. And it's pretty exciting stuff that's happening in the plant master plan, I think. So again, this is a 30-year master plan that will guide the use of the technical aspects of the water pollution control plant as well as the land use aspects for the next 30 years. So we're putting a lot of energy and effort into this. We're right now in the middle of our three-year effort and we came to T&E in last March and this is a one year update from that. Northwest corner of 880 and 237, about 2600 acres of land, about two miles across two miles deep I would say, very large piece of property that we have there. And this is the sewer, what we call the sewershed, like a watershed, except for sewers. And this shows where the flows come to for this plant, it's essentially all the South Bay, San José and eight other cities. It's about 300 square miles of area, serving 1.4 million people. And San José is about 71% of the flow. It also includes 17,000 businesses in the South Bay. And this is a zoom-in on the plant itself. We divide the 2600 acres into four broad areas. The yellow in the middle is the operations area, which actually the concrete and pumps and pipes and all that stuff is, about 180 acres. The biosolids area, where we treat the solids, pond 18, which is one of the Cargill salt ponds that we purchased, and then the rest of it we call the buffer lands, which was originally purchased to keep people away. Components of the master plan is kind of a three-step process. The first part, which is where we've been focusing most of our attention to date, is the technical aspects. Obviously the plant has to work, so we have been -- and I'm going to talk a little bit about what we've discovered, in going through the various studies in the plant itself, that then feeds into the land use. Because once you figure out what you need for the plant, then you can talk about what can happen in the lands around the plant. Sorry that red doesn't read very well. Then the third part, of course, is the community engagement, which we already have been involved with very heavily, which Bhavani will talk about in a bit, and we will even be ramping that up even more over the next few months. And our goals, we basically consider this to be a sustainable -- you know, we've categorized this as a sustainable project, this is one of our main goals, and we look at it as the sustainable bottom line, which is economic, environmental and social, plus operational. The plant obviously has to operate. So I'm going to talk a little bit about the technical components. And there's essentially three elements to the technical side of it. The plant as we've talked about before, the main purpose is to separate liquids from solids. And there's a whole liquid train, as the solids get pulled out they go through the next series of process and the solids get treated. And energy is kind of the third major development. Energy is used mostly to pump the water around, because we have to pump it three times, because the plant's very flat. And it's also used to pump air into the water, because our major process requires air, we pump air into the water. And the solids process generates energy, so we use that energy to in part run the pumps and the air injection systems. So in terms of our operational goal, for the component is to make sure we have a safe, effective and efficient treatment system. So to work, we have been -- as you know, we've hired consultants to help us, and we've been working for about a year now with consultants. We've got some of the top consultants in the world who are working with us, and frankly, our staff has been doing a whole lot of the work, because we know the plant better than everybody, so a lot of the work that gets done is actually done by our staff, and a lot of the checking is done by the staff. And then we also have a technical advisory group of eight professors, some of the leading wastewater minds in the world would be -- of course some of them are right here in the Bay Area, most of them are, and they come out three times during the process. We've had the first and the second one, and they'll be here one more time. They sort of validate where we're headed. They look at all the information that's presented, what we're proposing to do, and they bring in the most forward-thinking

that's out there anywhere in the world and say that looks like it's on target, you may want to rethink that one. So they really have been very valuable. I've sat in both of the meetings, full-day meetings and really just fascinating stuff. So I'm going to talk a little bit about the liquids, liquids portion. The red line goes in below, goes round and round and comes in, water comes out like this, makes a motion like this and then it goes out the effluent channel. That's kind of how the water flows. And so I'm going to take you through what we discovered on some of the major processes. The first thing the water hits is the head works, so the the head works in here. I'm sure you've noticed that we've been -- we've actually added a second head works. The plant had a head works that Wass added years ago. We only built half enough. One thing we've identified is we need to build the other half of the head works and ultimately take the old head works out of business, out of commission. We're also looking at odor in this area, because when it comes to head works, nothing's happened to it yet, so there are odor issues that you need to make sure you deal with that. And we're also looking at more screens, finer screens. The head works use a rough screen, like about a three quarter inch screen. We're looking at -- some of our experts are telling us you got to look at maybe a much finer screen, to get a lot of the material out right at the head works area. So that's an area that we're looking at.

>> Councilmember Liccardo: John, can you show us again where the head works is?

>> John Stufflebean: The head works is right here.

>> Councilmember Liccardo: Great, thanks.

>> John Stufflebean: So then the first major process is the primary treatment. And the primary treatment is, in case you're wondering, right up in here. This is the east -- the West primaries, which is the regional plant, and this is the east primaries. So the water flows through the head works into these two. The primary tanks simply slow the water down, allow the solid to settle out. We collect the solids, send it to the digesters, the liquids move on to the next step. What we've discovered about the primaries is first of all, the West primaries, the old ones that were built with the original plant in 1956, it's time to decommission those, that they have really served their useful life and then some. And so when you look at the condition of the tanks, it's time to just take them out of service. Which means that we will need to do additional work on the East primaries to make sure they can handle the additional flow and again, the east primaries also need a lot of work. Beyond that, again, primaries are of course the source of odor, so we're looking at the potential of covering them. They're open air tanks, so covering them would have a significant impact on odor, certainly in the immediate vicinity, like around in this area here, depending on which way the wind is blowing. And the estimate for that is about \$20 million to cover the primaries. So we're looking at that certainly as a possibility. From there, the waste water flows to the secondary tanks, and that's the heart of the plant. So from the primary tanks here the water flows to -- this is kind of A battery of the secondary aeration and the B battery, I'll just call it that, two different batteries. So one of the big questions, was, should we continue the basic process that occurs that we've been using for years out there? And the answer is yes. That we have a technology that's called BNR, and we've been using it for years and years, and so the question is, over the next decades are we going to continue to use that process. The answer is, in general, yes. We may make some modifications in 15 or 20 years, but generally speaking, we'll continue using these basic processes. The big change we're looking at here is going to fine bubble diffusers, which we've talked about before, previous -- the original design was coarse bubble diffusers, where big bubbles come up to the water, and it's more efficient to get the air into the water if you cause the air to become in fine little bubbles, you get a better transfer of air into the water. We're in the process of converting, and so one of the conclusions is, we need to continue that, make even more efficient use of the fine bubble diffusers. Half of the energy in the plant is to pump air into the water, so the more we can do on that respect, we've really had some major benefits. And we've seen some of that already, but our consultants, we agree, the tech agrees, we could make a lot more progress by doing even more state-of-the-art fine bubble diffusers and converting more of the plant. The second thing is that we have the aeration tanks. The way the secondary processor works is microorganisms break down the waste, consume the waste in the aeration tanks, and then it goes to a second set of clarifiers, which is the round tanks. So that also occurs -- these are aeration tanks here, and these are the clarifiers where it settles. And right now, you can only send waters from these aeration tanks to these clarifiers, and from these aeration tanks to these clarifiers. But they're not exactly matched. So one thing we're going to do is to make it so that we can send some wastewater from these aerators down to these, and vice versa. So now we have the complete flexibility with respect to when we take something out of service, you don't have to take out the -- you can use any of the clarifiers. So that's a big change we're going to make. And we've got a lot of structural rehabilitation to do in these tanks. Again, they're just big concrete tanks with

lots of concrete and steel, lots of pipes and pumps. So there's just a lot involved with that. We're also looking at optimizing these tanks for energy performance, which we are going to talk to you a little bit on a later item today about how much progress we made there. So the estimate of cost of this is about \$20 million also. Then we get to some of the more interesting parts. So then we go -- that's the clarifiers. So the next thing that happens after the water goes to the primary tanks, then the secondary, then it goes through filters. And these filters are just like a swimming pool filter, when you run the wastewater through sand and coal. And our conclusion -- one of the public's put it well, he says what we really ought to do with these filtration tanks is to blow them up, because they don't really work very well. So they were designed in the '80s, and so as we look forward to the future, we say we don't really want to continue with this type of design. So obviously, we've still got a number of years left, in terms of the life of these tanks, but as we move into the future we are going to be looking at really an entirely new kind of filtration system, which we have several options that we are considering. And the cost of that is going to be somewhere in the order of 40 to \$80 million. And then the final step before we go to the bay is we disinfect wastewater. We historically use gas, chlorine, we're now in the process of changing to liquid chlorine. Which is in much, opening up the new system in the marsh area, right finishing? But as we look out into the future certainly over the 30-year horizon we very likely could be going from chlorine into ultraviolet disinfection, and ultraviolet disinfection is basically using the -- it's similar to sunlight using the light -- ultraviolet rays that you manufacture to kill off the disease-causing organisms in the wastewater. And so that may, indeed, be the future. We looked at that carefully when we made our decision to get out of the chlorine gas business and concluded that it wasn't quite time to get into that, because the technology is still evolving. But certainly over the life of that we'll be able to get into that. So - - and disinfection could be on the order of 50 to \$80 million. So add all those up and you're coming close to the \$1 billion that we've talked about before on the liquid side. So what happens to the water of course is, it is discharged into the bay, and I think the point to make here is that we meet all regulations. The plant has met its permit for seven years now. But regulations may change. There's a pretty good chance that the bay is really being looked at as something we want to -- it's a special place. We want to make sure it's protected. So maybe new regulations will come along, and so as we're looking through this process we're trying to anticipate what some of those regulations might be and making sure we have the flexibility to meet whatever those regulations might be and then 11% of the water that comes into the plant goes back to the purple pipes and obviously one of our objectives is going to decrease that. The water come that of the-d as the water goes into the plant several times, we thicken it, I don't think there is a pleasant thing to talk about but we do think be it and technology, again, for the next 30 years, the answer is generally on this one yes, so we will continue with that, again we'll make some efficiency improvements but we'll continue with that. Begin, we've talked about this, we have 16 of these digesters, big tanks, 60 feet high, 120 foot across. We have 16 of them. We need 11 all the time, so we don't have any flexibility in that to take one out of service to maintain it. If one more goes down we're in trouble. So we're now in the process -- this is one of those can't wait until the master plan is done. We are now in the process of redesigning so we can start rebuilding one or two of them a year to get it back into service. But there's also significant complexities. Because digester science has evolved significantly since the '60s and '70s when these were designed. So there's new systems for mixing, there's new systems for the right temperature and the configuration of these tanks. So as we rebuild them we want to do everything we can to make sure that they are the right solution for the long term. The cost again for the digesters is about \$5 million per digester to fix them up, so it's also pretty expensive. And the current system, we basically use sludge lagoons where the solids sit at the bottom of the lagoon and kind of process over a number of years, goes to the drying beds, then it's trucked to the landfill. Just keeping this system that we have going today with the dissolved air flotation digesters, the sludge lagoons and drying beds, to fix that up is a \$150 million effort. And that would retain this entire biosolids area pretty much as-is, which is, again, we don't really want to do that. We'd like to get out of the biosolids business, biosolids drying business. So we face a number of challenges. As we looked at the difference between the liquids and the solids side, on the liquids train that I just went through, the technology is pretty mature. It's been pretty similar processes for years and years. We're going to be tweaking that to some degree. On the solids side, a lot is changing. That's a science that is advancing quickly. So as we look at our options for handling the solids, there is still a lot of different possibilities out there, so we're not as far along in terms of deciding, this is what exactly we're going to do. One of our objectives here is to leave some options open as we move ahead. One thing that we think we do want to do, though, is to get out of the drying bed business. Because it's 800 acres of land that could be available for something else, and because the

drying beds generate odor, so we're certainly -- and because what we do from the sludge that go -- from the biosolids that go in the dry beds is take them to a nearby landfill, and that's not the highest and best use of the material. It has other possible uses. And the landfill is going to close some day. So as we move through the analysis of what to do with the solids, we're considering all those things and what's happening in new technologies. One technology that we really like is this concept of greenhouses to dry the solids, which again dries them faster, more efficiently, and covered so you control the odors. So that's certainly one area that we're going to be looking at. The issue here for us of course is that the cost of changing to a new system is going to be very expensive. The reason we have drying beds and lagoons is because it's really cheap, and we use the sun's energy. So our rough estimate at this point for going into a whole new system of handling solids is four to \$500 million. So that's a big number. So we have to be very thoughtful about how we do that, when we have to do that, and then, when we do that what is the value of this land that would then be freed up, because that could be used to somewhat offset that expenditure. And of course as we move into any of these issues the public perception is important in terms of what you could do at the site. For example, if you were to build an incinerator, you might have some interesting -- some people might be interested in that decision. That would be certainly one option that we would be looking at. If you go into gassification, there's interest. If you get out of the drying beds, there's certainly a public interest in that. So a lot of these things really are very strongly connected. Which is why we have such a strong -- one reason we have such a strong stakeholder interest, stakeholder process. And of course the third big area in the plant is we create energy. These are just some of the big pieces of equipment that generate energy at the plant. You can see there are just huge pieces of equipment. These are the kinds of size of equipment that you would have on a large battleship, some of these engines are basically the same kind of thing that you would have on a large ship in the ocean. And again, they're use for aeration of the water and pumping the water. We use 12 megawatts of energy on the average. Very large energy user, and some of our engines are World War II vintage. So one thing we're looking at certainly is replacing those with more efficient engine generators, where we could have a lot more efficiency, the issue here is these are multimillion dollar pieces of equipment that we'd have to purchase. But we are going to have to at some point because these World War II engines are again, becoming very, very difficult to maintain and find parts for and that sort of thing. And then we're also looking at fuel cell technology which converts to gas that's generated in the digesters more efficiently to energy that we can then use. And of course some of the master plan land we certainly envision will be used for solar power, so that's kind of the energy picture. I'm going to turn it over to Bhavani now to talk about some of the land use issues there. Want to switch chairs?

>> Thank you. Bhavani Yerrapotu, division manager, environmental services. So John just talked about the technical development of the master plan. Like he started off, there are three main parallel tracks to the master plan progressing in. One is the technical component which is essentially the core component of what we do, the operation and the treatment and the second part is the land, what to do with the land. And then the third component I'll get into later is the outreach component of it. So the -- now that we know a little bit about future of the plant, where it comes to the technical uses, then that feeds into the land use alternatives. We kind of book ended the land needs that are required for the operation of the plant and now we can figure out what to do with the rest of the land. Once again, a reminder of our location. It is ideally located between 880 and 237 and very well connected with various transportation networks. The proposed BART going right through there, Amtrak, the proposed bay trail in that area and that 101 and the north San José area as well. So there are lots of commercial retail opportunities and interest in this land that surrounds the plant. So today, the consultants have actually taken a look at the existing conditions, basically, that surrounds the land, as it is, and we will be having a staff level workshop later this week and develop the alternatives that will be taken later to a public workshop that is to be happening in spring 2010. Again a quick reminder of the surrounding communities. Very close to Milpitas and Santa Clara, large metropolitan areas. So anything we do in this area impacts the economic development in those surrounding communities as well. John talked about the sewershed. We're also located at the junction of two major watersheds. Namely, the Guadalupe watershed and the Coyote Creek watershed. So we have two creeks running through the plant lands, and traditionally this site has served as a natural filter, if you will, before the surface water goes off into the bay. Challenge is keep doing what we do naturally to treat the surface water and make sure the land use development land use plan supports that goal as well as the treatment of the wastewater. As part of existing conditions and future production evaluation, the consultants looked at projected sea level rises. And this map shows a 100-year projection of sea level rise, and that's a three-foot rise in sea level high tide. While we're very

good at what we do, treating wastewater, it will be a bit challenging to do that under these conditions. So this we call the horror map. So our challenge for the master plan is to try to figure out alternatives, either to adapt to treat wastewater, and land uses that will take into account the size, or build buffers around the plant to mitigate this effort. As far as environmental land uses, we already have endangered habitat right on plant lands. It is a designated habitat for western burrowing owl. We also have areas designated for habitat for the salt harvest mouse and did California clapper rail. So these are the conditions that the consultant team have looked at and looked at future predicted uses and are working on developing the economic alternatives. And this is the needs map, that each of those squares there represents the different land use needs that have been identified through various workshops that staff and regulatory agencies on what could be accommodated in these lands. For example, there is a plan that we could use up to 250 acres for solar ponds, about 600 acres with the economic development need has been identified in this area, there is an owl habitat up to 140 acres, recreation area needs up to 160 acres, that are anticipated, and possibly abolishing wetlands. We already are working with the District on an advanced water recycle facility for about 30 acres. So the dotted line there shows the outline of the plant lands. And the squares show the relative area to that, what this map points is that what idea of uses could be accommodated in that area, it is just a matter of figuring out and fitting the piece of the jigsaw if you will and how we face them. And did you want to say something?

>> John Stufflebean: No, that's all right.

>> Okay. So while we have are very excited about all the land we have, we also need to deal with the myriad of agencies that have jurisdiction over these lands. At the federal, it is the EPA, the particularly over the pond A-18 and the other wet lance that are bordering the bay. And at the state level we have the state water board and then the California resource fish and game and the coastal conservancy. There are right of ways and agreements with the Santa Clara County Water District, the Association of Bay Area Governments and then the salt pond restoration project. So it is going -- the challenge for the master plan is going to be to engage these various regulatory agencies to figure out what is the regulatory book ends if you will of what we can feasibly do with these lands. And that's the work that the staff and consultant team have been engaged in over the past six months in meeting with these agencies separately. And as you can imagine, like any good government, each of them have their own priorities that are not quite aligned and our challenge is to try to resolve those differences and bring them all together. So we are working on those alternates and those alternates like I mentioned will be evaluated at the December 10th workshop at an internal staff level with the department heads and some of our tributary agencies. So the various types of land uses, mainly are into the three categories that we look at. The economic uses obviously are industrial, retail, type commercial type opportunities that possibly will look at some environmental uses for this facility are sustainable economic uses such as using the products, the biosolids, recycled water and generate revenue also back. There's also the opportunities to create a research park or commercial retail park in this area that possibly generate revenues that can offset the operational and the intense capital cost that John has mentioned.

>> John Stufflebean: I just wanted to add that in terms of environmental uses one of the things we have excluded is residential use around the property.

>> And of course, there's always more opportunity to expand the environmental land uses. We already have areas designated as wetlands and marsh lands on the plant lands, and there is opportunity to expand that land and make this a real asset to the community as well. And then there's always needs for social land uses. With two creeks running through the plant lands, there's always opportunities for trails and bike trails and possibly open lands and park lands especially with our -- with being so close to the bay. There is an opportunity to create something really special in this place. So our consultant team right now has been working on looking at all these types of uses and coming up with phasing and economic plans. Obviously these pictures are not whole lot without actually dollars going with that. So they are looking at what is the feasibility of phasing these various uses what is the cost of bringing them on and what is the cost of maintaining them and how would we fund them? So those are some of those alternatives that we will be looking at, at a staff level workshop this Thursday. Now, for the community, the third part and probably the most important part that we are keeping a very close eye thanks to our outreach group led by Jennifer, which is the community advisory group which is a key corner stone of this effort. It comprises of about 20 members through the community all through the tributary area that we serve and they were picked through an application process and represent the various sectors that we serve. And this group had a work plan to meet quarterly, until last year, and because of the additional interest in the master plan, we are now presenting an alternative work plan for them to meet monthly. And

that work plan is attached to your memo. And they will be going through each topic basically such as land uses, social uses, biosolids and technical. And it is a very engaged community group and we are very fortunate to have that level of interest. So throughout the process, we've had a very extensive outreach program through our plant tours. We've already had about 6,000 people tour the plant since we started this program about a year and a half ago. We had a community workshop back in May. That was the beginning of the great community effort, our outreach effort where we had about 100 participants from the community that basically attended a workshop and then gave their input on their priorities for the master plan. We continue to collect input through a Website and through our plant tours, as well, handing them out service to get -- collect their feedback. We've also had extensive media coverage. There are several newspapers that have picked up on articles that our outreach team had pitched to them. The San José business journal ran a whole front page spread on water, there is in the local residential newspapers as well on the plant, highlighting the importance of the plant and what we do. Even in the Mercury News, the highlighting the infrastructure needs of the plant as well. There was a public survey that was done at the beginning of the process, a telephone survey that established a baseline of community awareness on the plant and its role in this -- role in our treating wastewater and midpoint survey is planned after our spring community workshops which plan to have a series of them in April. So again, the time line, we did finish our first community workshop. We're at the end of 2009, we'll be having a second community workshop in spring, which will basically let the viable alternatives. We are done with the conceptual -- we are at the end of developing conceptual alternatives. We are narrowing them down to two or three viable alternatives that will be taken out to the community, and then at the end of 2010, by spring 2011, we hope to present the final recommended plan. And then the next step, there will be further refinements of the technical alternatives that John mentioned. We know what we get to keep as far as the plant technology goes. We know what we need to work on. Those alternatives will still be evaluated with the economics layer laid on top of it. And then the land use workshop number 2 is planned on this Thursday with staff. And then the alternates that come out of that are to be presented to public in spring and will come back to this committee in April of next year before we go out to the committee workshop to give an overview of that as law. Our outreach team is gearing up for an awareness campaign that is to be launched in February, to broaden the awareness beyond just the tours of the people we touched through Website more so into our service area. And the community workshops in spring will be a series of five workshops spread out through the tributary area and there will be a midpoint surveys as well, to kind of measure the effectiveness of outreach and gauge or capture any differences in public opinions through this process. And with that, we're ready.

>> John Stufflebean: At this point it is my chance to beg forgiveness for having a bit of a longer than usual presentation but I did think that with \$1.5 billion demand need for money out there and you know 2,000 acres of prime real estate in Silicon Valley that we go a little bit longer to make sure you thoroughly understand what we're doing, beg forgiveness for that.

>> Councilmember Liccardo: Understand, John, probably a few tens of billions per minute. Questions or comments?

>> Councilmember Campos: Thank you, chair. First of all, John, thank you for the presentation and your staff's willingness to be able to put together such a thorough presentation. I always think that it is so important, especially what you just said, \$1.5 billion, that we completely understand what the magnitude of this project is and what it entails. On the recommendations, on next steps, I think you talked about the second workshop that will be taking place this -- excuse me, the land use workshop that will be taking place on this coming Thursday, I think you said, and you said staff are going to be a part of that. And I know that I also sit on the TPAC committee as well. And we've had discussions with Milpitas about this particular plan. And I'm wondering, are they part of the workshop, as well as we think about how these lands work together and as we make decisions and have thoughtful and thorough discussions around the future of the plant?

>> John Stufflebean: Yes, they are. The workshop this week is plant only as we prepare for community workshop.

>> Councilmember Campos: They're only involved in the public one not the staff one?

>> John Stufflebean: The staff as well.

>> Councilmember Campos: Thank you for clarifying that for me, I appreciate that. The other question I wanted to ask was, I know that you showed the slide that shows about the sea levels. And I know that that's something that's probably going to make a lot of people nervous, if it gets out. We don't actually know when this is going to happen because we don't have a projected date. Are we also working on a

strategic plan, on proposals that will be coming together with the master plan on how to address this, or --

>> John Stufflebean: Yes. One of our foundation principles is that the sea level will likely happen and so whatever we do needs to anticipate it. So as we put together the plans for the land use we will make sure that we accommodate sea level rise either through levees or some sort of attenuation project. But yes we are anticipating this will happen and are planning for it.

>> Councilmember Campos: Thank you. My last question has to go to the solar panels that you were showing. And from what I was seeing on the slide, it's on the lower right-hand corner, is that correct?

>> John Stufflebean: Where things go hasn't been determined yet.

>> Councilmember Campos: Okay.

>> John Stufflebean: That's part of the reason we're doing this. And we have several ideas where solar panels will go. As we go out to the meeting this Thursday and also to the public that's when we decide what goes where.

>> Councilmember Campos: That is still under discussion?

>> John Stufflebean: That's still under discussion yes, ma'am.

>> Councilmember Campos: And when do you anticipate that will be coming forward to us to be able to actually see some of the work you've been doing with staff?

>> John Stufflebean: Right, before we go to the -- to have the Public Works meeting in April we will come to T&E or the council and bring to you what we're proposing on that. At the public meeting we'll still be looking at different alternatives and ultimately our objective is to have a recommended plan and that is what will come to council for really the formal discussion is the recommended plan.

>> Councilmember Campos: And will you know by then what the investment we would need to do to have that infrastructure?

>> John Stufflebean: Yes, we will have the financials at that point, even as we go to the public with the different alternatives, we will -- generally you know what our estimate is for plan A plan B plan C how that would affect what kind of revenue that would bring in what kind of expenditures that would require.

>> Councilmember Campos: Okay. Thank you.

>> Mayor Reed: Vice Mayor Chirco.

>> Councilmember Chirco: Yes, you talk about a series of community meetings to talk about. And I don't see where -- actually, there's a schedule here for the community advisory group. But when you go out to the community how many meetings do you have?

>> John Stufflebean: Hundreds. Not hundreds. I'll let Jennifer talk about that. A lot of them.

>> Vice Mayor, Jennifer Garnett, communications manager for environmental services department. We haven't planned the exact date or number of them. We're thinking about five or six. We need to obviously cover the entire tributary area, so unlike our first community workshop back in May where we had one very large community meeting centered at the plant, this time because we'll have alternatives for the public to look at and discuss, we'd like to sort of take them out to the individual communities. So we'll have at least five maybe six.

>> John Stufflebean: And what I was referring to is beyond that we're also having meetings with our different stakeholders. So we're having really dozens and dozens of meetings with a variety of groups to let them know what's happening in addition to the general public meetings.

>> Councilmember Chirco: I really want to encourage that. I remember when we increased the fees and the outcry that came about. This is a very dramatic project. It's a huge amount of dollars, and there is critical necessity for it. And I see that like your community advisory group, you're meeting with Santa Clara West valley cities, Milpitas, Alviso, but I look at San José, and you say five or six. Well, there's actually ten districts in San José and they all pay into the sewer fees which -- and I think to have that level of understanding when you're talking a billion plus project, and talk about the assets, just that whole variety of uses that you're looking at, I think more is important, and coordinating with -- you'll be coordinating with your partner cities, and I encourage you to coordinate with your councilmembers. And we now have the neighborhood commission, so that begins to be another resource. Because I think the more information we can get out about the criticalness of this resource, what an asset it can become for the city, the more critical the story. I can't emphasize that enough, thank you.

>> Councilmember Liccardo: Thank you, Vice Mayor. Councilmember Herrera.

>> Councilmember Herrera: I left the room when this slide came back, so I'm curious, what was discussed about the rising sea level?

>> Councilmember Liccardo: It's happening next year.

>> Councilmember Herrera: I know it's a 100-year deal, but I -- hopefully I'll catch up later, and there's hopefully mitigation and things that you're looking, because it's pretty striking to see. That's why it's a little bit scary. I was -- I reacted very positively as I was looking at your outreach, in terms of the community's overwhelming support for recreation activity. I was looking at some of the responses there, so no matter what type of activity you were thinking about it was like 80, 90% supporting that. So that would be something that would be really good, I think feedback too, as Vice Mayor Chirco was talking about to our council districts to let I think folks that are really supportive of that in terms of trails and other opportunities as you look -- as you move forward with this.

>> John Stufflebean: I'll just add --

>> Councilmember Herrera: Hard to read some of it while we're sitting here.

>> John Stufflebean: One thing I'll add to your comment is we totally agree, and we think that -- we are quite sure that recreational uses will come out as part of the plan. The other thing to mention there is that we also need money. And recreational uses don't bring a lot of money. So that's why we're looking at a balanced plan that has some economic aspects that generate some money for both the plant and potentially the General Fund and help offset the cost of the \$1.5 billion need. Luckily we have enough land where we can also add to that recreational uses and social benefit. How these all fit together is what we're aiming for, for our recommendation to council.

>> Councilmember Herrera: I totally agree with you. Obviously the economic development has to go there, there's lots of potential. I was just thinking, as residents are asked to pay fees and things, I think the idea of knowing that there's going to be some recreational opportunity out there I think goes a long way to adding more value in terms of what you're proposing.

>> John Stufflebean: Thank you.

>> Councilmember Liccardo: Thank you for the presentation. I -- knowing there's a certain inevitability of what we believe we know about the sea level rise no matter how ambitious we are here locally, we know there's a global phenomenon here. I'm assuming there are basic principles we're operating on, for instance, we are going to do something to be able to build levees, that is going to prevent the intrusion that we see there. I see nodding heads, that's good news. And I'm thinking about other principles that we would be operating in order to shape this plan and one -- I personally would like to see is that this thing become energy self-sufficient maybe even get off the grid completely. Is that realistic?

>> John Stufflebean: That is one of our goals, our goal is 2022 to be completely energy self sufficient. In about ten minutes here you'll find out how far we are towards that to be energy self-sufficient.

>> Councilmember Liccardo: Great. I understand we've got 800 acres rife with drying beds potentially to convert into other uses if all goes well, with the major shift in technology which will cost lots of money. John, you said residential uses aren't being considered. Is that primarily because of issues of odor, or are there other noxious-related elements here that --

>> John Stufflebean: There is two main reasons for that, the big one is the odor. There will still be odor from a waste treatment plant no matter what you do. There's odor from the primaries, head waters, tanks, the second reason is that residential we think might make it more difficult to do some of the other uses identity there. For example, one thing we're really hearing the need for is clean tech light industrial uses and it might not be compatible with residential nearby. So we're looking at residential as something that could make it difficult to do some of the other things we want to do, so that's kind of a second reason. But the big one is odor.

>> Councilmember Liccardo: My dreams of a beachfront condo are dashed?

>> John Stufflebean: Probably slim, yes.

>> Councilmember Liccardo: The reason why I asked, really, was other than my desire for a beachfront condo, the 800 acres, I imagine that value of land depends an awful lot on what the use is, and just doing the math obviously, if it all went residential we'd have all the money we'd need to build a new solid waste facility I imagine. The last question I had related to Newby island and some of the other disposal facilities. I'm hearing rumors that there are efforts underway to try to increase the altitude of the landfill and capacity and so forth. Does that affect what we're doing here?

>> John Stufflebean: No only in that if they do get an extension that would allow us to use our current disposal network longer if we wanted to or for part of the sludge, have a backup if we wanted to, that would be part of the effect, in terms of the adjacent land use issue not much of an impact, I don't think.

>> Councilmember Liccardo: All right. Any questions or comments? I don't have any cards from the public and if anyone would like to speak, here's your chance, if not I'll entertain a motion.

>> So moved.

>> Second.

>> Councilmember Liccardo: All in favor? That pass thank you. We'll move on then to item number 3. That is the construction and demolition diversion deposit redesign. I don't have any public speaker cards. If you would like to speak on this item please come up and submit one.

>> John Stufflebean: Okay, so this item is related do our zero waste goal. And one of the major components of the waste stream is construction demolition material. And as I imagine you've heard over the years, San José has kind of led the country in developing an innovative construction demolition diversion deposit program. And we've looked at a program, done an evaluation of it over the last year or so and are coming forward now with kind of our first thoughts about potentially how we could improve the program, increase it, even more diversion in the future and potentially provide some revenues to the General Fund, so that might be interest in that.

>> Jo Zientek, deputy director, integrated waste management program. Thank you for the opportunity to review some of the evaluation results we've conducted on our construction and demolition recycling program. How San José's currently program works, and we call it CDDD, which stands for Construction and Demolition Diversion Deposit Program, building permit applicants pay a deposit when they get a permit for demolition and construction with the city. And the city refunds the deposit when the permittee demonstrates that they've recycled their waste from the project. By far the easiest way to do this and the most common way in San José is to take this waste to a certified CDDD facility, and then the facility provides you the documentation that you've taken it there. C&D waste is normally collected at job sites two ways, either mixed waste, where all the demolition waste is put in one container, or it's separated. For example, the concrete is separated, the wood is separated. The main components of this waste stream are concrete, asphalt, masonry, dirt, metal, cardboard, wood, the typical things you'd expect from a construction project. So why are we talking about C&D waste today? About 30% of the overall waste generated is from C&D projects. The material is typically heavy, as you can imagine, concrete of course is the obvious example of that, and bulky in nature, and it represents unique opportunities and challenges for waste diversion. The modifications that we're proposing to move forward with in this report align the CDDD program to the city's zero waste goal, especially 75% waste diversion by 2012. And the CDDD program also aligns to several Green Vision goals, especially goal 5-0 waste, but also goal 3, renewable energy. There is a lot of potential from CDDD or construction demolition waste being feedstock to waste to energy projects. And one example to relate this presentation to the last one is there are new technologies which some of us got a presentation on today to take biosolids and wood waste from construction sites and use a gassification technology. And as Councilmember Liccardo mentioned, our treatment plant is located next to Newby Island Landfill, which is a CDDD certified facility, and Zanker Road landfill, so there are some synergies there. Today, most of the wood waste that's recycled as part of construction demolition operations does go to energy. It's shipped to the central valley and used in co-generation plants. So of course, not only does that method increase the carbon footprint of our operations, but we are not the beneficiaries of that waste. Kind of the history of the CDDD program, it was established in 2001. We've had 157,000 approximate building and construction permits issued in San José in the last five years, and about 18% of those were subject -- of a scale to be subject to the CDDD deposit. We have 26 CDDD certified facilities, those are both within the city and outside of the city and we tale have a lot of interest in additional facilities wanting to get certified. The deposit that permittees pay is 100% refundable, if 50% of the material is recovered. And over 90% of the people that request a refund get their full deposit back. Facilities voluntary participate in the program and like I said we have a lot of interest, both 26 facilities and new facilities wanting to come online. And other county facilities such as the city of Santa Clara simply use our CDDD certified facilities for their programs. As John mentioned, this is an award winning program. It was the first of its kind in the nation and has served as a model for both New York City's program and San Diego's program, for example, and New York City actually gives us credit for it on their Website. The program evaluation -- but no credit, yes? (inaudible)

>> Councilmember Liccardo: Predictable.

>> So what we did after the program had been operating for about eight years and given the new Green Vision goals we decided to do a full -- a comprehensive evaluation of how it was working. This process took about 16 months to complete. We did a waste characterization study, especially the facilities that process mixed C&D waste, that is the more complicated waste to process and we knew that some of the processing may not be going beyond the 50% diversion rate. And then we also did site assessments of all the certified facilities. We surveyed over 100 jurisdiction nationwide with regard to their program, and then we trained city staff on certification and how to do site assessments to make sure the facilities were

complying. We have engaged our stake extensively through this process. We wanted to make sure they both, when we kicked off the process we engaged with them. All the findings were sent out to them and we followed up with phone calls and meetings as the facilities wanted. The preliminary findings and standards were sent to the facilities for review and comment, and the final standards were sent to all facilities, our proposed standards. The C&D requirements can vary from city to city, and this can be challenging for contractors to handle. So what we are also doing not only with the facility in the hauler world but also with our neighboring jurisdictions is looking at ways to be more uniform in how we design our facility certification process. And we've gotten a lot of interest from Alameda County and San Mateo County in developing a more uniform system, plus some our facilities are in Alameda County, they're not all in Santa Clara County. So we did come up with some improvement opportunities. First of all, we did conclude that the current facility based program is working well. And we'd like to modify that approach before look at our or evaluating a different approach. And it is very easy for our construction community to participate in that program. They take it to the facility and then we ensure the facility is meeting our standards. We still have an opportunity to get more waste diversion out of the mixed waste loads. And so part of our recommendation is to increase our diversion requirement to align with the 75% diversion requirement over the next five years. So instead of 50% diversion for mixed-waste loads, we'd like to go to 75. The facilities that do process that says that's readily doable with the time line we've come up with. And this is in line with what a lot of other leading cities are doing, including Oakland, San Francisco, Alameda and San Mateo Counties, we're all doing the 75% diversion target and the time period the facilities can work with. We're also looking at the deposit, how we allocate the deposit amounts to see if they can be adjusted to encourage more participation. And then we're looking to streamline our processes internally. We've come up with some process improvements to get the deposit back to the customer as soon as we can. Additional findings, like I said, we can -- there's more opportunity to divert from the mixed loads. And of course any time we do increase recycling opportunities, we have the added benefit and Green Vision goal of increasing jobs. And we proved that with the multifamily program. We went to 80% diversion. We were able to add 70 permanent jobs here in San José to meet that goal. The other thing we're looking at is ways to encourage reuse of deconstruction materials on site versus having to have the hauler haul them to a facility and take the building material and create something else. For example, on the Las Plumas project we're looking at taking some of the salvage concrete and reusing it for another purpose on site. There's also been some great examples of demolition projects have taking the lumber and reused it onsite. And that really is the highest and best use for the solid waste hierarchy. So we are looking at ways to incentivize that more. Currently we do not allow the use of our construction demolition waste for what's called alternative daily cover. It's the regulatory cover landfill operators are require to use to cover the garbage every night. We don't consider that the highest and best use, but we do allow our -- this material to be used as a beneficial reuse on landfills. And we would like to take a closer look at that. That means the landfill uses it as roads in the landfill or to stabilize slopes. But we would like to take a relook at that sometime in the future to see if maybe there's a way to encourage highest and best use but we've decided at this point this is not something we want to take in now and that was after we got some stakeholder input on that. We also want to make sure our program aligns and supports the city's green building goals and private sector green building goals. There are LEED points to be received for recycling 50% of waste, there's more for 75 and we want to make sure our program is easy enough to use so businesses can easily get those points when they seek to have their buildings LEED certified. We also -- our evaluation also brought up the subject of waste management plans. Some cities have programs that will require contractors to develop comprehensive waste management plans. We have decided not to pursue that at this point, we're really sticking with the facility based approach to get our recycling rates up so we're not moving forward with that at this point. And again, with all these additional findings that we'll be looking at we'll include our stakeholder group and make sure that they're -- that the stakeholders and the city and the facilities can accommodate them. We did want to point out that there are some revenues options that the city is not participating in that some other cities do with the construction demolition recycling system. Many cities in the Bay Area charge a franchise fee for construction demolition waste hauling. The City of San José does not. Santa Clara for example charges a 10% franchise fee, Milpitas 12.5% and West Valley cities, Los Gatos, Saratoga, Monte Sereno and Campbell, 16%, and this is of gross receipts. San Jose does not charge a franchise fee on C&D waste hauling currently, so that's an option that could be looked at. The other options, one pertains to the disposal facility tax. As you know the city charges a \$13 per ton disposal facility tax of all waste disposed of in the city. The residue from construction demolition processing operations that is disposed, a lot of it

is disposed out of the city. So it's disposed, and our approach has always been if we're going to dispose of it anyway let's dispose of it in San José, we get the tax, it reduces our carbon footprint of our operations. So there may be ways to incentivize some of our smaller haulers to dispose of that waste in San José if they're going to dispose of it. So that's something more we can look at. And then also assessing the tax on the residue of construction demolition operations that happen at landfills in San José. Currently they're not paying the tax. And then some cities do charge facility fees on construction and demolition facilities within their jurisdiction. So of course, we're working with the attorney's office on all these and if any of them seem viable we can bring them forward as part of the budget process or another appropriate process. And of course we'd include stakeholder engagement in that. So our next steps is to start implementing the program enhancements we discussed, continue evaluating the additional findings and also, evaluate if any of the revenue opportunities we've uncovered would be worthwhile to bring forward through the city's budgeting process.

>> Councilmember Liccardo: Thanks Jo.

>> Okay.

>> Councilmember Liccardo: Any questions? Councilmember Campos.

>> Councilmember Campos: Thank you chair. You talked about the deposit and the refund. And so currently right now, is it the hauler that pays the deposit or is it the property owner that pays?

>> The permit applicant. So often it's the contractor. So the permit applicant, at the same time they pulled their building permit with the city, a portion of that fee is the deposit.

>> Councilmember Campos: Okay. So not necessarily the property owner? Good it could be, or it's just whoever pulls the permit.

>> Councilmember Campos: And the same person that pulls that gets the deposit back?

>> Currently that's the way it is. What we're looking at as part of a program enhancement is coming up with the way that the property other than can ultimately get the deposit back if the contractor is gone or something happens. So that the property owner can ultimately get that money back and we're look working with the attorney's office on that.

>> Councilmember Campos: Right now, the money may not even be claimed because somebody might leave, is that correct?

>> That's correct. If the money's unclaimed we do have a pretty extensive process for notification. We have three people on environmental services on the 10th floor of City Hall all of which are bilingual that are trained to help people manage the process. They send out a notification, they help them fill out the paperwork. So we do have a pretty extensive program and there's a year notification time before we deem the deposit abandoned and we do outreach during that period.

>> Councilmember Campos: But there are a lot of cases where money isn't claimed unclaimed?

>> Yes, and we have -- that's been more older money rather than newer money but we do have unclaimed deposits.

>> Councilmember Campos: Thank you.

>> Councilmember Liccardo: Vice Mayor Chirco.

>> Councilmember Chirco: To follow up to Councilmember Campos's question, on page 3 at the bottom it talks about if the process is modified, the city would notify permit applicants in advance of the expired permits becoming no longer active and specify the documents. That's not currently being done?

>> This isn't only -- that is currently being done. This is in case when a permit is no longer active. We don't have a mechanism to terminate that. If the project is done we currently have our standard process where you have a yore to file the paperwork. We help you through it. We notify you. If the permit's no longer active the deposit kind of sits in limbo. We don't have a mechanism to final that. So that's what we're working with, planning staff and the attorney's office to deal with that particular issue.

>> Councilmember Chirco: Well, hopefully that will be addressed quickly, thank you.

>> Councilmember Liccardo: Councilmember Herrera? No. I just had one question raised by the e-mail that was sent in, I guess it was a letter from Myron Crawford about CDD requirements. Question I had, I think the author is suggesting that we could or should instead impose requirements for waste management plans on disposal facilities rather than on contractors. I just wanted to know if you could respond to that criticism.

>> Yes, and that is what we are doing. I think what the writer was reading was the report about what we were not doing that other cities are doing. We're not moving forward with the contractor coming up with any waste management plan. The onus is completely on the facility.

>> Councilmember Liccardo: All right, one more happy customer. Any members of the public like to speak on there one? I see 92 one, so we'll entertain a motion.

>> Move.

>> Second.

>> Councilmember Liccardo: All in favor? That passes unanimously. Thank you. Item 4, I believe our last item, verbal report on energy efficiency and renewable energy activities.

>> Councilmember Chirco: Chairman Liccardo, if I could make a recommendation, larger numbers and lettering on pie charts and bar graphs. Because I think they're always interesting. Way too hard to read.

>> I wish I would have known that.

>> Councilmember Liccardo: Bigger is better henceforth, duly noted.

>> John Stufflebean: I'll kick it off by just noting that we do our monthly report on energy, and this month we're going to focus on the plant, because the plant, as we mentioned before, has done a lot on energy efficiency, and so Kerrie will do the presentation. Kerrie.

>> Yes, so this is -- I have a handout with a chart on it. So we often you know doing our monthly reports we've had an opportunity to talk with a lot of monthly activity in shorter time frames related to energy improvements throughout the city. We haven't had an opportunity to talk about the major improvements that the water pollution control plant has made over the last year. So we have Bill Erkes, and daily is going to talk a bit about some of the really big projects that the plant has completed, in the last two years. We've made some strategic hires and those have really helped focus our efforts. And I think we'll continue to see progress.

>> Yes, thank you. Good afternoon. So my name is Dale Ihrke. I'm deputy director of environmental services, and the plant manager at the San José-Santa Clara water pollution control plant. Is this thing working? Can you hear me? Okay, good. So as was described in the prior presentation of plant paster plan, the plant uses a lot of energy to treat wastewater. And we have been spending a lot of energy trying to reduce energy. I want to get that joke in. Spending a lot of energy to reduce energy at the plant. For many years we've had an energy reduction program ongoing for a long time but around 2007 we made some strategic hires as Carey said and brought on some staff that really were expert in wastewater treatment and we had them focus on energy reduction. And just as a background, the plant uses about 10 megawatts of electricity every day so basically we could power up a city of about 8,000 homes just from what the plant consumes on a daily basis. And that's roughly about 49% of all the power that's used in all the city facilities combined. So the plant really is a large player when it comes to energy consumption in the city. After the Green Vision was adopted, the plant wanting to play their part and meet that goal of 50% reduction, we took on an intermediate target of trying to reduce our power by 20% by the end of 2010, so on a three-year time frame. So the chart that I'm going to go through with you is basically some of the project that we've implemented and are going to implement in the next 20 years to meet that 20% goal. But as I mentioned in 2007 we made some strategic hiring and revitalized our process engineering group and brought on some real experts in wastewater treatment, with the goal of not only optimizing the plant from a reliability standpoint, but also from an energy reduction standpoint. We also had a couple of audits done of the plant, external audits by consultants that were paid for by PG&E and they identified some projects that we went ahead and implemented in 2008 and I'll talk about those. We also wanted our process engineering group to take a look at what we're doing, what we've done historically and ask the question why are we doing it that way and can we do things better? And some of the projects that were implemented in 2008 came with that mindset. If you look at your -- at the table, projects that we completed in 2008, we were able to demonstrate through metering that we were able to reduction our power consumption by about 1.6 megawatts or 1600 kilowatts per day. That translates to an annual savings of about \$1.3 million. Our current budget for power at the plant is around \$9 million and our total budget for running the wastewater treatment plant is about \$40 million. So we're looking at 20% to 25% of our cost just go into power. And as John mentioned, 50% of that \$9 million goes into producing air for the biological processes. So you'll notice that many of the projects and some of the projects we're working on in the future is really targeting air and air reductions because that's really where we spend our money. I just wanted to highlight as you look down this list plant air compressor upgrades. That was replacing an older compressor system. And replacing some variable frequency drives for motors. But then you get into these other projects like biological treatment, pulsed air mixed liquor channel air reduction. That was a big one, was 10%. And this was one of those projects that were strictly energy savings, asking the questions, why are you doing things the way you do it? I think most of you have had a tour of the plant before, and you've seen the big aeration tanks and all the air bubbling through the tanks. And we have --

in a single tank there are four quadrants. And the first and third quadrant we don't need a lot of air. We just want to keep the solids mixed so we just bubbled air continuously through these tanks and somebody asked the question well why don't you just bubble it for a couple of minutes and then turn it off? That's a good idea. So we tried it. It doesn't -- it's really simple concept, right? But we piloted it in one tank and didn't seem to have an effect and we took tests and took them to the lab and didn't seem to have any impact on the process. So we expanded it to a few more tanks, and now we're implemented full scale in one of our biological processes, and next year we will be full scale in the other process. And that alone saved about 10% of our power, we called it pulsed air, just pulsing air. Real simple concept but is saving a lot of money. We'll be implementing pulsed air and nitrification next year. We had some equipment we had to put in. And then in 2010, we've got another project. We had a study done on our heat, we used a lot of heat at the plant to heat the digesters and heat buildings. We had a consultant look at our heat loads and they recommended that we tripe try to capture some more heat off of our engines and use that back in the process instead of using a boiler where we burn natural gas. That's the project in 2010 and we expect that to save about 3% of our power as well. We were well on our way to the 20% goal. Right 90 we're shooting around 15%. With these other two projects we'll be about 18%. We're still beating the bushes for some additional projects. We have several projects that we have identified for implementation in the 2011 -- 2012 time frame. The projects that we have listed here were relatively inexpensive. Some of them didn't require any infrastructure at all. Some of them were process controls. Pressed air, opening the valve and closing the valve. As a matter of fact, some of these projects we got a significant rebate back from PG&E on this list of five projects here we were able to get a rebate of about \$450,000 from PG&E for these energy savings. So they almost paid for the projects plus we get the ongoing energy savings. So it was a really great program. In the future we have -- the projects that we have identified are a little more complex. Are going to take longer to pilot and they require more infrastructure. And so we're looking at those projects, and we're putting together a work plan for the resources and funding needs to do those projects. The other thing I just wanted to point out was the other goal that was 100% renewable energy. And the plant currently showing this pie chart we're about -- we're a little bit more than 50% renewable energy right now. As you know, we generate our own gas from the solids that we remove from the wastewater treatment process. That provides a little over a third of our power, and then we use landfill gas from our neighbor Newby island and that makes up over 50% of our renewable portfolio and so we're still work towards that. So some of the projects that we have not only are looking at reducing energy but we've got other projects that we're working on to try get more freeze energy, like the use of fat, oils and grease and getting more gas out of the solids that we have. So we've got other projects that are looking at trying to get more free energy than we have now, so really exciting program.

>> What's kind of neat about the projects through 2010, is the cost to the plant exclusive of rebates is about 1.2 million. So to spend 1.2 million to get 1.75 million in savings forever more seemed to make sense to Dale and his team.

>> Councilmember Liccardo: Well, thank you very much. Thanks for the report. Any questions? Okay.

>> So we just wanted to point out on the other side is more stuff about money. So that was kind of our other theme, energy and money today. Kind of a good way to end the year.

>> John Stufflebean: This is the money we receive and anticipate receiving, in the process of receiving.

>> We have about \$10.7 million that we should be getting. We keep hearing we will be getting it.

>> Councilmember Liccardo: Revised from staff from the federal agency?

>> Yes.

>> Councilmember Liccardo: Great, wonderful to see it rolling in. Thank youfully questions about this?

>> Councilmember Chirco: That was a fantastic report, thank you.

>> Thank you.

>> Councilmember Liccardo: Thank you. Okay, I think with that -- we don't need a motion right? We just move on to public comment. We have time then for public comment at this time. Would anyone like to speak? Mark, come on up.

>> Thanks for this opportunity. My family has been in San José for over 100 years. And I'm very concerned about the future. The next generation has always been given a better Santa Clara County than the previous and I'm very concerned that we're not going to be able to do that to the next generation. So my concern is, that we need to -- it's a very sad day for me because we're backing away from our goals of the Green Vision which was ambitious, granted. But I don't think we stepped up and tried to meet those goals. Instead we're backing away. It's very sad. I'm very saddened by that. But there are some things you can look at in the future. AB 811, Jim Beall's bill. Can do a lot in generating power on a house by

house basis, substantializing districts. We can consider developing a solar thermal or 20 megawatt to 40 megawatt solar thermal power plant. We're spending you know billions of dollars on the district, and we need, I think it's-d we need to balance the money and not -- and look in the next ten years, instead of looking at 20, 30, 40, 50 years I think we just really need to focus on the next ten because that's where all bets are off after 2020 if we haven't established a reduction in our emissions. The last thing I'd like to comment I'd like to make is in respect to sea level rise, there's the commission that sent the bay conservation and development commission, I think we need a seat at that -- on that commission because you just can't put up walls that water is going to go somewhere. And Contra Costa or San Mateo Alameda County are facing some real serious impacts. More three to four times more than Santa Clara County. So I think we need to really work together, in throughout the bay on a strategy to deal with sea level rise. One city or one county is not going to be effective. It needs to be like a regional and that commission will really help allow us to work together to deal with sea level rise.

>> Councilmember Liccardo: Thank you, Mark. Okay. I see no one else. At this time, then, the meeting's adjourned. Thank you all.