- - - - - - - - - - - -

STATE LAND BOARD MEETING

February 8, 2011

State Lands Building

775 Summer Street NE, Salem, Oregon

- - - - - - - - - - - -

TABLE OF CONTENTS

AGENDA ITEM NO.	PAGE
Consent Agenda	
(Approved, Page 1)	1
Action Item No. 1	1
(Approved, Page 3)	
Informational Reports	3
Agenda Item No. 4	48

TRANSCRIPT OF PROCEEDINGS

GOVERNOR KITZHABER: 10:00 sharp. Time to go to work. Land Board will come to order.

DIRECTOR SOLLIDAY: Governor, the first item on the agenda today; we only have one item on the Consent Agenda, and that is a request for approval of the minutes of the December 14th meeting.

GOVERNOR KITZHABER: Is there a motion?

SECRETARY OF STATE BROWN: I would move approval of the December minutes.

STATE TREASURER WHEELER: I'll second.

GOVERNOR KITZHABER: It's been moved and seconded that the Land Board approve the minutes of the December 14th meeting. Any objections? Hearing none, so ordered.

DIRECTOR SOLLIDAY: We have a single Action Item today, and that is a request for approval of a land exchange with the Oregon Parks and recreation Department. We are requesting that the Board approve a land exchange that involves a 75.15 acre parcel of land that is owned by the Department in Lincoln County, which is adjacent to the newly created Beaver Creek natural area. And in exchange the Parks Department would exchange to us a 6.37 acre parcel that they own in Deschutes County, which is adjacent to a parcel we own called the South Redmond Tract.

GOVERNOR KITZHABER: And if you look, it's under the

tab C, our maps that show the --

DIRECTOR SOLLIDAY: Yeah, and you'll see both, two maps, one that shows the parcel that we would be picking up from the Parks Departments and one that Parks Department would be picking up from us. Both of those parcels were appraised. The Beaver Creek parcel was appraised at $128,000. The South Redmond parcel was appraised at $95,550. As part of the exchange the Parks Department will pay us the difference to equalize the exchange values. And that amount is $32,450.

The Parks Commission has already approved this exchange at their meeting in late January. With that, staff would recommend that the Land Board approve the final land exchange between the Parks Department and the Department of Lands, including the $32,450 in cash to DSL to equalize values.

GOVERNOR KITZHABER: Any questions? Is there a motion?

STATE TREASURER WHEELER: So moved.

SECRETARY OF STATE BROWN: Second.

GOVERNOR KITZHABER: Moved and seconded that the Land Board approve the land exchange with Oregon Parks and Recreation Department. I would just like to say I have no problem and certainly move forward. I would like at some point fairly soon maybe to get sort of a review of a current asset management strategy. There's been a bit of controversy about it. And I think it would be -- the Land Board to kind of review

that and decide if we want to make any changes to that.

DIRECTOR SOLLIDAY: Governor, I just might mention their Asset Management Plan calls for a five-year review. And this is the fifth year. So we will have already built that into our work plan for this year. And at some point we'd be having a discussion with the Board about what we've done in the first five years; what we might propose to do differently going forward in the next five years.

GOVERNOR KITZHABER: Okay. Objection? Motion's approved.

DIRECTOR SOLLIDAY: We have two informational items for you today. The first is a panel presentation on climate change. And there were three reports recently released in Oregon related to climate change. And we've asked speakers to come talk about the findings, conclusions and recommendations of each of those three reports. The reason the Department is interested in this, and the Board will want to pay close attention.

As you know, we manage and regulate lands and waterways around the state of Oregon. And many of the lands that we manage have the potential to be either adversely or positively impacted by the affects the climate change. We also regulate activities and waters in the state under the Removal/Fill Program, and are looking at the potential impacts of climate change on coastal wetland communities in particular

since they seem to be the most vulnerable under a scenario where sea level rises anywhere from one to four feet are the latest predictions.

And so we are as a department starting to take a look at what do we need to do in terms of adaptation strategies, thinking about those potential impacts moving forward. And the information that you're going to hear today will give some sense of the science as we know it today and the impacts from the science here specifically in Oregon. And then Richard Whitman and Phil Mote will do that. And then Richard Whitman will talk about State Adaptation Framework that was put together by a host of State agencies who were trying to work to really think through what is it that we think are the likely impacts here in Oregon and what as State agencies should we be doing or can we be doing to try to adapt to those coming changes.

And then finally Angus Duncan is going to come talk about recommendations from the Global Warming Commission's Interim 2020 Report in terms of how we reduce greenhouse gas emissions both in the short term and the long term. And with that I'd like to introduce Phil Mote, Richard Whitman and Angus Duncan.

GOVERNOR KITZHABER: Welcome. If you could just before we start just identify yourself for the record.

DIRECTOR MOTE: Yeah, Governor, Phil Mote, the

1 Director of the Oregon Climate Change Research Institute. And
2 I want to acknowledge and thank you for the invitation to
3 appear before you today. This is not the first time the three
4 of us have done this set of presentations that we're very
5 pleased to be working together. I also want to acknowledge
6 Kathie Dello from our office, who was responsible for pulling
7 this report together, and to point out that it's available at
8 our website occri.net.
9 This is the first ever Oregon Climate Assessment
10 Report that was created to satisfy the legislation that created
11 the Oregon Climate Change Research Institute, HB 3543, which
12 passed in 2007. Here's the language from the Bill that said,
13 "Once each biennium we must asset the state of climate change
14 science as it pertains to Oregon." And it specifies physical,
15 biological and social sciences.
16 We convened a group of nine lead authors and a blue
17 ribbon panel consisting of two State legislators and Gale
18 Ackerman (Phonetic). He is the Chair of Transportation
19 Commission and then was the Director of the Institute for
20 Natural Resources, and Mark Abbott (Phonetic), the Dean of the
21 College of Ocean and Atmospheric Sciences at OSU. And they
22 sort of helped us sort through all the possible topics and come
23 up with a list nine chapters.
24 We identified lead authors, ended up with
25 approximately 70 scientists contributing to these nine chapters

1 from four universities in the Oregon university system and also
2 scientists from state and federal agencies. We primarily drew
3 from peer reviewed literature, including other climate impact
4 assessments from Washington and California. I was involved in
5 the Washington assessment when I was there at UW a few years
6 ago. We're really focusing on the science. We're not
7 prescribing any policies. We worked with and strongly
8 supported the State Adaptation Framework. And I want to
9 commend Richard and his agency and Jim Rue (Phonetic) and
10 Louise and all the other agency directors who worked on the
11 Adaptation Framework. It was a delight to work in tandem with
12 them.
13 Here's the outline of the report. There's a
14 legislative summary, which satisfies the terms of the
15 legislation, a two-page summary, which was delivered to each
16 state legislator. An executive summary, which was not called
17 for but we felt like we needed to be able to summarize the 500-
18 page report in something longer than two pages. So that
19 executive summary is also available. And then we had chapters
20 on climate, on the factors that produce climate change, the
21 emissions, which Angus will discuss and how to reduce.
22 Then we focused on different kinds of impacts to
23 fresh water, agriculture, vegetation, coast and estuary, fish
24 and wildlife. And then sort of wrapping them together economic
25 and finally human dimensions. They'll just go briefly through

1 the report at the sort of executive summary level. First of
2 all, we know from observations that the region is in fact
3 warming. This map shows warming trends in the Pacific
4 Northwest over the period 1920 to 2005.
5 Each red dot indicates a long-term record that shows
6 a warming trend. Blue dots, in which there are only a couple
7 in the region, indicate a cooling trend. And there are a
8 couple of yellow dots that indicate basically no trend. The
9 average warming trend over this period was about one and a half
10 degrees Fahrenheit. So that's roughly 28 degrees Celsius and
11 it's comparable to theoretical expectations, given the rise in
12 greenhouse gases during this period.
13 This figure shows both past and future climate
14 changes for the Pacific Northwest, as simulated by climate
15 models. So again, this is just for the Pacific Northwest. The
16 gray shaded area on the left indicates simulations of 20th
17 Century temperature increase on the top, and precipitation
18 change on the bottom, again from climate models. And that
19 works out to about the one and a half degrees Fahrenheit that I
20 just mentioned was observed.
21 So in other words, if you tell climate models how
22 much the greenhouse gas has increased, you get roughly the
23 regional warming that's been observed. Then spinning that out
24 into the future, we don't know how much greenhouse gases will
25 be emitted in the future. So the convention in climate

1 modeling communities has been to take a couple of possible
2 scenarios and then run with those. So we're averaging here the
3 outputs of roughly 18 modeling efforts around the world.
4 The B1 scenario is what we hope we can manage to
5 achieve, which is a stabilization of greenhouse gases sometime
6 during this century. And the A1-B is more of a middle of the
7 road scenario. There are scarier scenarios out there. But
8 given all the questions about the amount of greenhouse gases in
9 the atmosphere and also how responsive the climate system is,
10 the warming of the region could be as low as two degrees
11 Fahrenheit in this century or as high as ten degrees.
12 I'm looking over the very right-hand edge of that top
13 figure. Now, the question of how precipitation will change is
14 a little more complicated. The Pacific Northwest lies between
15 Canada where climate models uniformly predict it will increase,
16 and Mexico and southern California where they uniformly project
17 decreases. So the bottom panel shows precipitation change in
18 percent both in the past and the future. And you'll see it
19 sort of wiggles around zero for the annual mean.
20 **GOVERNOR KITZHABER:** One question.
21 **DIRECTOR MOTE:** Yeah.
22 **GOVERNOR KITZHABER:** The two degree and ten degree
23 range; which one of those is reflected on the B1 graph there?
24 **DIRECTOR MOTE:** The B1 alone would give us roughly
25 two to seven degrees. And the A1-B would give us four to ten

degrees. There's another scenario that very few climate modelers ran, called A1-FI; FI standing for fossil intensive. It's you know, China and India grow like gangbusters and they burn coal to do it. And that's sort of what's been happening. So we could conceivably see warming rates higher than what's shown here. So the question in the precipitation really boils down more to a seasonal one. And what we're seeing out of -- and again, this is the last generation of climate models from several years ago. We're just starting to get the next generation results now.

So these will be in the next report. But that generation suggested not much change in precipitation during fall, winter and spring, but that there would be accentuated warming and drying in the summer. And also emerging evidence that more extreme precipitation events would become more likely. Chapter 2 covering the emissions of greenhouse gases throughout some good work that's been done at the Oregon Department of Energy and Department of Transportation, looking at the production of greenhouse gases.

And it breaks down the two biggest sectors of course are generation of electricity primarily from burning coal, and transportation. Those are each roughly a third or a little bit more. And then the remaining third is sliced up into other fossil fuel combustion, agricultural waste and wastewater and other industrial. And so strategies to reduce emissions, you

1 know, need to recognize and do recognize.

2 **GOVERNOR KITZHABER:** What is the built environment

3 (phonetic) there?

4 **DIRECTOR MOTE:** That would be -- well, a good part of

5 the built environment consumption is in heating. And so if

6 you're heating by burning methane natural gas that would be

7 under other fossil fuel combustion. If you're heating with

8 electricity, it would be in that section. So yeah, there are

9 different ways to break these out. The question about water

10 resources in Oregon hinges very much on how snow cover will

11 change because we have reservoir storage in built reservoirs.

12 But most of our reservoir storage in most of the

13 state, except for the coastal rivers, is in snow pack. And

14 this is some modeling work done at Portland State University,

15 looking just at the Willamette Basin and looking at the spring

16 snowpack storage on the left would be the reference to late

17 20th Century. And the darker blues indicate more snow. And

18 they're simulated by sub-basins. So that's what the little

19 polygons represent.

20 And stepping forward in the 2040s and 2080s again on

21 this A1-B, sort of middle of the road scenarios, can see by the

22 2080s there's very little snow storage left on April 1st. And

23 what that translates to is a dramatic change in the hydrograph.

24 This is some work done at University of Washington simulating

25 the flow in the Willamette where it joins the Columbia. And

1 the reference curve is the blue curve, so fairly flat and
2 average flow from January really through May because as the
3 precipitation tails off the snow melt produces more flow.
4 And then stepping forward into the future you see the
5 green and the red curves going up in winter, JFM, standing for
6 January, February, March. And then going down in spring, June
7 and July, May, June, July. So this does two things; one, the
8 reduction of snow storage increases the flood risk in the
9 winter. Think back to February 1996 for a good example of a
10 wintertime flood. And then it also reduces the available water
11 in the spring and summer. And OSU and U of O and PSU are
12 teaming up on a study funded by the National Science Foundation
13 to kind of work out the future of water and all its uses in the
14 Willamette --
15 **GOVERNOR KITZHABER:** So the message here is to begin
16 to rethink both our flood management and sort of storage
17 strategies --
18 **DIRECTOR MOTE:** Yes. Agriculture, this was an
19 interesting chapter for us to pull together, tabulating
20 Oregon's largest agricultural crops. And we are the top
21 producer of 15 commodities, a lot of crops grown here,
22 including things like hazelnuts. Agriculture is responsible
23 for about nine percent of our emissions. A changing climate
24 and higher CO2 leads to longer growing seasons, more rapidly
25 maturing plants and reduced water demand from plants as they

1 can close their stomach (phonetic) in a higher CO2 world, and
2 also more wine varieties.
3 But the previous light about the reduction in water
4 supply is a concern anywhere that agriculture relies on
5 irrigation. And also experiments have shown that in a higher
6 CO2 world if you compare growth rates of weeds and non-weeds,
7 guess what; the weeds grow faster than the non-weeds. And they
8 also become more resistant to herbicides.
9 So similar concerns about insects that can damage
10 crops. This is a slide by Greg Jones at Southern Oregon
11 University showing the growing season preferences for different
12 wine grapes. And as you move from left to right, these are
13 grapes that grow in very cool climates over to warmer climates.
14 And as you move down, then you're moving down the wine
15 varieties toward those more warmth tolerant or warmth
16 preferring crops. Right now, of course, pinot noir is the
17 marquee wine grape for Oregon. And that's fourth from the top.
18 As you move to a warmer climate pinot noir becomes
19 harder to grow. But then you get into, you know, all the
20 different kinds of red wines, the merlot and malbec, Jiroft
21 (Phonetic); some of my favorites. Unfortunately for Napa
22 Valley if you're already down in that sort of lower category
23 specializing in cabernet sauvignon and so on, then you warm up
24 by a couple degrees Celsius, then all you can grow is table
25 grapes and raisins.

1 Chapter 5, future projected vegetation type; this is
2 work done by Ron Neilson (Phonetic) at the forest service lab
3 in Corvallis. This sort of model takes climate input and then
4 compares with where different types of vegetation grow now, and
5 then changes the climate inputs to see what the types of
6 vegetation are. So what we're looking at is the map of Oregon
7 on the top for the 1961 to '90 climate, and then the preferred
8 vegetation types for end of 21st Century in that lower
9 scenario, B1, and a higher one, A2 that's a little bit higher
10 than the A1-B I showed you earlier.
11 And so really depending on the climate scenario, and
12 these are all two different climate models, the one that's at
13 the lower end of the warming, and one that's at the higher end
14 of warming. So depending on whether we hit a kind of low warmth
15 Oregon or a high warmth Oregon, we could end up with largely
16 the same vegetation distribution in the lower left, or a
17 substantially different vegetation distribution in the lower
18 right where the maritime evergreen yielding (phonetic) forest
19 that's predominant in western Oregon is largely supplanted by
20 other species or a mixed conifer and hardwood forest.
21 **STATE TREASURER WHEELER:** May I ask a question on
22 this point?
23 **DIRECTOR MOTE:** Yes.
24 **STATE TREASURER WHEELER:** Could you give specifically
25 the differences between B and C in terms of temperature

gradient; what your expectations of the model are?

DIRECTOR MOTE: I would have to look it up. But the low end of the warming in the B1 scenario is a few degrees Fahrenheit and the high end in A2 is more like ten degrees. And it's especially warming a lot in the summer. And so that really changes the water stress for these plants. And that becomes a big determinate, more than the annual mean temperature change, the summer temperature and moisture change.

STATE TREASURER WHEELER: And may I ask under scenario B and C what are your expectations? And just looking for example at the Elliott State Forest, what do your models predict in terms of the vegetation type for those areas of the state in the forest --

DIRECTOR MOTE: Yeah, I don't want to try to get into the results on the fly --

STATE TREASURER WHEELER: What does the model say? Just help me interpret the chart.

DIRECTOR MOTE: So the dark green is maritime evergreen yielding forest and that will find itself in a very unsuitable climate in scenario C in western Oregon. I'm sorry, I don't know where the state forest is that you're mentioning, the Elliott.

STATE TREASURER WHEELER: It's in the lower left --

DIRECTOR SOLLIDAY: Coos County.

DIRECTOR MOTE: Coos County, lower left --

STATE TREASURER WHEELER: --and southwest portion.

DIRECTOR MOTE: Yeah, so what you're seeing there is a northward expansion of the sort of coastal species that are currently prevalent in California into the coastal areas of Oregon. And again, this is potential vegetation. This is what would prefer to be there if you started from scratch. A mature forest is fairly resilient to climate changes. This isn't predicting what will actually cover landscapes --

STATE TREASURER WHEELER: Like the preference.

DIRECTOR MOTE: But yeah, if there's a fire that comes through and stand replacing (phonetic) fire, then what starts it out in a new, you know, an empty stand or an empty patch of ground could be substantially different from what was there.

STATE TREASURER WHEELER: Thank you, appreciate it.

DIRECTOR MOTE: Yeah, I'm sorry I'm not the forest expert to answer these answers properly. But another issue here is the fire regime. And what this is illustrating is that for that scenario C with the hot, dry summers in that particular model, the likelihood of wildfire in western Oregon rises substantially. And so then you lose a lot more carbon storage in this scenario. So the pair of those with trees being well outside their climate envelope and a large increase in a fire regime, especially in western Oregon, means a substantial change in the actual vegetation that would thrive.

1 One of the issues that we have here on the Oregon
2 Coast and just as a parenthetical note, the Natural Resources
3 Council, National Academy of Sciences is preparing a report on
4 sea level rise for Oregon, Washington, and California. It was
5 requested by then Governor Schwarzenegger. And I'm
6 participating in that effort. We should have the report
7 finished by December. But this shows in addition to the global
8 sea level rise from melting ice and the thermal expansion of
9 the ocean that on our part of the coast the geologic activity
10 that we have with the Pacific plate sliding under the North
11 American plate leads to deformation of the coast.
12 So blue arrows indicate areas where the land is
13 rising. And therefore, the sea level rise is lower than the
14 global average. I'm sorry, the red arrows are where the land
15 is rising, and the net sea level is lower because of that. And
16 the blue areas are where the land is subsiding so the net sea
17 level is higher than the global average. So you know, at any
18 given point on the coast it might be different from the global
19 average.
20 And we're kind of working out what that means for
21 localities. But another issue with the coast, coastal change
22 of course is there's already erosion that may or may not have
23 much to do with the sea level rise. And so you see the
24 response in some areas is to armor. And that can shift erosion
25 to adjacent areas, and otherwise alter the shoreline. It also

means that, as this example shows, that you lose a certain kind of habitat; in this case the sandy beach and shrubby uplands because the erosion then just cuts right into those.

GOVERNOR KITZHABER: So can you actually pinpoint -- how accurately can you pinpoint those areas where the land is rising and falling?

DIRECTOR MOTE: Well, there are GPS measurements now that can quantify with pretty good degree accuracy, you know. As many GPS sensors as there are installed we can tell how that particular point is going on --

GOVERNOR KITZHABER: The sections down the coast that have a pretty narrow strip of land and theoretically we've had communities cut off by landslides before. And this could be a much more catastrophic potential for the transportation.

DIRECTOR MOTE: Yeah. Yeah, and another thing that we're concerned about is of course these areas that are rising are rising because the plate is deforming. And when we get large seductions of an earthquake, we know from January 1700 one of these 9.0, nine-something earthquakes resulted in a one meter drop in shoreline. So that's worse than the sort of slow sea level rise. But we didn't have no idea when it all happened.

Chapter 7 about species changes; looking back at changes that have already occurred in different kinds of fish and wildlife, these are some things that have been observed.

1 Different kinds of insects moving in from California into
2 Oregon; frogs reproducing earlier in the year; land birds
3 shifting distributions northward; fresh water fish losing
4 habitat. And then we have these occasional invasives like the
5 Humboldt squid, which are subtropical warm water loving animals
6 appearing on our coast.
7 So going to the future, you know, obviously a lot of
8 these things will continue to happen. And we'll end up with
9 different species of assemblages, especially as we consider the
10 backdrop in vegetation change and the flow changes in the
11 rivers. One concern is alva blooms (phonetic) and this shows
12 the frequency of alva blooms of domoic acid in gray and
13 saxitoxin in red. And these are -- the frequency of closure at
14 different places on the Oregon Coast over the last 17 years for
15 domoic acid and the last 30 years for the saxitoxin.
16 We were at a bit of a loss in the economics chapter
17 because there just hasn't been a lot of research on economic
18 impacts for Oregon. But there have been a variety of global
19 studies of impacts of climate change. And they typically
20 estimate the cost on the order of one to five percent of gross
21 domestic products, average over all the country. Some things
22 that are of concern for Oregon are these changes in snow
23 storage and summer water supply, changes in hydropower and wind
24 energy, crop yield and water supply for agriculture, you know,
25 some up, some down.

1 Forestry concerns about wildfire, insects and
2 shifting species, rivering and coastal flooding. And then a
3 previous study that was done by the Climate Leadership
4 Initiative focused on the impacts just on salmon health and
5 recreation as a way of quantifying a few types of impacts. So
6 we really aren't yet at a point where we can say much about the
7 numerical impacts on the change, either positive or negative
8 here in Oregon.
9 And finally, the human dimensions chapter, one of the
10 things that it covered was surveys of opinions of climate
11 change. And this was an example of one question that had been
12 posed to Oregon residents. Given the state of science of
13 climate change do you support the development of renewable
14 energy basically. And 60-something percent of respondents said
15 that climate change is a moderate to serious problem. And we
16 need some kind of energy policy to support that.
17 And about a quarter of respondents said climate
18 change is not a problem and we shouldn't tinker with existing
19 energy policies. So my final -- there are slides here, the key
20 findings from the report. The take-home messages, increases in
21 annual temperature, very roughly five degrees over this next
22 century. But it could be lower or higher, depending on a lot
23 of things. One theme that emerged from the modeling results
24 was seasonal changes would be most accentuated in summer with
25 warmer, dryer summers.

1 Summer water supply will decrease as a result of
2 reduced snowpack, and the dryer summers. The most greenhouse
3 gas intensive sector is transportation. And that's partly
4 because we have a relatively green electricity sector compared
5 with other states. And also I think we mentioned a little bit
6 but the land use policies in Oregon have contributed to making
7 Oregon a relatively carbon-efficient state. Finally, the
8 availability quality of cost of water (phonetic) will be a
9 limiting factor for agriculture and hydropower and forestry.
10 Some opportunities in the agriculture sector,
11 especially wine grapes, projected increases in wildfire. We're
12 concerned about the frequency and magnitude of coastal flooding
13 events and inundations; plant and animal species on land, fresh
14 water and sea, shifting their distributions. There have already
15 been observed some changes to the marine environment, notably
16 increased temperatures off Oregon's coast.
17 And as we sort of wrapped up this report, what we
18 think we know now that we didn't know a couple years ago, but
19 we really need a more complete economic analysis that impacts
20 the climate change on Oregon economy. Also, we're already
21 experiencing some impacts now; the increases in wildfire,
22 changes in species distribution, coastal erosion, changes in
23 fresh water supply. These are all underway. And there should
24 be measures for adaptation undertaken already. And for that we
25 really commend the agencies for pulling together the Oregon

1 Climate Change Adaptation Framework Report, which Richard will
2 cover next.
3 **SECRETARY OF STATE BROWN:** Governor?
4 **GOVERNOR KITZHABER:** Yes. Secretary Kate Brown.
5 **SECRETARY OF STATE BROWN:** Thank you. Thank you,
6 Governor. My question is have you and your counterpart Kathie
7 presented this entire presentation to the Global Warming
8 Commission and the Sustainability Board at the same time? Are
9 you presenting to the Legislative Committees as well and have
10 you considered presenting to some of Oregon's Boards and
11 commissions on natural resources issues?
12 **DIRECTOR MOTE:** Yes. Thank you, Secretary of State
13 Brown. We were invited to present the two reports. I think
14 for the Legislature I don't think we had Angus on board. You
15 did. Yes, House and Senate, Natural Resources Environment
16 Committees in December right after the report was released.
17 And how many Boards and commissions have we been to now? I
18 think is number --
19 **DIRECTOR WHITMAN:** We've done five or six.
20 **DIRECTOR MOTE:** Yeah.
21 **DIRECTOR WHITMAN:** And there are more scheduled so
22 we're getting the word out.
23 **GOVERNOR KITZHABER:** Have you done the Forestry and
24 Ag yet?
25 **DIRECTOR WHITMAN:** We have not done the Board of Ag

1 or the Board of Forestry yet. But those will be good ones.
2 **SECRETARY OF STATE BROWN:** Governor, one more
3 question, if I may? And your report was -- was your report
4 completed before the decision regarding Boardman was made?
5 Does that factor into this at all?
6 **DIRECTOR MOTE:** Yes, it was before the decision on
7 Boardman was made. But I think that was already well in motion
8 before our report came out.
9 **SECRETARY OF STATE BROWN:** Okay.
10 **DIRECTOR WHITMAN:** I can speak to that if you want.
11 **SECRETARY OF STATE BROWN:** Great, that'd be good.
12 **DIRECTOR MOTE:** And I only remember that because we
13 presented to the Board on Environmental Quality --
14 **SECRETARY OF STATE BROWN:** Thank you. Okay.
15 **DIRECTOR MOTE:** --Commission on Environmental Quality
16 on the day after that had --
17 **SECRETARY OF STATE BROWN:** Okay.
18 **DIRECTOR MOTE:** --made the Boardman decision.
19 **SECRETARY OF STATE BROWN:** Great.
20 **DIRECTOR WHITMAN:** Good morning, Governor, Secretary
21 Brown, and Treasurer Wheeler. I'm Richard Whitman, the
22 Director of the Department of Land Conservation and
23 Development, and sort of a middle man here taking the pure
24 science that you just heard about in the OCCRI report, which is
25 the state of the climate science in Oregon specifically. And

1 then Angus is going to talk about some of the policy
2 implications of how to limit emissions of greenhouse gases,
3 which of course is the cause of climate change.
4 The middle part of this is to talk about given the
5 science report that we've heard, what are the policy
6 implications of that for the state of Oregon? What are the
7 major risks for the state? What should we be starting to think
8 about doing in order to help communities in Oregon begin to
9 prepare for some of the risks that are present because of
10 climate change? So that is the purpose of this presentation.
11 And so I'm going to talk about actually five things
12 if we could see how this one works here. Good. Okay. So I'm
13 going to -- first of all I'm going to set the context a little
14 bit and talk about the purposes of the adaptation framework.
15 The prioritization of risk coming out of the OCCRI report, some
16 priorities for short-term, low-hanging fruit-type actions that
17 people are recommending that Oregon and communities in Oregon
18 start to take.
19 And then some recommendations for how to continue
20 this effort in terms of working not just at the state level but
21 also at the local level and federal levels with our
22 counterparts to keep adapting this effort as we learn more and
23 more about climate change in Oregon. So I want to talk about
24 context a little bit. First of all, this is not the first
25 report on climate adaptation in the state of Oregon. There was

1 a report that I want to acknowledge done in early 2008 called
2 Climate Change Integrations Group Framework for Addressing
3 Rapid Climate Change that had both mitigation elements for
4 recommendations on reductions of greenhouse gas emissions and a
5 chapter on adaptation and preparation.
6 But back in 2009 there was an effort by a group of
7 about 20 State agencies and university entities as well to --
8 we knew that the OCCRI report was coming out, to begin working
9 with OCCRI and really integrate that science work into a policy
10 context. So during this work it also became quite clear that
11 we were going to have little or no resources to really spend a
12 lot of additional money on this effort in the state of Oregon,
13 given the emerging fiscal situation in the state.
14 So a lot of the emphasis on the part of the agencies
15 was develop recommendations that can be implemented for little
16 to no money. So you know, given what you just saw from Phil's
17 presentation, you can very quickly get some big ideas about
18 what the State might do in an ideal sense. But that's not the
19 fiscal reality that we're in right now. So that was very much
20 a part of the context for this.
21 A couple of unique things about this adaptation
22 framework; other states are doing similar sorts of effort. But
23 the integration of both the effects on natural environment and
24 built environment, looking across that spectrum, is very
25 unusual. And I think Oregon is perhaps the only state that's

1 looked both at effects of climate change on built environment
2 and natural environment, and tried to tie those effects
3 together in one framework.
4 We also made a big point of including public health
5 in this discussion. So public health participated actively in
6 the group of agencies and the work group that actually put this
7 stuff together. And you'll see in a minute there's some
8 specific recommendations relating to public health. You just
9 heard from Phil the information on climate change in the state
10 of Oregon. A lot of what we're trying to do is make this
11 information personal to individuals, and make it specific to
12 communities so that we can start having discussions not about
13 this is what's happening globally that I think a lot of people
14 have trouble focusing on, but really make it personal.
15 Take it down to the local level. This is what
16 climate change is going to mean for your community. These are
17 the major risks for your particular community. But those risks
18 are going to vary across different parts of the state,
19 depending on the specific environment and conditions. Okay.
20 So purposes of the framework again to identify the major risk
21 to Oregon in terms of climate change, to provide a framework
22 for state and local government to begin preparing communities
23 for climate change, to assess on an ongoing basis our ability
24 to respond to climate change, and then lastly to identify next
25 steps in terms of policy implementation.

1 So that adaptation framework has three main elements
2 and they are a summary of the climate risk, building off of the
3 science work that OCCRI did. That identifies 11 major areas of
4 risk. And what we did that really takes the OCCRI work one step
5 further is to do a qualitative assessment based on the
6 likelihood of the risk and the magnitude of the risk in terms
7 of population or environment for what's the most important.
8 Then second element is short-term priority actions
9 for each risk, and then recommendations for version 2.0 of the
10 adaptation framework. I'm actually going to skip through these
11 and go right to the actions that are put together here with the
12 risk. So the first category here are risks that are very
13 likely to occur. And you've heard much of this from Phil's
14 presentation. Increase in average air temperature and
15 likelihood of extreme heat event.
16 So the collective thinking in terms of a short-term
17 action that we could start taking now is really to work with
18 our existing infrastructure for public health and start to
19 identify facilities, areas where people can go to shelter from
20 extreme heat events. You may recall a couple of summers ago we
21 had the ten-day period of plus-100 degree temperatures in the
22 Willamette Valley. And we had a lot of people fleeing the
23 valley for the coast or other parts of the state.
24 So that's the sort of situation we're talking about.
25 The concerns from the public health point of view is elderly

1 who are not mobile and who do not have air conditioning and who
2 need a place to go in shelter in the short term. The second
3 risk that's very likely to occur are the changes in hydrology,
4 in particular the changes as a result of reduced snowpack. And
5 I need to mention here in terms of actions, this plugs into an
6 action that is already ongoing on the part of the Department of
7 Water Resources. And that's integrated water resources strategy
8 that's under development right now looking at new water supply
9 and water storage options across the state. So that really
10 responds directly to this particular risk.
11 There was also in terms of other actions working with
12 landowners to improve natural storage along our waterways in
13 the state of Oregon. Okay. Now we're stepping it down a level
14 into risks that instead of very likely to occur, these are the
15 risks that are likely to occur. So a little less certainty in
16 terms of the timing of when these effects are going to be felt.
17 And the first one that we focused on was the increase in
18 wildfire frequency and intensity.
19 We've seen a number of very bad wildfires in the
20 state of Oregon in the last 15 years that have threatened some
21 major communities in the state. And so this is an area where
22 the action recommendation is to better integrate our land use
23 system and our system for predicting where the most significant
24 risk of wildfire is to make sure that we're planning the design
25 of communities, the edges of communities and to some extent the

1 location of communities in areas where we can minimize risk.
2 Question?
3 **SECRETARY OF STATE BROWN:** Governor, if I may?
4 Wouldn't this also speak to sort of developing biomass in
5 cleaning, you know, working on forest health?
6 **DIRECTOR WHITMAN:** Governor, Secretary Brown,
7 absolutely. So in terms of a supply, a stream of biomass to
8 fuel those facilities, tying those together with forest health
9 proposals that reduce fire risks to communities where the risk
10 is the greatest makes absolute sense to achieve both
11 objectives. Okay. Again, there's a public health aspect to
12 this in terms of risk to public health as a result of fire.
13 This is something that the state of Washington saw quite a bit
14 of. I think two fire seasons ago there was some significant
15 public health concerns as a result of the fires there.
16 Increased ocean temperature; this is one where we
17 don't have any great ideas in terms of short-term actions other
18 than to basically improve our level of research and
19 understanding about what exactly is happening out there in
20 terms of both increase in temperature and changes in ocean
21 chemistry. This effect is already affecting our natural
22 resource industries in terms of oyster production in the state.
23 This is already having a significant effect.
24 Drought again comes back to the water management
25 issue, improving storage and our incentives to basically make

1 wise use of our limited water resources. Phil showed you the
2 slide of the RV park on the coast in terms of coastal erosion.
3 The main effect here is not so much sea level rise, but there
4 has been a very significant increase in storm surge wave height
5 over the last 10, 20 years in the state of Oregon. And that's
6 in the near term that's what's leading to very significant
7 erosion concerns and risk to communities in the state.
8 So my department along with Parks and Recreation and
9 DOGAMI and some other agencies are working on improving our
10 mapping of where those risk areas are now, and beginning to
11 work with communities on the coast to plan for moving key
12 facilities away from those areas in perhaps longer term, even
13 relocating some of those communities to areas of lesser risk.
14 And number 7 is a change in habitat as a result,
15 primarily changes in average annual temperature. And here the
16 main focus is on identifying areas that are most likely to be
17 refuges for sensitive species in the long term, and doing what
18 we can to protect those areas. Last two for likely to occur
19 are increase in invasives and disease. This is I think one of
20 the first leading edge effects that we're starting to see from
21 climate change.
22 Invasives are very sensitive to changes in both
23 temperature and precipitation. So we've had a number of new
24 invasive species come into the state recently. Basically
25 increase monitoring and surveillance activities to try to

1 control those before they get out of hand. Number 9 is
2 directed at wetlands, basically supporting existing programs to
3 protect our wetland resources and ecosystems in the state.
4 The last two are directed at risks that there is a
5 fair degree of uncertainty about. Phil noted that on
6 precipitation there's much less certainty than there is on
7 temperature. We do believe that there's going to be an increase
8 in extreme precipitation events leading to flooding. And so
9 again basically continuing work that we're doing now to improve
10 the state of knowledge about what areas are at risk from
11 flooding and work with communities to move away from those
12 areas of risk is the main recommendation, and then similarly
13 with landslides.
14 Okay. The last part of this presentation is just to
15 talk a little bit about maybe version point 2.0 of the
16 adaptation framework. The recommendation is that we continue
17 this informal effort among the agencies to adjust this
18 framework as we get new information about risk and
19 opportunities for actions; to work with Phil and OCCRI to
20 identify what the research priorities are for that institution.
21 Agency program assessments; I need to mention two
22 specific things. One, OFDW is in the middle of an update to
23 their conservation plan to add a climate change element into
24 that. Similarly ODOT in the built environment side is working
25 to incorporate a risk assessment directed at climate change

1 into their long-term planning for highway facilities. But
2 basically broadening that out so that looking at climate risk
3 becomes part of the regular work of agencies that are doing
4 long-term planning.
5 Phil mentioned the need for economic analysis. We
6 agree there is a need to do more analysis of the predicted
7 economic affects of climate change. And then of particular
8 importance to DLCD; integrating this at the local level. We're
9 starting to work with several cities and counties right now
10 that are interested in taking a systematic look at what their
11 risks are in terms of climate change and what they should be
12 doing to respond to those risks.
13 Part of that is data that we were getting is starting
14 to improve. We're going to be able to begin to tell communities
15 down to a 25 kilometer grid what the predicted change in
16 precipitation and temperature is and then derive from that
17 changes in vegetation and other environmental conditions. But
18 allow you to say for my community at the end of this century
19 what are the main things that we should be concerned about?
20 What do we need to start planning for?
21 And then last but not least, communication and
22 outreach. That's part of what we're doing here today. We have
23 made a series of presentations to other Boards and commissions.
24 We've got more scheduled, the suggestion to do Board of Ag and
25 Forestry is a great one. One thing that we would like to do is

1 start working more with our educational system in the schools
2 to provide some of this information also because of course long
3 term, that's really how we make this more permanent is to
4 integrate it into the educational system.
5 So that's adaptation framework. This is a structure,
6 if you will, that allows for a continuation of this effort,
7 again working with federal and local and private citizens. And
8 so we think this is a great effort. And we'd be happy to take
9 any questions that you might have.
10 **GOVERNOR KITZHABER:** Treasurer?
11 **STATE TREASURER WHEELER:** Thanks, Governor. This is
12 really more of a comment maybe than a question. First of all,
13 as you were presenting your information particularly on the
14 changes that you see here in the state of Oregon, it occurs to
15 me it's going to create some interesting changes in the
16 dynamics of some of the debates we're having around this table.
17 Obviously we talk a lot about forest policy.
18 And I am actually seeing an opportunity where
19 environmentalists and the natural resources industries become
20 partners around the question that the Secretary of State
21 raised. She mentioned biomass. But I think there's hidden here
22 is a larger headline around active forest management, and
23 looking again or looking anew at what makes a healthy forest.
24 And it seems to me that this being the number one priority,
25 generally speaking in the environmental community, and looking

1 at the economic interests of the state of Oregon, you mentioned
2 insect infestation.
3 You mentioned conflagration risk and you mentioned
4 the difference in the type of vegetation that could potentially
5 be supported by those currently forested lands. It seems like
6 it's going to shift who's sitting at that table and what their
7 respective roles are. So I just point that out as something
8 that's kind of interesting that I noted based on the Secretary
9 of State's comment that this might actually dry this altogether
10 in sort of a peculiar and maybe hopeful way.
11 The second was around economic effect. I can assure
12 you that within the private sector in the business community
13 there is already robust discussion, particularly right down at
14 the industry level about what the impact of all of this is on
15 the long-term viability of industries and how they should adapt
16 to it. And I would just encourage us as we go forward not to
17 exclude them but actively encourage them to the table since I
18 know that they're already looking at these issues.
19 Speaking just from my narrow perspective, as one of
20 many people responsible for the State's pension fund, we invest
21 for the long term. We invest in entire life cycles, and
22 treasuries around the nation are already coming together to
23 talk to industry about asking them to establish global warming
24 policies in terms of what it means for their industry and how
25 they will respond to those real changes in the environment.

1 So I would encourage us to go just beyond the
2 government framework and also look at the many things that are
3 currently happening in the private sector to adapt to some of
4 these changes. A third and final point; you mentioned that you
5 were currently working with the coastal communities on
6 identifying areas of potential major erosion. And you even
7 raised the specter of relocating communities. And I just hope
8 that as we go about that process we're very sensitive to what
9 that actually means for individual households.
10 Once you declare an area a major erosion hazard there
11 are insurance implications for those homeowners. And I just
12 hope we're taking into account what the practical implications
13 are for our citizens as we undertake what's at this point sort
14 of an academic discussion.
15 **DIRECTOR WHITMAN:** Governor, Treasurer Wheeler, on
16 your last point, absolutely. In terms of its role of the
17 insurance industry and all of this, like the forest industry,
18 they're well aware of these issues and already looking at them
19 in terms of figuring out their business model for particular
20 parts of the country, including Oregon. And we have had some
21 unfortunate experience in this state where government entities
22 have gotten out, publicized the risk I think prematurely before
23 there's been good community involvement and good knowledge.
24 And we are well aware of those risks. And approaching
25 this from the perspective of we will work with communities that

are ready to work with us, and make this very much a bottom-up effort. This is not something that we are pushing on particular communities. This absolutely needs to be a bottom-up driven effort if it's going to succeed.

STATE TREASURER WHEELER: I really appreciate that. Thank you.

DIRECTOR WHITMAN: Yes.

STATE TREASURER WHEELER: Thank you, Governor.

CHAIR DUNCAN: Richard, can you --

DIRECTOR WHITMAN: Yes.

CHAIR DUNCAN: --find my show there? My name's Angus Duncan. Thank you, Governor, members of the Land Board, for inviting us to put on our show here again. In my day job I'm president of the Bonneville Environmental Foundation, which works to develop renewable energy projects and watershed restoration projects across the Pacific Northwest, and in some cases nationally. And I moonlight as Chair of the Global Warming Commission, and sometimes as staff director, and frequently as staff member and scheduler and PowerPoint developer.

So understand and give me a little bit of slack here as we go through this. When we've done this drill before I tend to characterize it as Phil providing the diagnosis and Richard, the symptomatic relief. But at some point you have to, you know, cure the patient. And that means remedies. And

one of the messages I think we pulled out of our process as a Global Warming Commission and as many other participants in it is that while there are many incremental actions that we have to take to address greenhouse gas emissions, ultimately we have to see some transformational change instead as well.

And that's the reason for starting you out with this kind of interesting old drawing. This is arguably the first commercial coal-driven steam engine constructed and operating in England 300 years ago and some. It used up about as much coal. It was using coal mines to help evacuate water from them. And it used up about as much coal as it allowed to be additionally evacuated. It wasn't one of the most efficient things that you ever saw.

But within 70 years or so James Watt and others had transformed it into a machine that ultimately would transform pretty much the globe. And it would do so essentially by substituting fossil fuel power for the kind of muscle power that had basically driven culture and economic life for the prior several thousand years. It took until 1800 for a global population to reach about a billion people.

From 1800 to today the population has increased about seven fold. We are approaching 7 billion people just in 200 years. And anyone who reads the papers let alone history books, understands the velocity of change that has occurred over this last 200 years. But I just mentioned one other one. Besides

1 that population increase, which is really evidence of the fact
2 that you could produce more value and therefore support bigger
3 populations, bigger cities, a bigger economy.
4 The productivity while you shifted from muscle power
5 to fossil fuel power has increased somewhere between two and
6 three orders of magnitude in the last 200 years. And that's
7 significant in itself but it's also useful to set off what most
8 of the analysis tells us about defusing our emissions of
9 greenhouse gases, and that is that our carbon efficiency has to
10 increase by about an order of magnitude.
11 So it puts it right up there with the kind of
12 transformational change that that machine produced or at least
13 initiated 300 years ago. That's where we have to get. And so
14 the real core message here is that we have to shift in a
15 transformational way from fossil fuels to renewables and
16 efficiency in the same way we once shifted from muscle to
17 fossil fuels. There is actually another core message here,
18 which I was going to defer, but since Treasurer Wheeler
19 mentioned it.
20 We actually ended up in as divisive an issue as you
21 see as you know climate to be. We actually ended up in a
22 number of fairly surprising places with opportunities where
23 different people in Oregon could come together. And the one
24 that I want to mention right here is simply in the allocation
25 of the tasks of converting our energy system to efficiency in

1 renewables. Most of the efficiencies that we could acquire are
2 probably going to be acquired in cities.
3 They're going to be in urban areas. They're going to
4 be in the west side of the state, and the north end of the
5 state. Most of the renewable energy opportunities we have in
6 this state are not in the city of Portland or in Eugene.
7 They're in rural Oregon. They're east of the mountains. They
8 are solar and biomass and water and geothermal. And I think
9 there's a real opportunity for folks to basically carve out
10 what their share of the responsibility is and get to it.
11 And there are burdens that would have to be carried
12 in both cases. But there are also huge both cultural and
13 economic opportunities. This is just a -- just to give you a
14 reference point, and I throw that out there mostly just to
15 indicate that while in fact over the last ten years or so our
16 greenhouse gas emissions in this state have largely flattened.
17 They have flattened at least in part because our industrial
18 emissions have dropped.
19 But our transportation emissions and our commercial
20 and residential, our building stock emissions have continued to
21 increase. Industry basically took a huge hit in the
22 electricity price meltdown of 2000/2001, and in some cases has
23 never recovered from that. So while our emissions have
24 flattened after consistently increasing for the better part of
25 20 years, a little bit of that is misleading. And I don't want

1 to leave anybody with the impression that, you know, the job is
2 even half done at this point because there is a huge amount
3 left to do.
4 House Bill 3543 in 2007 established this commission,
5 established OCCRI. It also adopted these goals for the state
6 of Oregon. And you've seen them and you've got them in front
7 of you so I'm not going to go through them. But I am going to
8 mention that if we had simply extrapolated our greenhouse gas
9 emissions lines from the numbers we saw in 2004 when Governor
10 Kulongoski's advisory group first grappled with this subject,
11 we'd be looking at the line that ascends.
12 If we were meeting our goals on a linear basis we'd
13 be looking at the line that drops. In fact, we're right about
14 in the middle. We are somewhere between those two middle lines.
15 That's good news because it says we are meeting our 2010 goal,
16 which was to arrest the creep upwards to flatten that line and
17 to start it bending downhill. But there is a huge distance to
18 go. And this to some extent describes not just the distance
19 but a huge complicating factor.
20 And this is for vehicle fuels in Oregon. If you just
21 look at that left-hand side it shows basically a 75 percent
22 reduction that we have to achieve in the consumption of fossil
23 fuel in vehicle travel. But then you add in the expected
24 population increase, which is something like 40 percent between
25 now and 2035 and closer to 50 percent between now and 2050.

1 And you see that we have to drop not just by 75 percent. We
2 really have to drop our emissions by something close to 90
3 percent between now and 2050 on a per-capita basis.
4 So here's the roadmap. And I'm not going to take you
5 through every detail of this. But I do want to sketch out the
6 outlines of it. This was a project our commission started in
7 collaboration with a number of State agencies, relied heavily
8 on State agency staff support when they were available, but
9 also on six committees that worked in those areas, and were
10 made up of technical experts but also stakeholders and
11 representatives from Industry, from Ag, from Forestry, from the
12 environmental community, from local governments.
13 We fairly shamelessly looked at and crimped from
14 existing plans that Multnomah County, City of Portland, Metro,
15 Eugene and others had developed so we weren't trying to
16 reproduce what had already been worked on. And we ended up
17 taking the set of recommendations, about 162 action
18 recommendations to our commission in October where they were
19 adopted unanimously by the commission.
20 The next step we have, and this is apropos also a
21 couple of questions that you've asked is we take this out --
22 well, two things. One is some of the implementation already has
23 begun in a number of areas. The other though is we're taking
24 this out for a public review process that will consist first of
25 a set of community workshops that we will undertake jointly

1 with local governments around the state that themselves are
2 already undertaking their own climate change mitigation and
3 adaptation initiatives.
4 And secondly, in parallel we will put out a survey.
5 We are going to try to put it out to as many people as we can
6 collect over the web. We are, Governor, actually going to try
7 to work with the electronic cabinet proposal that Portland
8 State is working on I think on your behalf so that we end up
9 again, not duplicating but developing what we hope will be a
10 two-way communication with people around the state on this
11 subject as on others, that will be able to be ongoing because
12 goodness knows, the remedies and the revision of those remedies
13 is also ongoing.
14 I'm at a bit of a loss and consistently to try to
15 figure out how to present this because I'm not going to take
16 you down through 162 actions, you'll be pleased to know.
17 Everyone would drift off quickly. But I am going to try to sort
18 these into a set of themes and just touch on each one of those
19 themes and try to conclude my presentation with those. Theme
20 number 1 is we have to better imbed carbon in our planning
21 process.
22 Certainly the adaptation framework is an example of
23 that. But there are any number of others. We're working with
24 ODOT and the Transportation Commission to try to put carbon
25 into the MPO planning processes. There is also a lease cost

1 planning process that was in House Bill 2000 that ODOT has
2 undertaken and that I'm a part of along with a number of other
3 stakeholders that will include carbon embedded into overall
4 transportation planning.
5 We need to figure out how to do, in effect, lease
6 cost carbon planning across sectors. We don't even do lease
7 cost carbon planning within the utility sector. We do it
8 utility by utility but that doesn't, for example, allow us to
9 trade off gas and electricity where there are opportunities to
10 reduce carbon by shifting loads from one to another.
11 We need to do it within sectors and we need to do it
12 on a consumption basis. Right now we mostly do our planning on
13 the basis of emissions that originate in Oregon, you know,
14 whether they are originating as a consequence of products being
15 produced and shipped elsewhere or consumed here. The only place
16 where we actually measure emissions associated with -- from
17 outside associated with our own consumption is that we do that
18 with electricity. We take responsibility for the electricity
19 produced in Montana and Wyoming, shipped to Oregon and consumed
20 here.
21 But we don't do it for anything else and we have a
22 project now underway at DEQ that will give us that additional
23 look at how we are responsible for what emissions. It will
24 probably say that our actual emissions on a consumption basis
25 are ten to 15 percent higher than they are the way we're

1 looking at them right now. We need to embed carbon into energy
2 prices. And of course, there's been lots of conversation
3 regionally and nationally about carbon taxes, about cap and
4 trade.
5 But there are some more immediate ways that we can do
6 that; for example, shifting auto registration or overall
7 transportation revenue raising to something that more carefully
8 reflects the amount of our, if you will, state carbon budget
9 that is consumed by my driving or your driving. We potentially
10 can do a carbon adder (phonetic) to property taxes to reflect
11 the fact that my house consumes a lot more carbon because it's
12 bigger and it's draftier than yours does.
13 There are other opportunities like that. We need to
14 leverage the efficiency of cities. Governor, I think you asked
15 about the build environment. And our buildings consume
16 nationally about 40 percent of our energy, produce about 40
17 percent of our carbon. And that's a useful statistic. But the
18 other one that's important here is that of the buildings that
19 will be in place in 2050, about half of them have not yet been
20 built.
21 So every one of those buildings that gets built to
22 old building codes that don't reflect carbon is a huge lost
23 opportunity. It is a building we will be living with through
24 2050. And it will make the climb that much harder. We need to
25 shift transportation fuels from oil-base fuels, gasoline and

1 diesel to either natural gas or electricity. There are some
2 other potential opportunities but those look like the two most
3 likely to significantly reduce greenhouse gases associated with
4 transportation.
5 And that's about 39 percent of our overall greenhouse
6 gas emissions in this state. So transportation is a bigger deal
7 in Oregon than it is in other places. We need to ramp down
8 coal. Approximately a third of the total greenhouse gas -- I'm
9 sorry; a third of the total carbon dioxide that is emitted that
10 is a part of our greenhouse gas inventory comes strictly from
11 burning coal in power plants.
12 A third; that's overall greenhouse gases, it's about
13 25 percent just from coal burning mostly in Montana and
14 Wyoming. That includes Boardman. But when Boardman is phased
15 out and I was pretty heavily involved in the negotiations to
16 try to get to an agreement with PGE and the EQC on that. One
17 of the observations that emerged in that is that if we close
18 down Boardman but we replace it with another base load plant,
19 in this case a much more efficient one powered by natural gas,
20 that by 2030 the emissions coming from PGE's operations will be
21 higher without a coal plant in 2030 than they are today with
22 Boardman.
23 They will actually be higher after we close the coal
24 plant. And there are some specific load associated reasons for
25 that. But a significant one is that we will be building a

1 significant gas base load and that will be displacing
2 renewables and energy efficiency that could otherwise have been
3 built to meet those load requirements. So if that's going to be
4 the case with Boardman when we get to Pacific Power, you know,
5 we have an even steeper hill to climb because those are our two
6 sources of coal fire generation.
7 There are other places we have to catch the carbon
8 reductions. These tend to be less transformational and more
9 incremental. But I know that some of these are of considerable
10 interest to the Land Board. So let me just spend a quick moment
11 particularly on forestry, which is the committee frankly where
12 I expected a meltdown because we had some pretty hard over
13 environmental voices in that committee. You know, we had
14 industry represented in the committee. We had the scientific
15 voices from Oregon State and elsewhere in the committee.
16 And I admit that I am surprised and very grateful to
17 the work of that committee for the outcomes. And let me just
18 summarize it very quickly. The people generally agreed that
19 westside moist public forests should basically be allowed to
20 grow, that the cutting in those westside moist forests is right
21 now extremely minimal and should continue to follow that trend
22 line.
23 We are accumulating carbon in those forests. And we
24 can continue to do so. Dryer forests; mostly but not
25 exclusively eastside. There was a general consensus that over

1 the next ten to 15, maybe even 20 years we're actually going to
2 see a decline in the amount of carbon sequestered in those
3 forests. And we need to see that decline because we need to
4 clean the forests up. We need to pull the fuel overloading out
5 of those forests, you know, ideally in a systematic way rather
6 than through forest fires.
7 And then those eastside public forests should begin
8 to accumulate carbon and that should be not very exclusive but
9 their primary role. We agreed that privately held forests are
10 going to be the source of most of our product, our wood
11 products for the foreseeable future, and that that was an
12 appropriate role for them. But there was an important quid pro
13 quo here and it was one that everybody around the table agreed
14 to, and that is that there should be no net conversion of those
15 privately owned forests from their current land use to other
16 land uses; golf courses, subdivisions, whatever.
17 There was an agreement. And we need to figure out how
18 to codify that in some way. But that was essentially the
19 collective agreement around the table. There was obviously
20 agreement that consisted with those roles. We should try to
21 expand biomass opportunities within forests. In agriculture,
22 frankly, biomass opportunities are probably the most
23 significant opportunities that we're going to see in the near
24 term.
25 There are some changes we can make to tilling

1 practices that will have an impact, but they're not an impact
2 that we can find any way to pay for right now. So that's going
3 to be a harder take. And finally, within industry there was a
4 general agreement that we should focus. This is the one place
5 where we should focus on carbon intensity rather than absolute
6 reductions of carbon. This is a bitter pill for
7 environmentalists to swallow.
8 But it seemed like the appropriate one within
9 industry that we should focus particularly on a voluntary state
10 and we hope federally supported program starting industry
11 sector by industry sector, and probably starting with food
12 processing to ramp up energy and process efficiency in those
13 industries, to recognize the gains through a state process, to
14 brand them as a state product and to try to take them out and
15 market them nationally if they can out of a facility that was
16 in the, you know, tenth or twentieth upper percentile of
17 efficiency per unit of output in their industry sector.
18 And we're going to try to work with appropriate state
19 agencies to see if we can build that into a program. There was
20 interest within the food processors at AOC, at AOI and a number
21 of other places in trying to put that kind of package together.
22 No, I don't want to do that. I want to do -- actually see if
23 I've got this here. Yup, there. No, I take it back. I'm
24 done. Thought you'd appreciate it.
25 **GOVERNOR KITZHABER:** Thank you very much. Excellent

presentation. Appreciate it. Thank you.

CHAIR DUNCAN: Thank you.

GOVERNOR KITZHABER: Thank you.

DIRECTOR SOLLIDAY: Even a second time it was good.

CHAIR DUNCAN: We're going to have to work some new material in.

GOVERNOR KITZHABER: That was great, thank you.

CHAIR DUNCAN: Thank you.

GOVERNOR KITZHABER: Louise.

DIRECTOR SOLLIDAY: So the last informational item we have for you today is in the fiscal year '10 update on the estates program. And joining me is Pamela Konstant, who is the program manager for the estates program.

MANAGER KONSTANT: Governor, Secretary Brown, Treasurer Wheeler, for the record I'm Pamela Konstant. I am the fiscal manager and the estate administrator for the Department of State Lands. I recognize time's limited so I'm just going to get to the meat of the presentation for the events of this last year. As you know, this program manages the estates of Oregon residents who die without a will and without any known heirs.

Our program seeks to safeguard the assets of the estates, locate the heirs if there are any, and if none are found, act as a personal representative for the estate, carrying it throughout the probate process and the courts. I

1 have a staff of three people. A couple of them are with us
2 today, working on the estates program. And if needed I do pull
3 other staff in to assist with some of the larger estates.
4 So this last year, I won't go into the details of how
5 all of that works. It's in your report in your binder. But
6 this last year we have seen a slight reduction in the case
7 level over 2009. Fiscal year 2010 the estates program opened a
8 total of 121 new cases, which averages about 2.35 cases a week.
9 It's a pretty substantial workload for the small staff that I
10 have. In 2009 we saw 132 cases. So even though the figure
11 fluctuates slightly from year to year, essentially it's
12 remaining at the high level that we've experienced since we
13 reorganized the program several years ago.
14 The estates team has managed estates valued at
15 approximately $2.3 million during 2010. And the value of the
16 estates that actually escheated to the Common School Fund was
17 $370,000, a little over that. We've been working hard to
18 recover our administrative costs. This last year we've
19 recovered approximately one-third of our operating expenses,
20 which is about $80,000.
21 Our success rate is way up in finding heirs. We
22 found heirs for about 39 percent of our cases this last year.
23 That's up from 28 percent in 2009. Of course, much of that we
24 have no control over who dies and whether we find an heir or
25 not. But it is a testimony to the success of my team in being

able to locate people. I would say that 2010 has been the year of a new vision for the estates program.

We've gone through all of our policies and procedures. And we have implemented new tighter policies and procedures. We've also streamlined operations. We've been continuing to work on our challenge of getting statewide compliance. And we are working on additional seminars, targeting certain groups which would be first notifiers to us. That will be in full swing. We had been doing some of that. However, we will be augmenting better and expanding that over this next year.

During 2011 we're going to be moving to an electronic format for the estates file, using the imaged (phonetic) system. And that will greatly enhance our ability to administer the estates. We're also working on a new tracking program. As you can well see with the caseload that we have, we have dozens of cases in active status at any point in time. And all of them are at different stages in the process.

And so it's a big task to keep track of where each one of them are. And so we're working on a new tracking system as well for an implementation during 2011. And with that, that pretty much sums up what's happened this last year. And I'd be glad to answer any questions.

GOVERNOR KITZHABER: I have one question. You said you recouped some of the administrative costs.

1 **MANAGER KONSTANT:** Yeah, that --

2 **GOVERNOR KITZHABER:** So what's to prevent us from
3 recouping all of them?

4 **MANAGER KONSTANT:** Governor, members of the Board,
5 because many of the estates that we have are insolvent, we
6 still have to respond and make a determination whether they are
7 solvent or not. And so there's always going to be some
8 administrative costs in making that determination that we can't
9 recoup from those insolvent estates.

10 **GOVERNOR KITZHABER:** Okay. So does the overall
11 amount that flows on an annual basis into the Common School
12 Fund or biennium basis significantly exceed the administrative
13 cost of the program?

14 **MANAGER KONSTANT:** Governor, yes, it does.

15 **GOVERNOR KITZHABER:** Any questions? Thank you very
16 much.

17 **MANAGER KONSTANT:** Thank you.

18 **DIRECTOR SOLLIDAY:** Governor, under the other
19 category I want to just talk about a couple things. First I
20 just want to update on legislative activities to date. The
21 Governor's balanced budget was released a week or so ago. And
22 just in terms of the Department's budget, our budget will go
23 down about $4 million from this biennium to next biennium. But
24 most of that is one-time federal fund we receive for grants for
25 one-time activities.

In terms of our overall budget, I would say we were flat budgeted. It maintains our existing staff and our existing programs. There's a couple of policy action packages that were approved, most of which we paid for within our own budget. The only additional resources that we would get in a policy action package is an additional $200,000 in other funds limitations for our ongoing work in Portland Harbor related to our legal costs associated with the Portland Harbor super fun site.

And then in terms of bills, our agency bill, which is the bill that would transfer the Natural Heritage Program from the Department of State Lands to the Parks Department moved out of committee last week. And so it is on its way through the process. It has a referral to Ways and Means because there's a budget package both in our budget and Parks budget that are associated with that bill. We have a number of bills that we're tracking; I think over 100 bills that we're tracking.

And I would group them in a couple of different groups. We have a number of bills affecting the removal/fill program in terms of making it either easier for people to get through the process or cleaning up some of our statutory language that's created some confusion with some of our customer groups. And then we have a number of bills that have the potential to affect our land management activities.

There are a number of Forestry bills, several of

1 which mention the Elliott State Forest by name. And so we are
2 tracking those as well and expect that most of those Forestry
3 bills will come up as a group in the House; Ag and Natural
4 Resources Committee at some point over the next month or so.
5 And then we have some bills that affect submerged and
6 submersible lands. And we've been working with one in
7 particular with Senator Johnson on fixing some things in our
8 statutes that are important to us, and addressing some problems
9 that are important in her district at the same time.
10 So we've been working with her on that bill. So there
11 are a number of bills that affect multiple agencies. There are
12 a couple of bills that affect agency consolidation in the
13 natural resource arena; one that would merge ten natural
14 resource agencies into a Department of Natural Resources.
15 There's one that calls for a task force to look at the
16 consolidation. There's one that would propose to have the
17 Department of State Lands and several other agencies develop
18 plans to eliminate their agencies from existence.
19 So there are a number of bills out there dealing with
20 agency consolidation. And then there are a number of bills that
21 DAS takes the lead on tracking that affects multiple agencies.
22 But we're also keeping an eye on those. And I'd be happy to
23 answer any questions about legislative issues.
24 **GOVERNOR KITZHABER:** Questions for Louise?
25 **SECRETARY OF STATE BROWN:** Governor, I just -- this

is a general comment to the presentation that we had earlier. And that is the short-term priority actions that Richard Whitman delivered. It would be really helpful for me in my role as Chair. The Sustainability Board, if the Governor's going to let me continue in that role, and for the Global Warming Commission; if we knew from those risks (phonetic) specific legislation that correlated and addressed those risks. And so tying the two pieces together would be really helpful. And Louise, I think you're familiar with the market ecosystems legislation that the Sustainability Board passed last time.

DIRECTOR SOLLIDAY: Right.

SECRETARY OF STATE BROWN: We're going to have a second one to follow up. But to me that ties right into the wetlands mitigation issue that's addressed in the short-term priority action. I'm guessing the Dingfelter buyer (phonetic) legislation PUC addresses some of the concerns that Angus raised. Sort of tying the priories with the legislation in a way that connects it for policy makers would be really helpful.

DIRECTOR SOLLIDAY: Great. Good idea.

SECRETARY OF STATE BROWN: Okay.

GOVERNOR KITZHABER: And you will produce that for us??

SECRETARY OF STATE BROWN: Yeah, well, I'll tap someone who can collect those.

DIRECTOR SOLLIDAY: That'd be great. Thank you.

1 Great. And then the one other issue I want to talk about; the
2 Board adopted a resolution in October indicating a desire to
3 get out and meet with the public more in local areas around the
4 state. I've not had an opportunity to speak with all of you
5 about what your vision is for doing that. And what I'm going
6 to propose is that we start by trying to do at least two
7 meetings this year.
8 We may be able to figure out how to do a third. But
9 that we try to associate those meetings with upcoming decisions
10 that the Land Board will be making. We've had one request from
11 the Coos Bay area for the Board to travel down there. There's
12 a number of issues; the Elliott State Forest Management Plan,
13 proposed LNG facility, some historical fill land issues,
14 submerged and submersible land issues there.
15 And we have similar issues on the north coast. We
16 also have a number of issues in the Bend/Redmond area. So I
17 think there's some areas where it makes sense for the Board to
18 schedule some time to be out there to listen to the customers
19 that we're trying to serve. I think what I'd want to do is
20 recommend that we develop agendas for those as opposed to just
21 a free for all come, talk to the Land Board and actually set
22 some hearing time around particular decisions that are coming
23 up with the Board.
24 So for instance on the Elliott State Forest we know
25 the Board is slated to make a decision in October. So would

1 suggest we try and go to Coos Bay before that October meeting.
2 We can set up some panel presentations, allow the general
3 public to come in and talk a little bit about where they want
4 to see the Board head with regard to the Elliott State Forest.
5 On the north coast I might suggest we try and tie in
6 with waterway leasing rules that'll probably be back in the
7 process after the session ends and we know what the submerged
8 and submersible land statutes are going to say. And in terms
9 of the central Oregon I think there's a couple of
10 opportunities. We have a central Oregon management planning
11 effort underway. We also have the Asset Management Plan
12 review, which has a considerable impact on central Oregon.
13 So I think there's some opportunities for us to tie
14 meetings to decisions that might be coming up at later Land
15 Board meetings. So that's what I'd recommend. And what we'll do
16 is start trying to schedule those out with all of your
17 schedules. We know it won't be always the case that we would
18 get all of you to all of these. And I think individual Board
19 members are willing to go out, even if they're going out by
20 themselves to do this. But I think just having a member of
21 the Board available for the public to talk to will be good for
22 the agency.
23 **GOVERNOR KITZHABER:** I wasn't there when you came up.
24 I think it's a good idea to get out around the state. I think
25 that we should before we schedule the Board out I think we

1 should have a conversation about sort of the format and topic
2 because having been on this Board eight years, and you can have
3 an event where it's basically general venting about an issue
4 over which we have little or no control.
5 And I think to go out and invite that kind of hearing
6 and be able to do actually nothing about it is actually going
7 to add to public frustration. So I think we should gear this
8 around areas where we actually have some control and decision,
9 depending where that kind of input actually form are
10 (phonetic). But that's just my suggestion. I think that it's
11 a great idea but I think we need to think about sort of how we
12 make it happen.
13 **DIRECTOR SOLLIDAY:** Yeah, I guess what I'd suggest is
14 I'll frame out the first one and send that out to all of you to
15 sort of take a look at what we propose doing, how we'd set the
16 agenda and get your feedback, and then move from there.
17 **GOVERNOR KITZHABER:** Anything else coming to the Land
18 Board? We stand adjourned.
19
20
21
22
23
24
25

1 CERTIFICATE

2 I, Jayne Rosamond, hereby certify that I am an electronic
3 transcriptionist for Business Support Services of Salem, Inc.,
4 that as such electronic transcriptionist I prepared from an
5 electronic recording provided by Business Support Services,
6 Inc., the foregoing typewritten transcript of the meeting had
7 upon the matter at the time and place set forth in the caption
8 hereof; and that the foregoing pages, which are numbered 1
9 through 57, both inclusive, are the true, accurate and complete
10 transcript of the proceedings adduced had upon the said
11 meeting.
12 WITNESS my hand as electronic transcriptionist this
13 18th day of February 2011.
14
15 _____
Jayne Rosamond, Transcriptionist
16
17
18 jr/jr
19
20
21
22
23
24
25