

**Minutes of the Board of Commissioners
Multnomah Building, Board Room 100
501 SE Hawthorne Blvd., Portland, Oregon
Wednesday, June 10, 2015**

BUDGET WORK SESSION #17

Chair Deborah Kafoury called the meeting to order at 10:08 a.m. with Vice-Chair Jules Bailey and Commissioners Loretta Smith, Judy Shiprack, and Diane McKeel present.

Also attending were Jenny Madkour, County Attorney, and Marina Baker, Assistant Board Clerk.

[THE FOLLOWING TEXT IS THE BYPRODUCT OF THE CLOSED CAPTIONING OF THIS BROADCAST THE TEXT HAS NOT BEEN PROOFREAD, AND SHOULD NOT BE CONSIDERED A FINAL TRANSCRIPT.]

Chair Kafoury: GOOD MORNING, AND BEFORE WE GET STARTED THIS MORNING I'D LIKE TO TAKE A MOMENT OF SILENCE. IT'S BEEN A YEAR SINCE THE REYNOLDS HIGH SCHOOL SHOOTING AND I THINK ALL OF US STILL CARRY THESE VERY RAW WOUNDS AND ARE STILL DOING THE VERY BEST WE CAN TO MAKE SURE CHILDREN DON'T GET GUNS INTO THEIR HANDS. ALL RIGHT, THANK YOU.

BWS-17a Cyber Security Briefing. Presenters: Sherry Swackhamer, CIO and Director for Department of County Assets, George Chamberlin, Supervisory Special Agent, FBI.

Commissioner McKeel: MAY I ADD SOMETHING ON THAT? I RECOGNIZE AND ACKNOWLEDGE THE RESILIENCY OF REYNOLDS COMMUNITY AND THE CITIZENS OF TROUTDALE. THIS PAST YEAR HAS BEEN VERY DIFFICULT FOR THEM BUT THEY ARE RESILIENT AND AN AMAZING GROUP OF PEOPLE. I WOULD LIKE TO ACKNOWLEDGE THAT AS WELL ON THIS DAY.

Chair Kafoury: THANK YOU, THAT'S VERY IMPORTANT. ALL RIGHT, NOW WE HAVE A BRIEFING ON CYBERSECURITY.

Ms. Swackhamer: GOOD MORNING, CHAIR KAFOURY, COMMISSIONERS, I'M SHERRY SWACKHAMER, DIRECTOR FOR DEPARTMENT OF COUNTY ASSETS, AND CIO. I HAVE WITH ME GEORGE CHAMBERLIN AND BOB LEEK. AS YOU'VE HEARD BOB AND I FOR THE PAST COUPLE OF MONTHS WE HAVE TALKED TO YOU QUITE A BIT IN OUR TRENDS BRIEFING AND DEPARTMENTAL AND CAPITAL BRIEFINGS ABOUT CYBERSECURITY. WE HAVE ASKED THE FBI AND THE UNITED STATES ATTORNEY'S OFFICE TO COME AND BRIEF YOU ON THEIR PERSPECTIVES. I WILL NOW TURN IT OVER TO SUPERVISORY SPECIAL AGENT GEORGE CHAMBERLIN.

Mr. Chamberlin: THANKS FOR THE OPPORTUNITY TO COME AND SPEAK THIS MORNING. JUST TO FRAME THIS, I'LL PROBABLY TALK ABOUT 20 TO 25 MINUTES AND TURN IT OVER TO SCOTT TO GIVE THE U.S. ATTORNEY'S OFFICE PERSPECTIVE ON THIS AND THEN OPEN IT FOR QUESTIONS. WE WILL FOCUS FIRST ON SOME THREATS, A VERY TOPICAL LEVEL. AND THEN WE'LL TALK ABOUT THE LAW ENFORCEMENT ROLE AND THEN TALK A LITTLE BIT ABOUT THREATS TO STATE AND LOCAL GOVERNMENT AGENCIES NETWORKS FROM OUR PERSPECTIVE. AND WE'LL ALSO TALK ABOUT THE DEVELOPMENT OF THE OREGON CYBER TASK FORCE WHICH I HAVE PASSED HANDOUT FOR REFERENCE.

SO JUST A QUICK OVERVIEW, THIS IS SLIDE OFTEN USED TO DESCRIBE WHAT WE'RE UP AGAINST IN THE CYBERSECURITY REALM. TO DRILL DOWN, YOU HAVE THREAT LEVELS 1, 2, 3. PROBABLY THE MOST IMPORTANT BULLET POINTS ON THIS SLIDE, THE BOTTOM OF THREAT LEVEL 2, DETECTABLE BUT HARD TO ATTRIBUTE. WHAT WE'RE TALKING ABOUT THERE IS THE ORGANIZED CYBER CRIMINAL GROUPS THAT ARE VERY, VERY CAPABLE OF COMPLEX COMPUTER INTRUSIONS, THEY ARE CAPABLE OFS WITHENCE. BUT THEIR INTENT IS TO GRAB DATA OR DESTROY DATA. THEY DON'T REALLY FOCUS THAT MUCH ON REMAINING HIDDEN FOR THE PERSISTENCE PART OF IT. WE CAN OFTEN ATTRIBUTE THOSE ATTACKS BACK TO GROUPS OR EVEN PERSONS POTENTIALLY, BUT TO GET DOWN TO I GUESS INDIVIDUALS IS VERY DIFFICULT. AND ALSO MOST OF THE TIME THEY ARE OVERSEAS. SO WORKING WITH THOSE FOREIGN GOVERNMENTS TO BRING SOME OF THOSE PEOPLE TO JUSTICE AND HOLD THEM ACCOUNTABLE IS VERY CHALLENGES. SO THREAT LEVEL 2 IS DETECTABLE. WE KNOW WHEN IT HAPPENS BUT IT'S HARD TO GET TO THE PERSON BEHIND THE KEYBOARD OR THE GROUPS BEHIND THE KEYBOARDS.

THREAT LEVEL 3, IF THEY ASK WHAT KEEPS YOU UP AT NIGHT, THIS WOULD BE THE ONE. THE NATION STATE ACTORS WHO MAINTAIN A PERSISTENCE IN A SENSE OF NETWORK WITHOUT OUR KNOWLEDGE. THEY GET IN AND THEN THEY MOVE Laterally THROUGH A SYSTEM, WHICH WE'LL TALK ABOUT IN A LITTLE BIT, AND WE DON'T KNOW THEY ARE THERE. THEY ARE ABLE TO EXFILTRATE DATA AND MAKE IT LOOK LIKE NORMAL NETWORK TRAFFIC LEAVING THE SYSTEM. DEEP PACKET INSPECTION MAY NOT CAPTURE WHAT'S BEING TAKEN A STOLEN AND THEY MAY BE THERE FOR YEARS. THAT IS A VERY SOPHISTICATED THREAT AND ONE WE SPEND A LOT OF TIME ON DISRUPTING. BACK TO THREAT LEVEL 1, THIS USED TO BE THE WEBSITE DEFAACEMENT AND THOSE MORE SIMPLISTIC HACKS. UNFORTUNATELY, WITH WHAT'S GOING ON WITH THE CYBER CRIMINAL UNDERGROUND RIGHT NOW, SOMEONE WITH VIRTUALLY NO SKILLS, BUT A FEW BITCOINS OR A CREDIT CARD CAN GO ON AND RENT OR PURCHASE TOOLS THAT ARE VERY, VERY CAPABLE AND VERY DEVASTATING. SO THIS TYPE WAS THINGS ARE AVAILABLE TO SOMEONE WITH VERY LITTLE EXPERIENCE. SO YOU DON'T

HAVE TO BE VERY TECHNICALLY ORIENTED IN ORDER TO LEVEL SOME OF THESE ATTACKS AGAINST VICTIMS.

Mr. Chamberlin: JUST AN OVERVIEW OF SOME OF THE THREATS AS WE KIND OF LOOK AT THEM FROM THE FBI PERSPECTIVE. SOME OF THE LINES ARE BLURRED ON THESE BUT THAT'S THE GENERAL CATEGORIZING. JUST A QUICK TERM, HACKTIVISTS, IT'S FAIRLY APPROPRIATE, SOMEONE WHO HAS AN AGENDA A POLITICAL AGENDA THAT THEY WANT TO FORWARD. AND THEY ARE USING THE CYBER REALM TO DO SO, AND TO MOVE THAT FORWARD. THE SLIDING SCALE THERE, THE FBI IS NOT INTERESTED IN LEGAL PRODUCT BOYCOTTS, WRITING YOUR PUBLIC OFFICIALS, THESE ARE ALL OBVIOUSLY LEGAL AND ACCEPTABLE WAYS TO MOVE YOUR AGENDA AND TO HAVE YOUR VOICE BE HEARD. WHERE IT GOES INTO THE ORANGE AND RED AND THE CRIMINAL ROM IS THINGS SUCH AS DOXYING WEBSITE DEPAVEMENT, DATA BREACH. THIS HAS BECOME CRIMINAL HACKTIVISM. WE START TO LOOK AT THE CRIMINAL VIOLATIONS OF WHAT'S HAPPENING. SOME OF THOSE GROUPS ARE WELL-KNOWN IN THE MEDIA FOR SERIAL WEBSITE DEFAACEMENTS. DOXYING IS TAKEN PERSONAL DOCUMENTS, BASICALLY RELEASING INFORMATION THAT MAY NOT BE INTENDED FOR RELEASE FOR THE PURPOSES OF EMBARRASSING OR EXSUPPOSING AN ISSUE THEY FEEL SHOULD BE EXPOSED TO THE PUBLIC. THAT ESCALATES TO THREAT OF LIFE TYPE THINGS, WHERE WE ENTER INTO THE TERRORISM REALM. THAT'S A DIFFERENT TOPIC WE'LL GET TO HERE MOMENTARILY.

WE HAVE HACKTIVISTS WHICH LARGELY ARE TRYING TO MAKE THEMSELVES HEARD THROUGH ACTIVISM ONLINE, AND THEN WE HAVE THE CRIMINAL GROUPS. THIS CHALLENGE HAS EXPLODED OVER THE PAST FEW YEARS IN TERMS OF WHAT'S AVAILABLE IN THE CYBER UNDERGROUND FORUMS. WE'LL GET TO SOME STATISTICS HERE SHORTLY BUT IT'S PRETTY MUCH SAFE TO ASSUME, AND PROBABLY PRUDENT TO ASSUME THAT YOUR DATA MAY BE OUT THERE AND BEING MONETIZED ON THESE CRIMINAL UNDERGROUND FORUMS. THERE WERE A FEW YEARS BACK, WE COULD COUNT THE NUMBER OF FORUMS WHERE THIS INFORMATION WAS FOR SALE WITHIN THE SINGLE TO DOUBLE DIGITS. WE'RE NOW WELL INTO THE TRIPLE DIGITS OF THE NUMBER OF FORUM WHICH IS MONETIZE THIS DATA, SELL IT AND MAKE IT READILY AVAILABLE.

WE'RE TALKING ABOUT YOUR PERSONALLY IDENTIFIABLE INFORMATION, CREDIT CARD INFORMATION, THINGS THEY WOULD NEED TO STEAL IDENTITIES. THEY HAVE BEEN MONETIZED AND PURCHASED. YOU CAN GO ONLINE AND PURCHASE AND LOOK FOR SPECIFIC PEOPLE AND TARGET. SO IT'S A BIG PROBLEM, ONE OF THE FBI'S FOCUSING ON VERY, VERY CLOSELY. THIS PARALLELS THE NATION-STATE THREAT IN TERMS OF SEVERITY. HACKTIVISM THE PROFESSIONAL APPROACH TO THESE COMMODITIES, WITH TECHNICAL SUPPORT, ADVERTISING, THERE'S RECRUITERS, PEOPLE ON THE GROUND, IT'S A WHOLE ECOSYSTEM OF THE CYBER CRIMINAL

UNDERGROUND THAT WORK TOGETHER TO ACCOMPLISH THEIR GOALS, BASICALLY TO USE THE STOLEN DATA TO MAKE MONEY. COMMISSIONER SMITH CAN WE GO BACK TO THAT SLIDE? FOR ALL THOSE FOLKS ON THE LAST SLIDE, THOSE RIGHT BAD GUYS?

Commissioner Smith: ON THIS LAST SLIDE THAT YOU HAD, WERE ALL THOSE FOLKS THE BAD GUYS, IS THAT WHAT YOU'RE SAYING?

Mr. Chamberlin: YES. THAT REPRESENTED WHAT'S AVAILABLE IN THE CYBER CRIMINAL UNDERGROUND.

Commissioner Smith: SO THAT IS OPEN AND PEOPLE CAN GO DIRECTLY TO THAT WEBSITE AND THEY CAN DO WHAT THEY DO TO UPSET OR SYSTEM?

Mr. Chamberlin: YOU CAN LOOK FOR THOSE TYPES OF FORUMS. SOME ARE CLOSED ACCESS ONLY. IF YOU KNOW THE CORRECT FORUMS TO GO TO AND THE CORRECT COMMUNICATION CHANNELS TO REACH OUT TO PEOPLE YOU CAN FIND YOUR WAY TO WHERE THOSE TYPES WAS PRODUCTS AND SERVICES ARE AVAILABLE.

Commissioner Smith: OKAY, THANK YOU.

Mr. Chamberlin: THESE ARE SOME OF THE STATISTICS THAT WE'RE DEALING WITH RIGHT NOW IN TERMS OF RECORDS THAT HAVE BEEN COMPROMISED WITHIN THE PAST SIX MONTHS AND WITHIN THE PAST YEAR. SO THE TOP 438 MILLION, BEST ESTIMATES IN TERMS OF RECORDS THAT HAVE BEEN BREACHED. AND THEN THAT'S FROM THE PAST SIX MONTHS, THE 518 IS ROUGHLY WITHIN THE PAST 12 MONTHS. THE BOTTOM ONE IS THE POPULATION OF THE UNITED STATES TO PUT THINGS IN PERSPECTIVE. WE ARE DEALING WITH QUITE A PROBLEM HERE AND IT'S PROBABLY GOING TO GET WORSE. THAT'S WHY WE'RE STANDING UP SOME OF THESE PROGRAMS.

Commissioner McKeel: MAY I ASK YOU A QUESTION ABOUT THAT? THAT'S ACROSS THE THREE LEVELS, IS THAT CORRECT? THAT'S TOTAL NUMBERS THAT YOU JUST GAVE US.

Mr. Chamberlin: YES. THAT REPRESENTS THE NUMBERS OF LET'S SAY PII RECORDS OR HEALTH RECORDS OR OTHER SENSITIVE RECORDS THAT BELONG TO INDIVIDUALS THAT HAVE BEEN COMPROMISED AND STOLEN, AS RESULT OF COMPUTER INTRUSIONS.

Commissioner McKeel: OKAY, THANK-YOU.

Mr. Chamberlin: THIS IS SOME OF THE INFORMATION THAT'S AVAILABLE IN THAT UNDERGROUND MARKET. AND WE'RE NOT TALKING ABOUT A LOT OF MONEY TO PURCHASE THIS. WE'RE TALKING ABOUT SOMETIMES A COUPLE DOLLARS

TO PURCHASE A DRIVER'S LICENSE NUMBER OR SOMETHING THAT BELONGS TO SOMEBODY. YOU CAN GET THIS DONE WITH A VERY MODEST AMOUNT OF MONEY TO OBTAIN THIS INFORMATION. OTHER CONFIDENTIALS REFERS TO THINGS LIKE NETFLIX ACCOUNTS, AMAZON ACCOUNTS, AND APPLE ITUNES THAT ARE COMPROMISED AND OFFERED BACK THROUGH THESE FORUMS FOR SOMETIMES JUST A FEW DOLLARS, AS I MENTIONED.

Mr. Chamberlin: BECAUSE WE HAVE A LOT OF COMPLAINTS REGARDING THIS, IN THIS COUNTY AS A MATTER OF FACT, TOO, THE BUSINESS EMAIL COMPROMISE, A NUMBER OF BUSINESSES HAVE BEEN VICTIMIZED BY THIS SCAM WHERE AN EMAIL IS COMPROMISED OR SPOOFED. AND THE VICTIMS HAVE BEEN IDENTIFIED THROUGH TARGET RECOGNIZANCE AND THEY WILL INJECT THEMSELVES INTO LEGITIMATE EMAIL EXCHANGES REGARDING MONEY TRANSFERS. AND SMALL BUSINESSES WILL, SAY, LIKE A COMPTROLLER'S EMAIL IS COMPROMISED. THE COMPTROLLER DIRECTS SOMEONE ELSE TO WIRE MONEY TO A SPECIFIC ACCOUNT. AND THAT WIFE TRANSFER IS EXPECTED BY THAT EMPLOYEE BECAUSE IT'S SUPPOSED TO HAPPEN BUT THE ACCOUNT IS SWITCHED AND IT'S COMING FROM THE COMPTROLLER BUT NOT REALLY, IT'S COMING FROM THE CRIMINAL WHO'S INJECTED THEMSELVES INTO THIS EMAIL EXCHANGE. INSTEAD OF THE MONEY GOING TO THE LEGITIMATE VENDOR, IT INSTEAD GOES TO AN ACCOUNT USUALLY HERE IN THE UNITED STATES AND THEN IS IMMEDIATELY BOUNCED OVERSEAS. SOME OF THE COMPANIES HERE IN OREGON AND IN MULTNOMAH COUNTY HAVE LOST A SIGNIFICANT AMOUNT TO THEM, \$20,000, UP TO \$400,000. THIS IS A GLOBAL PROBLEM.

THE BUSINESS EMAIL COMPROMISE SCAM, AND NATIONWIDE IT'S IN THE HUNDREDS OF MILLIONS IN LOSSES. BUT THE BANKS ARE SAVVY TO THIS NOW, AS ARE OTHERS. THERE'S A LOT OF EFFORT NOW TOWARDS EDUCATION ABOUT THIS SCAM, AND IT COULD BE VOIDED WITH A SIMPLE Q FACTOR AUTHENTICATION ON TRANSFERS OF MONEY ABOVE A CERTAIN AMOUNT. IF THERE'S JUST THAT ONE INTERNAL CONTROL ON THIS, THAT CAN AVOID THAT TYPE OF LOSS. THE ISSUE REMAINS ABOUT THE COMPROMISED EMAIL ACCOUNT. INITIALLY THEY CAN AVOID THE LOSS, WHICH CAN BE DONE. I ONLY BRING THAT UP IN THE SENSE THAT WE'RE SEEING A LOT OF IT AND IT HAS PEAKED WITHIN THE PAST FEW YEARS, SIGNIFICANT LOSSES.

Commissioner McKeel: COULD I ASK A QUESTION? THIS IS FASCINATING, THANK YOU. HOW WOULD SOMEONE DETECT THAT GOT THAT EMAIL?

Mr. Chamberlin: USUALLY WITH THE EMAIL SPOOFED, THEY WILL GO IN AND REGISTER A DOMAIN LITERALLY A DAY BEFORE THEY MAKE THEIR ATTACK. THE DOMAIN IS USUALLY SOMETHING SIMPLE, LIKE SUBSTITUTING A 1 FOR AN L, PUTTING IN AN EXTRA DIGIT INTO THAT EMAIL ACCOUNT. SO AT FIRST GLANCE, ALL OF ARE US IN OUR HURRIED BUSINESS DAY, DON'T TEND TO LOOK VERY CLOSELY AT THAT WHEN IT'S COMING FROM A TRUSTED SOURCE

AND IT MAKES SENSE IN CONTEXT. THE BEST WAY TO AVOID IT IS TO ON THOSE TYPES OF TRANSACTIONAL, WHERE MONEY BUSINESS TO BE TRANSFERRED, JUST LOOK VERY, VERY CLOSELY AT THE DOMAIN AND THE EMAIL IT'S COMING. FROM ENSURE THAT THE LANGUAGE IN IT MAKES SENSE. IF THE CFO NEVER HAS SPELLING ERRORS AND AS YOU HAD THERE ARE TWO SPELLING ERRORS IN THAT EMAIL, THAT'S PROBABLY NOT COMING FROM THE CFO. LITTLE THINGS TO MAKE YOUR EMPLOYEES AWARE TO BE ALERT AND ONCE AGAIN, MAYBE BACK IT UP WITH A PHONE CALL, SOME OTHER OUT OF EMAIL BAND METHOD TO CONFIRM THAT TRANSFER SHOULD GO FORWARD. WE PUT OUT A PSAA PUBLIC SERVICE ANNOUNCEMENT ON THIS THAT DESCRIBES ALL THIS SCAM AND WE'VE PUSHED IT AS FAR AND WIDE AS WE CAN.

Commissioner Smith: MADAM CHAIR, I HAVE A QUESTION. WHOM SHOULD WE REPORT THIS TOO? I'VE GOT AN EMAIL THAT SAID SEND M \$1500, IT WAS FOR A STATE REPRESENTATIVE. HE WAS VERY, VERY WEALTHY AND DIDN'T NEED THAT MONEY SEND TO LONDON. WHO SHOULD WE REPORT IT TO, THE LOCAL FOLKS OR THE FEDERAL FOLKS?

Mr. Chamberlin: YOU CAN REPORT IT TO BOTH. WE HANDLE THOSE TYPES OF SCAMS THROUGH OUR INTERNET COMPLAINT CENTER, IC3. IT'S A WEBSITE WHERE YOU CAN REPORT THESE TYPES WAS CRIMES. OFTENTIMES IT LOOKS LIKE IT'S GOING INTO A BIG FEDERAL BLACK HOLE. I CAN TELL YOU FOLKS WORKING BEHIND THE SCENES DO TAKE THAT DATA. THERE ARE SOME COMPLAINTS, WE TRY TO AGGREGATE THE COMPLAINTS AND THEN LOOK FOR TRENDS AND COMMONALITIES WE CAN THEN ASSIGN TO A SPECIFIC FIELD OFFICE TO DIRECT AN INVESTIGATION, AN ENTERPRISE INVESTIGATION AGAINST THE GROUP THAT MIGHT BE RESPONSIBLE. WE CAN'T RESPOND TO EVERY SINGLE ONE OF THE COMPLAINTS BUT THAT'S WHAT HAPPENS BEHIND THE SCENES. WWW.IC3.GOV.

THESE ARE WHAT WE CALL ADVANCED PERSISTENT THREAT, THE NATION-STATE ACTORS LOOKING TO BECOME A TECH LOGICAL ADVANTAGE, MILITARY ADVANTAGE, ECONOMIC ADVANTAGE OR TO COLLECT INFORMATION ON PEOPLE. IT'S ALL ABOUT DATA. THE MORE INFORMATION THEY CAN COLLECT FROM OUR SYSTEMS TO PUT INTO THEIR OWN AND ACCESS, IT PUTS THEM THAT MUCH FURTHER AHEAD. THEY ARE PROBABLY THE MOST SOPHISTICATED ACTORS THAT WE COME UP AGAINST ON A NATIONAL SECURITY SIDE. THIS IS A BIG, BIG CHALLENGE THAT'S FACING THE UNITED STATES AND IT'LL BE FOR THE FORESEEABLE FUTURE. SO JUST A QUICK THING ON THE INTRUSION LIFE CYCLE, THE MALWARE MIGHT CHANGE AND THE ATTACK VECTORS MIGHT CHANGE BUT THE GENERAL THEME OF THE ATTACKS FOLLOWS THIS FLOW. BASICALLY YOU HAVE A SCANNING, A TARGET RECONNAISSANCE, THEY IDENTIFY A VULNERABILITY OR A WEAKNESS. USUALLY ESTABLISH A FOOTHOLD THROUGH SOMETHING VERY SIMPLE LIKE A PHISHING ATTACK THROUGH ONE OF YOUR EMPLOYEES. THEY

ESTABLISH A FOOTHOLD. THEY THEN CUSTOMIZE THE MALWARE FOR THAT PARTICULAR NETWORK AND START TO MOVE Laterally. AS THEY MOVE Laterally THEY ESCALATE THEIR PRIVILEGES BY COMPROMISING CREDENTIALS AND ACHIEVING SOMETIMES ADMINISTRATIVE PRIVILEGES AND THE RIGHT TO MOVE EVERYWHERE THROUGHOUT THAT NETWORK. THEY WILL KEEP REFRESHING THAT AS UPDATES ARE DONE UNTIL THEY FIND WHAT THEY ARE THERE TO EX-FIL AND THEY EXFILTRATE THAT DATA. USUALLY IT'S USUALLY ENCRYPTED AND IT'S WITH REGULAR TRAFFIC SO IT'S NOT DETECTED. THAT'S THE INTRUSION LIFE CYCLE OF THE ADVANCED PERSISTENT THREAT. WE PROBABLY DON'T HAVE TIME TO GO INTO THIS RIGHT NOW, IT'S ONE OF THE MODELS WE USE WHEN WE CONDUCTING COMPUTER ANALYSIS. IT'S PART OF THE FBI'S INSTANT RESPONSE.

Mr. Chamberlin: WITH CYBERTERRORISM, IT CAN TAKE A NUMBER OF FORMS. IT'S HISTORICALLY THE DEFAACEMENT OF WEBSITES. THE DIFFERENT GROUPS, ISIS, THEY LOOK FOR VULNERABLE WEBSITES, HOSTING COMPANIES, AND POSTS DISTURBING MESSAGES AGAINST THE UNITED STATES, ON THOSE WEBSITES. THAT'S CONSIDERED A FORM OF CYBERTERRORISM BECAUSE IT'S TRYING TO INSTILL FEAR A LACK OF CONFIDENCE IN THE GOVERNMENT AND THE PERCEPTION THAT THAT PARTICULAR GROUP HAS CONTROL AND IS EVERYWHERE. TO PEOPLE UNFAMILIAR WITH NETWORKS AND THE INTERNET AND HOW IT WORKS, THAT'S WHAT IT DOES. ULTIMATELY WEBSITE DEFAACEMENTS ARE NOT THAT COMPLEX OF ATTACKS AND USUALLY THEY CAN BE REMEDIED FAIRLY QUICKLY.

IT'S NOT OFTEN THEY ARE CONNECTED TO THE BACK END SYSTEMS OF THOSE PARTICULAR ORGANIZATIONS. YES, IT'S SPLASHY AND VERY SENSATIONAL BUT IT'S NOT AS SERIOUS AS SOME OF THESE OTHER ATTACKS WE'VE TALKED ABOUT. CYBERTERRORISM, IF THE CAPABILITY IS DEVELOPED TO TARGET OR CRITICAL INFRASTRUCTURE THAT IS WHERE WE ARE FOCUSING OUR EFFORT TO DISRUPTION AND MITIGATION. WE DO NOT WANT THESE GROUPS TO DEVELOP THAT CAPABILITY OR INTENT TO TARGET OUR CRITICAL INFRASTRUCTURE OR POTENTIALLY TARGET OUR CRITICAL INFRASTRUCTURE IN PARALLEL TO A PHYSICAL ATTACK. SO AT THE SAME TIME THEY ARE DEGRADING OUR ABILITY TO COMMUNICATE AND COORDINATE, THEY ARE EXECUTING MULTIPLE PHYSICAL ATTACKS. THAT IS POTENTIALLY THE WORST CASE SCENARIO IN TERMS OF CYBERTERRORISM. MOVING UP THE SPECTRUM, WE GO ALL THE WAY UP TO STATE-SPONSORED DISRUPTIONS AND WARFARE. AS WE MOVE FURTHER INTO THIS CENTURY AND THE TECHNOLOGY GROWS TO BE ABLE TO PARALYZE A COUNTRY'S INFRASTRUCTURE, THE ABILITY TO MITIGATE AND PROTECT THE NATIONAL INFRASTRUCTURE FROM THIS TYPE OF THREAT, OUR ROLE IS MORE OF A DOMESTIC ROLE TO INVESTIGATE INCIDENTS AS THEY OCCUR. BUT THERE'S ALSO A GOVERNMENT AGENCIES DEDICATED TO THIS SUCH AS DHS.CERT, WORKING TOWARDS THE MITIGATION OF THIS PARTICULAR THREAT.

Mr. Chamberlin: BRINGING IT BACK DOWN TO THE STATE AND LOCAL GOVERNMENTS AND WHAT WOULD WE MOST LIKELY SEE IN MULTNOMAH COUNTY, FOR INSTANCE, AND THE NETWORKS THAT SHERRY AND BOB WORK WITH EVERY DAY, THESE TYPES OF THREATS LISTED HERE ARE VERY REAL. I COULD SAY THIS WOULDN'T BE A STRETCH TO SEE COUNTY SYSTEMS TARGETED, POTENTIALLY WITH THESE TYPE WAS ATTACKS OR COMPUTER INTRUSIONS, WE'LL CALL THEM. OF COURSE COUNTY RECORDS, EMPLOYMENT RECORDS AND SUCH COULD REPRESENT SOMETHING OF INTEREST TO AN ATTACKER. SO THE THEFT OF PII WOULD BE SOMETHING THEY COULD POTENTIALLY BE VULNERABLE. NOT JUST THAT BUT THE LOSS OR DESTRUCTION OF CRITICAL DATA LIKE RANSOM SOMEWARE.

WE'VE HAD REPORTED A FEW TIMES WHERE A LOCAL CITY WAS THE VICTIM OF RANSOM SOMEWARE ATTACK, WHERE 43,000 CITY FILES WERE LOCKED UP AND A RANSOM SOME WAS DEMANDED. FORTUNATELY THE CITY HAD BACK UP FILES AND WAS ABLE TO RESTORE THAT DATA WITHOUT HAVING TO PAY THE ROG. BUT THERE ARE OTHER CITIES THAT MAY NOT HAVE ALL THOSE FILES BACKED UP ADEQUATELY. THAT DESTRUCTION OR LOSS OF DATA PUTS THEM INTO A SITUATION WHERE THEY ARE HELD RANSOM SOME TO THE CRIMINALS FOR WHAT AMOUNTS TO PUBLIC DATA. SO THAT IS SOMETHING THAT WE LOOK AT VERY CLOSELY AND WOULD INVESTIGATE. WEB DEFAACEMENTS, LOSS OF PUBLIC CONFIDENCE, WE'VE TALKED ABOUT THAT.

IF THE COUNTY WEBSITE GOES DOWN THAT'S NOT ONLY A DISRUPTION AND INCONVENIENCE, IT SHOWS A LACK OF OUR ABILITY TO PROTECT OUR INFRASTRUCTURE. THEN AS THE NETWORK COMP MISED AND THE ADVANCED PERSISTENT THREAT THAT MAY BE RESIDING WITHIN THE SYSTEMS WITHOUT OUR KNOWLEDGE, FOR THE PURPOSES OF OBTAINING DATA OR TO DEGRADE THE SYSTEM IN A TIME FOR ANY OTHER PARTICULAR REASON. SOME OF THOSE OTHERS ARE FAIRLY SELF-EXPLANATORY. DECK DAYS OF CRITICAL SYSTEMS, WE TALKED ABOUT IN TERMS OF CYBERTERRORISM, THAT SNARE GROW. AND THEN THE INSIDER THREAT IS ONE THAT IS VERY, VERY DIFFICULT TO DEFEND AGAINST. IF SOMEONE IS ON THE INSIDE AND HAS CREDENTIALS AND ADMINISTRATIVE PRIVILEGES, AND DECIDES THAT THEY ARE GOING TAKE ACTION AGAINST THE ENTITY FOR ANY PARTICULAR REASON, IT'S VERY DIFFICULT ONE, TO DETECT IT, TWO, TO PREVENT IT.

SO HAVING YOUR NETWORK SEGMENTED VIRTUALLY OR PHYSICALLY, TO PREVENT AND ONLY HAVE TOP LEVEL PRIVILEGES GIVEN TO VERY FEW PEOPLE AS NEEDED, IS CRITICAL TO PROTECTING SYSTEMS. ONCE THIS OCCURS THERE'S NO REELING IT BACK IN. THERE'S NO WAY TO REWIND THAT. SO EMAIL COMPROMISE WE TALKED ABOUT. EDUCATION OF EMPLOYEES ABOUT WHAT THEIR ACTIVITIES ARE DURING THE DAY ONLINE, GOING TO THEIR SOCIAL MEDIA ACCOUNTS, CONNECTING TO PERSONAL

EMAIL ACCOUNTS, USING COUNTY SYSTEMS, IT'S NOT SOMETHING THAT WE WOULD ADVISE TAKING AWAY FROM THE EMPLOYEES, BUT THERE IS AN EDUCATION ASPECT TO THAT ABOUT COMPUTER SECURITY, INFORMATION SECURITY, ABOUT WHAT THEY SHOULD AND SHOULD NOT DO WHEN THEY ARE ONLINE DURING THE DAY AT THE WORKPLACE. THERE'S DEFINITELY VULNERABILITY. ALL IT TAKES IS ONE SPEAR-PHISH, ONE LINK AND THE BEST DEFENSE RESOURCE COMPROMISED. ONCE IT'S GAINED THAT FOOTHOLD WE TALKED ABOUT EARLIER.

Mr. Chamberlin: LAW ENFORCEMENT, OUR ROLE IS EVOLVING IN THIS. WE ARE NOT JUST ABOUT PROSECUTING CRIMINALS. SOME OF THESE CRIMINALS ARE EXTREMELY DIFFICULT TO GAIN ACCESS TO AND IDENTIFY. IT'S TAKEN ON A DIFFERENT LOOK, I SHOULD SAY. AND THE OUTREACH, EDUCATION, TRAINING, INTELLIGENCE SHARING, WORKING SIDE BY SIDE WITH VICTIMIZED COMPANIES TO COLLECT DIGITAL EVIDENCE, REMEDIATE THE INTRUSION AND HELP THEM GET BACK ON THEIR FEET AND BACK INTO THEIR BUSINESS OPERATIONS, THAT IS VERY IMPORTANT TO LAW ENFORCEMENT, JUST AS MUCH AS COLLECTING THE DIGITAL EVIDENCE AND ATTEMPTING TO PROSECUTOR CRIMINALLY THOSE RESPONSIBLE. THESE ARE SOME EXAMPLE WAS RECENT MESSAGES THAT WE PUT OUT TO THE PRIVATE SECTOR. THEY ARE CALLED FBI FLASH MESSAGES.

THEY ARE GETTING INCREASINGLY TECHNICAL WITH GREATER DETAIL. MD5 FLASH VALUES TO ENABLE DIRECTORS TO ENTER THAT IN AS INDICATORS OF COMPROMISE, TO SWEEP THEIR NETWORKS AND DO COMPROMISE ASSESSMENTS. WE'RE TRYING TO MAKE THESE MUCH MORE VALUABLE TO THOSE PEOPLE OUT THERE DEALING WITH THESE TYPES OF THREATS EVERY DAY. WE ALSO PUT OUT PINs, PRIVATE INDUSTRY NOTIFICATIONS WHICH ARE MORE BROAD I'M SORRY. THEY ARE MORE FOCUSED. FBI FLASH MESSAGE IS MORE OF A BROAD ANNOUNCEMENT. A PIN MAY BE FOR A SPECIFIC SECTOR SUCH AS ENERGY OR FINANCE, WHERE IT'S DIRECTED TO A SPECIFIC INDUSTRY. WE'VE SEEN A THREAT AND WE CAN PASS ON INTELLIGENCE REGARDING IT. DHS ALSO PUTS OUT THEIR OWN MESSAGES, AS WELL WITH A LOT OF GOOD INFORMATION.

TO FINISH UP, WE ARE BUILDING AN OREGON CYBER TASK FORCE RIGHT NOW. AND THE PURPOSE IS TO PROVIDE A STATEWIDE RESOURCE TO ASSIST LAW ENFORCEMENT THAT, MAY NOT HAVE THE FUNDING, TRAINING OR EXPERTISE TO ADDRESS THESE TYPES OF COMPLEX DIGITAL CRIMES. RIGHT NOW WE ARE WORKING WITH BRINGING ABOARD A NUMBER OF POLICE DEPARTMENTS, AS WELL AS STATE AGENCIES. IT'LL BE RUN OUT OF FBI OFFICE HERE. IT IS BEING RUN RIGHT NOW AND THE PROCESS OF BACKGROUND INVESTIGATIONS AND IDENTIFYING CANDIDATES TO WORK ON THE TASK FORCE. THE INTENT OF THE TASK FORCE IS TO NOT JUST SERVE THE PORTLAND AREA BUT TO REACH OUT TO THE FAR CORNERS OF THE STATE AND TRAIN AND PROVIDE THEM INVESTIGATIVE RESOURCES THAT WE

CAN DEPLOY IN THE EVENT OF A COMPLEX ATTACK. AND NEXT, WE BUILD UP THE EXPERTISE LEVEL WITHIN THE STATE BY PROVIDING TRAINING TO OFFICERS AND DETECTIVES THAT ARE PART OF THE TASK FORCE.

Mr. Chamberlin: SO EVENTUALLY AFTER SEVERAL YEARS SERVING WITH A TASK FORCE THEY CAN GO BACK TO THEIR DEPARTMENTS AND BECOME THE PILLAR AND FOUNDATION FOR THOSE DEPARTMENTS TO BUILD THEIR OWN CYBER INVESTIGATIVE PROGRAMS. THAT IS GOING ON RIGHT NOW. WE HAVE ABOUT FIVE AGENCIES THAT HAVE JOINED ON AND THAT'S ACTUALLY WHERE WE'RE KEEPING IT RIGHT NOW INITIALLY. THEN WE'LL START TO EXPAND ONCE WE GET THIS INVESTIGATIVE TEAM UP, TRAINED AND OPERATIONAL.

Mr. Bradford: GOOD MORNING, FOR THE RECORD I'M SCOTT BRADFORD, I'M WITH THE UNITED STATES ATTORNEY'S OFFICE HERE IN OREGON. CYBER THREATS ARE PREVALENT AND PERVASIVE. IT'S IMPORTANT THAT WE AS INDIVIDUALS, COMMUNITIES, STATES AND COUNTRIES BE VIGILANT IN ORDER TO PROTECT OUR SENSITIVE INFORMATION. I WANT TO PROVIDE SOME EXAMPLES TO YOU, OR AT LEAST ONE EXAMPLE TO SHOW HOW EASY THIS IS TO ACCOMPLISH IF YOU'RE A CRIMINAL AND YOU WANT TO GET SOMEBODY'S SENSITIVE INFORMATION AND USE IT FOR YOUR PERSONAL GAIN.

I RECENTLY HANDLED A CASE WITH AN INDIVIDUAL WHO WAS ADDICTED TO METHAMPHETAMINE. HE DIDN'T WORK HE STAYED HOME AND HE GOT ONLINE AND WENT TO WEBSITES LIKE THE SILK ROAD AND SOME OF THESE OTHER DARK SITES WHERE HE COULD PURCHASE DRUGS AND PII, PERSONAL IDENTIFYING INFORMATION. HE ALSO WAS ABLE TO PURCHASE SOME CREDIT CARD BLANKS AND A CREDIT CARD MAKING MACHINE ALL FROM HIS BASEMENT, AND IT WAS ALL DELIVERED TO HIS HOUSE. IT DIDN'T COST HIM VERY MUCH MONEY TO DO SO, AS SPECIAL AGENT CHAMBERLIN MENTIONED MOMENT AGO. THEY ARE FOR SALE CHEAP. IT'S EASY TO PURCHASE, GET AN AUTOMATIC DOWNLOAD OF INFORMATION AND THEN BUY THESE CREDIT CARD MAKING MACHINES AND MAKE CREDIT CARDS FROM THEIR BASEMENTS. THEY CAN GO AROUND TOWN AND USE OUR CREDIT TO MAKE PURCHASES. THEY NEVER HAVE TO PAY IT FOR. IF THEY DON'T GET CAUGHT THEY ARE NEVER HELD ACCOUNTABLE FOR THAT CONDUCT, EITHER. THAT'S A CASE I HANDLED RIGHT HERE IN OREGON.

ON A MORE PERSONAL NOTE, I'VE RECEIVED SEVERAL NOTICES IN MAIL OVER THE LAST YEAR ABOUT MY PERSONAL INFORMATION BEING COMPROMISED. IN FACT, I RECEIVED AN EMAIL LAST WEEK FROM THE DEPARTMENT OF JUSTICE. I DON'T KNOW IF YOU READ ABOUT THE OPM BREECH THAT HAPPENED RECENTLY WHERE MY PERSONAL INFORMATION AT THE DEPARTMENT OF JUSTICE WAS COMPROMISED. IT COULD INCLUDE PII, IT COULD INCLUDE BACKGROUND INFORMATION USED FOR MY SECURITY CLEARANCES AND THAT TYPE OF INFORMATION. MY WIFE AND NINE-YEAR-OLD DAUGHTER ALSO RECENTLY RECEIVED NOTICES IN THE MAIL THAT THEIR

INFORMATION MAY HAVE BEEN COMPROMISED THROUGH OUR INSURANCE CARRIER OR AN ABRASIVE OR A DATA INTRUSION THAT OCCURRED WITH OUR INSURANCE CARRIER. IT IS REAL AND BECOMING MORE REAL FOR ALL OF US CITIZENS. AGAIN, I HIGHLIGHT THE IMPORTANCE THAT WE'RE VIGILANT ABOUT PROTECTING OUR INFORMATION WHETHER IT'S AT HOME, AT WORK WITHIN THE COMMUNITY, OR WITHIN OUR COMMUNITY ORGANIZATIONS AND LOCAL GOVERNMENTS. FEDERAL GOVERNMENT AND STATE GOVERNMENTS -

Commissioner Shiprack: IT SEEMS INAPPROPRIATE, YOU'RE TALKING ABOUT GETTING AN EMAIL OR A NOTICE IN THE MAIL FROM THE DEPARTMENT OF JUSTICE TELLING YOU YOUR INFORMATION IS COMPROMISED. OVER HERE COMMISSIONER SHIPRACK BREAKS INTO A GRIN. THE ONLY I'M I'VE GOTTEN INFORMATION COMPROMISED, IT WAS A HACKER TELLING ME MY INFORMATIONS WITH COMPROMISED, PLEASE GO TO THEIR WEBSITE AND FILL IN ALL OF MY SENSITIVE INFORMATION SO THEY COULD HELP ME.

Mr. Bradford: I DID VERIFY THIS CAME FROM A LEGITIMATE SOURCE. YOU DO HAVE TO BE CAREFUL. AS SPECIAL AGENT CHAMBERLIN SAID, THAT'S A PLOY THAT HACKERS CAN USE. THEY CAN SEND YOU PHISHING EMAILS TRYING TO GET TO YOU TOUCH THAT LINK AND ENTER YOUR PERSONAL INFORMATION GIVE THEM A Foothold INTO YOUR LIFE AND YOUR INFORMATION. IT'S IMPORTANT THAT WE'RE VIGILANT AND DOUBLE-CHECK THESE EMAILS. I'VE RECEIVED PHISHING EMAILS FROM MY ALLEGED FINANCIAL INSTITUTION ASKING ME TO UPDATE AN ACCOUNT. I CALLED THE BANK BEFORE I RESPOND TO IT AND THAT'S NOT FROM US, DON'T RESPOND TO THAT, I GAVE THEM THE INFORMATION. IT'S IMPORTANT THAT WE'RE ALL VIGILANT. AND CYBER THREATS AND CYBER CRIME ARE SO PREVALENT AS I INDICATED A MOBILE HOME AGO THAT THE DEPARTMENT OF JUSTICE HAVE GIVEN US A LOT OF TOOLS TO COMBAT THESE ISSUES.

ON THE CURRENT SLIDE YOU CAN SEE AN OVERVIEW OF HOW THE DEPARTMENT OF JUSTICE IS ORGANIZED WHEN IT COMES TO CYBER THREATS AND INTELLECTUAL PROPERTY CRIMES. YOU CAN SEE THE WHITE HOUSE HAS AN INTELLECTUAL PROPERTY COORDINATOR, THE WHITE HOUSE IS INVOLVED AND UP TO DATE AND BRIEFED ON THESE ISSUES. WITHIN THE DEPARTMENT ITSELF WE HAVE OUR INVESTIGATIVE AGENCIES, THE FBI FOR EXAMPLE WHO KIND OF LEADS THE WAY WHEN IT COMES TO CYBER CRIMES AND CYBER THREATS. THEN YOU HAVE THE 94 U.S. ATTORNEY'S OFFICES THROUGHOUT THE COUNTRY. WITHIN EACH U.S. ATTORNEY'S OFFICE YOU HAVE A PROSECUTOR WHO IS A -- WHO IS DESIGNATED TO DEAL WITH COMPUTER CRIMES AND INTELLECTUAL PROPERTY CRIMES. WE CALLED THEM CHIPS FOR SHORT, COMPUTER HACKING AND INTELLECTUAL PROPERTY. THERE ARE 240 CHIPS THROUGHOUT THE COUNTRY. AT MAINTAIN JUSTICE IN WASHINGTON, D.C. WE HAVE A SPECIFIC SECTION, THE COMPUTER CRIME AND INTELLECTUAL PROPERTY QUESTION WITH 480 PROSECUTORS TO DEAL WITH COMPUTER CRIMES AND INTELLECTUAL

PROPERTY CRIMES. THEY PROSECUTOR CRIMES THEMSELVES BUT THEY ARE ALSO THERE TO SUPPORT THE U.S. ATTORNEY'S OFFICES AND THE WORK WE DO IN THE FIELD. THEY ALSO HAVE WEBSITES, THE COMPUTER CRIMES AND INTELLECTUAL PROPERTY AREAS FOR SHORT CCIPS. THEY PUBLISH MANUALS TO HELP OUT LOCAL LAW ENFORCEMENT, STATE AGENCIES AND THE U.S. ATTORNEY'S OFFICES.

Mr. Bradford: THEY ALSO HAVE A CRIME LAB BACK THERE IN WASHINGTON, D.C. THAT IS VERY HELPFUL WHEN IT COMES TO UNRAVELING THE EVIDENCE IN OUR CASES. I AM THE DESIGNATED CHIP IN OUR OFFICE AND MY CONTACT INFORMATION IS AVAILABLE IN THAT PREVIOUS SLIDE. BUT AS A DEPARTMENT WE COORDINATE WITH OTHER COUNTRIES THROUGHOUT THE WORLD. BECAUSE CYBERCRIME IS NOT JUST HERE IN THE UNITED STATES, WE HAVE INDIVIDUALS WHO ARE IN FOREIGN COUNTRIES COMMITTING CRIMES WITHIN OUR COUNTRY, ONE OUR COMMUNITY. AND WE HAVE THIS NETWORK IN PLACE, IT'S CALLED THE G824/7 NETWORK WHICH ENABLES TO WORK WITH OTHER LAW ENFORCEMENT AGENCIES TO PRESERVE EVIDENCE, INVESTIGATE CASES AND TO PROSECUTE THOSE CASES. AVAILABLE THROUGHOUT THE YEAR, 24 HOURS A DAY, SEVEN DAYS A WEEK.

I WANTED TO HIGHLIGHT FOR YOU SOME OF THE STATUTES OR A STATUTE WE HAVE IN OUR TOOLBOX IN ORDER TO PROSECUTE SOME OF THESE CRIMES. IT'S IMPORTANT TO TALK ABOUT BEHAVIOR AND CONDUCT, OUR ABILITY TO INVESTIGATE THEORIES CRIMES. BUT ALSO I WANT TO GIVE YOU A HIGHLIGHT ABOUT WHAT WE DO ONCE WE DISCOVER A CRIME AND OUR TOOL PROSECUTE THAT TYPE OF CONDUCT. THE STATUTE IS 18 UNITED STATES SECTION 1030. I'VE GIVEN THE A SUMMARY OF THE TYPES OF CONDUCT WE CAN PROSECUTE UNDER THAT STATUTE. THE ATTAINMENT OF NATIONAL SECURITY INFORMATION IS THE INTRUSION TO OBTAIN JUST PLAIN OLD INFORMATION. ARE YOU TRESPASSING IN A GOVERNMENT COMPUTER? ARE YOU ACCESSING THE COMPUTER TO OBTAIN SOMETHING OF VALUE? ARE YOU ACCESSING A COMMUNITY TO DAMAGE IT? WAS THERE DAMAGE, WAS IT NEGLIGENT DAMAGE. DID YOU CAUSE THE LOSS INTENTIONALLY? ARE YOU HACKING TO OBTAIN PASS WORDS AND TRAFFICKING THOSE PASS WORDS, SELLING THEM. OR ARE YOU USING COMPUTERS TO EXTORT COMPANIES AND INDIVIDUALS, ETC. THAT'S THE PRIMARY STATUTE WE USE TO PROSECUTOR COMPUTER INTRUSIONS OR HACKS AND IT HAS A LOT OF DIFFERENT SUBSECTIONS SO WE CAN GO AFTER A LOT OF VARIETIES OF CONDUCT.

THAT'S REALLY ALL I HAVE FOR YOU TODAY, I'M HAPPY TO ANSWER ANY QUESTION FOR US. I JUST WANTED TO COME AND PROVIDE A LITTLE OVERVIEW OF WHAT OUR OFFICE DOES. WE ARE INVOLVED IN THE FBI IN COMBATING CYBERCRIMES AND WE HAVE THIS TOOL, THIS STATUTE TO GO AFTER THIS TYPE OF CONDUCT. THANK YOU VERY MUCH.

Chair Kafoury: THANK YOU. DO WE HAVE ANY QUESTIONS OR COMMENTS FROM THE BOARD? ARE YOU UP NEXT?

Ms. Swackhamer: I THINK THIS ACTUALS CONCLUDES. WE'RE JUST HERE TO SUPPORT THEM.

Chair Kafoury: I WOULD BE INTERESTED IN HEARING WHAT STEPS WERE TAKEN IN OUR I.T. DEPARTMENT SO THAT THESE PROBLEMS WE'VE HEARD ABOUT ARE NOT GOING TO HAPPEN HERE.

Ms. Swackhamer: AND WE CAN GIVE YOU SOME HIGHLIGHTS BUT WE COULD COME BACK AND DO A BRIEFING AROUND THAT. BUT WE HAVE A WHOLE GROUP THAT'S RESPONSIBLE FOR SECURITY. WE DO A LOT OF THINGS THAT THEY HAVE ALREADY MENTIONED. EVEN AT A VERY LOW LEVEL, YOU HAVE TO CHANGE YOUR PASSWORD PERIODICALLY. THAT'S PART OF THE BASIC THINGS. WE HAVE MONITORING TOOLS THAT ARE LOOKING AT OUR NETWORK ALL THE TIME. WE HAVE A THIRD PARTY COME IN AND DO PERIODIC PENETRATION TESTS TO IDENTIFY ANY ISSUES THAT WE MIGHT HAVE, WEAKNESSES IN OUR NETWORK, AND THEN WE TAKE ACTION TO SURROUND THOSE. WE HAD OUR CAPITAL PRESENTATION FOR SOME DOLLARS TO DO SOME ADDITIONAL WORK TO UPDATE SOME OF OUR NETWORK TOOLS TO FILL IN GAPS WE KNOW WE HAVE OF THEM IN SOME CRITICAL SYSTEMS. SO WE'RE DILIGENT. WE BELIEVE IN THOSE AREAS BUT WE'RE ALWAYS LOOKING TO IMPROVE AND ALWAYS LOOKING WHERE WE NEED TO MAKE CHANGES. SO OVER THE NEXT YEAR WE'LL BE DOING MORE WORK IN THAT AREA JUST FROM AN ORGANIZATIONAL LEVEL.

Chair Kafoury: I KNOW WE'VE PUT SOME MONEY IN THE BUDGET THIS YEAR TO ADDRESS THIS ISSUE. WILL YOU COME BACK TO US AT A LATER DATE AND TELL US WHAT THOSE DOLLARS WILL BE SPENT ON SPECIFICALLY?

Ms. Swackhamer: YES.

Commissioner Smith: MADAM CHAIR, I IMAGINE OUR MOST CRITICAL DATA IS THE HEALTH CARE SYSTEM. ARE WE BACKED UP WITH THE PRIVATE INFORMATION THAT WE HAVE ON PEOPLE?

Ms. Swackhamer: YES, OUR PROBABLY LARGEST HEALTH CARE SYSTEM IS THE EPIC SYSTEM THAT'S USED BY THE HEALTH DEPARTMENT. IT'S ACTUALLY HOSTED BY A THIRD PARTY BUT THEY DO REGULAR BACKUPS. I BELIEVE SO.

Commissioner Smith: THANK YOU.

Chair Kafoury: ANY OTHER QUESTIONS OR COMMENTS FROM THE BOARD? THANK YOU VERY MUCH FOR COMING TODAY. THIS WAS FASCINATING AND A

LITTLE SCARY TO BE HONEST BUT GOOD TO KNOW OUR I.T. DEPARTMENT IS TAKING STEPS TO ENSURE THAT WE ARE SAFE AS POSSIBLE. THANK YOU VERY MUCH.

Chair Kafoury: OUR NEXT BRIEFING THIS MORNING WILL BE AN UPDATE ON OPTIONS FOR THE BOARD TO CONSIDER THE PERS RULING. WE WILL ALSO HAVE A BRIEF HISTORY OF PERS FROM OUR CFO MARK CAMPBELL. AND OUR OWN MIKE JASPIN, COUNTY ECONOMIST.

BWS-17b PERS Options Update. Presenters: Mark Campbell, CFO & Mike Jaspin, County Economist.

Mr. Campbell: GOOD MORNING, CHAIR AND BOARD. MARK CAMPBELL, CHIEF FINANCIAL OFFICER, AND WITH ME IS MICHAEL JASPIN, THE COUNTY ECONOMIST. WE'RE HERE TO TALK ABOUT PERS AND SPECIFICALLY WHAT SOME OF THE OPTIONS THE COUNTY HAS IN THE AFTERMATH OF THE RECENT SUPREME COURT DECISION. I THOUGHT I WOULD START WITH JUST KIND OF A BRIEF OVERVIEW. AND THIS IS GOING TO BE A REVIEW IN SOME RESPECTS FOR MOST OF YOU. BUT I THOUGHT IT WOULD BE HELPFUL TO PAINT A PICTURE TO HELP GET AN UNDERSTANDING OF WHAT PERS IS AND HOW IT'S FUNDED, SO WE CAN GET A BETTER UNDERSTANDING OF WHAT OUR OPTIONS ARE FOR GOING FORWARD. I THOUGHT I'D GIVE THAT LITTLE OVERVIEW OF WHAT THE PERS SYSTEM IS, AND TALK A LITTLE BIT ABOUT WHAT SENATE BILL 822 AND SENATE BILL 861, PASSED DURING THE 2013 LEGISLATIVE SESSIONS, DID. AND THEN TALK ABOUT WHAT THE IMPACT OF THE DECISION IN MORO VERSUS OREGON WAS. WE'LL TALK ABOUT THE IMPLEMENTATION OF THE MORO DECISION. I THINK ONE OF THE THINGS THAT'S BENEFICIAL TO US AS WE THINK ABOUT THIS, WE DON'T NEED TO DO ANYTHING RIGHT AWAY. THE RATE INCREASES THAT WE ARE ANTICIPATING WILL NOT OCCUR UNTIL OUR FISCAL YEAR 2018 SO. WE HAVE A LITTLE BIT OF TIME TO SORT THINGS OUT. THEN WE'LL TALK ABOUT SOME FUNDING OPTIONS AND FINALLY GIVE YOU WHAT OUR BEST THINKING AND OUR RECOMMENDATION IS ON THIS AT THIS POINT.

SO JUST BRIEFLY, PERS AS YOU KNOW IS A COST-SHARING MULTIEmployer DEFINED BENEFIT PENSION PLAN, ADMINISTERED BY A FIVE-MEMBER BOARD APPOINTED BY THE GOVERNOR. THE FUNDS ARE MANAGED BY THE OREGON INVESTMENT COUNCIL, AN ARM OF THE STATE TREASURY. PERS WAS CREATED BY THE STATE LEGISLATURE IN 1945 AND THE COUNTY HAS BEEN A PARTICIPATING MEMBER SINCE 1982. THERE ARE OVER 900 PARTICIPATING EMPLOYERS IN THE PERS SYSTEM THAT COVER ABOUT 95% OF ALL PUBLIC SERVICE WORKERS IN THE STATE. PERS IS GROUPED INTO THE EMPLOYERS ARE GROUPED INTO FOUR POOLS AND THE COUNTY BELONGS TO THE STATE AND LOCAL GOVERNMENT POOL. PERS MAINTAINS THREE DISTINCT BENEFIT PROGRAMS. AND THEY ARE LISTED HERE. TIER 1 IS THE BENEFIT PROGRAM FOR EMPLOYEES THAT WERE HIRED PRIOR TO JANUARY OF 1996. TIER 2 WAS

IMPLEMENTED IN 1996 AND IT COVERS EMPLOYEES WHO WERE HIRED AFTER JANUARY OF 1996, AND PRIOR TO SEPTEMBER OF 2003. THE OREGON PUBLIC SERVICE RETIREMENT PROGRAM HAS BEEN IN PLACE SINCE SEPTEMBER OF 2003 AND THAT WAS IMPLEMENTED FOLLOWING THE REFORMS THAT WERE PUT IN PLACE IN THE 2003 LEGISLATIVE SESSION.

Mr. Campbell: ONE OF THE IMPORTANT FEATURE BUSY WHAT HAPPENED IN THE 2003 REFORMS, SINCE THAT TIME ALL MEMBER CONTRIBUTIONS HAVE BEEN DIRECTED TO WHAT IS KNOWN AS AN INDIVIDUAL ACCOUNT PROGRAM, WHICH BEGAN IN JANUARY OF 2004. SO EFFECTIVELY ALL OF THE TIER 1 AND TIER 2 PERS PROGRAMS ARE FROZEN AND ALL OF THE CURRENT CONTRIBUTIONS GO INTO THE IAP. THE CHARTS ON THE SIDE THERE SHOW THE MEMBERSHIP BY CATEGORY. AND THE TOP CHART, THE TOP CHART IS A PIE CHART THAT SHOWS THE MEMBERSHIP BY CATEGORY. THIS IS A STATEWIDE SYSTEMWIDE TOTAL. YOU CAN SEE THAT THERE'S RETIREES MAKING UP ABOUT 27%, AND TIER 1 AND 2 MAKE UP ANOTHER 55%. AND THAT 82% REALLY REPRESENTS THE CRUX OF THE ISSUE FOR WHY PERS IS UNDERFUNDED TODAY. BUT THE CHART ON THE BOTTOM, AS YOU CAN SEE, THIS IS COUNTY EMPLOYEES. AND WHAT YOU CAN SEE IS THAT OVER TIME THE NUMBER OF PEOPLE HAVE GROWN AND THE NUMBER OF EMPLOYEES IN TIER 1 AND TIER 2 HAS BEEN REDUCED. I BELIEVE WE'RE OVER ABOUT 50% OF TOTAL COUNTY EMPLOYEES NOW IN THE PROGRAM.

THIS IS IMPORTANT BECAUSE AS THOSE TIER 1 AND TIER 2 PEOPLE LEAVE COUNTY EMPLOYMENT, THEY ARE STILL IN THE PERS PROGRAM. BUT AS THEY AGE OUT THE TIER 3, I THINK WE'LL START TO SEE THE REAL BENEFIT OF WHAT THE LEGISLATURE DID BY CREATING THAT PROGRAM. THIS CHART IS A BENEFIT OBSERVATION. I THINK THE IMPORTANT TEA FROM THIS IS AS YOU GO FROM TIER 1 TO THE PROGRAM THE BENEFITS HAVING A GUARANTEED RATE OF RETURN. THE 2013, DURING 2013 THE PERS BOARD REDUCESSED THAT GUARANTEE WHICH HAD BEEN 8%. THEY REDUCED TO IT 7.75%. THAT HAS KIND OF GOOD AND BAD CONNOTATIONS WHICH WE'LL GET INTO IN A FEW MINUTES. BUT I THINK THE GENERAL NOTION HERE IS THAT AS YOU GO FROM TIER 1 TO TIER 3 THE BENEFITS OF REDUCED.

Commissioner Shiprack: I HAVE A QUESTION. SO REGULAR ACCOUNT EARNINGS HAVE A GUARANTEED 7.75% FOR TIER 1, THE BENEFIT IS DETERMINED BY A FACTOR TIMES YEARS. WHAT DOES THE MARKET RETURN HAVE TO DO WITH THE BENEFACITOR?

Mr. Campbell: THE MARKET RETURN IS ON THE INDIVIDUAL ACCOUNT PROGRAM. AS I MENTIONED THE TIER 1 AND TIER 2 ACCOUNTS WERE FROZEN. THE 7.75% ONLY GETS APPLIED TO THE MONEY WITHIN THE PERS ACCOUNT AND THE INDIVIDUAL ACCOUNTS FOR YEARS PRIOR TO 2004. SO NOW EVERYBODY IN THE SYSTEM IS GETTING MARKET RETURN EXEMPT FOR

THE AMOUNT OF MONEY IN THE PERS FUND PRIOR TO 2004 FOR THOSE TIER 1 PEOPLE.

Commissioner Shiprack: SORRY, I'M GOING TO ASK MY QUESTION AGAIN. THE REGULAR ACCOUNT IS OVER HERE EARNING 7.75%. AND THE FORMULA IS BASED ON A MULTIPLIER TIMES YEARS OF SERVICE. DO THESE EVER CONNECT?

Mr. Campbell: SOMEWHAT.

Mr. Jaspin: I THINK ONE THING TO REMEMBER IS THAT WITH THE 2003 REFORMS, THE MONEY WAS DIRECTED FROM THE REGULAR ACCOUNT TO THE INDIVIDUAL ACCOUNT PROGRAM. THAT WAS IMPORTANT BECAUSE YOUR REGULAR ACCOUNT IS WHAT WAS USED FOR MONEY. SO WHAT USED TO HAPPEN IS THE MONEY WOULD GO INTO THAT ACCOUNT. YOU WOULD BE GUARANTEED 8% EARNING AND IT WOULD GROW AND GROW. WHEN IT BECAME TIME TO RETIRE, THE EMPLOYER WOULD HAVE TO MATCH IT, THEY WOULD LOOK AT THE MONEY MATCH AND THE FULL FORMULA AND SAY, WHICH GAVE YOU THE BIGGER BENEFIT. BACK IN 2001 IT WAS USUALLY THE MONEY MATCH. YOU WOULD GET THE MONEY MATCH FORMULA AS OPPOSED TO THE FULL FORMULA. OVER TIME THAT'S STARTED TO REDUCE THE NUMBER OF PEOPLE THAT RETIRE UNDER THE MONEY MATCH.

Commissioner Shiprack: GREAT.

Mr. Campbell: AND THERE ARE MANY WAYS THAT PEOPLE CAN GET THEIR BENEFITS UNDER TIER 1. I THINK THERE'S LIKE 16 DIFFERENT WAYS PEOPLE CAN CHOOSE TO GET THAT. TO MAKE'S POINT, THERE ARE VERY FEW OF US. IN FACT, I DOUBT THERE ARE ANY PEOPLE RETIRING TODAY THAT WOULD BE ELIGIBLE FOR MONEY MATCH, SO FOR WHAT IT'S WORTH. I WANTED TO TALK A LITTLE BIT ABOUT HOW PERS IS FUNDED. THIS IS VERY OH IMPORTANT TO UNDERSTANDING WHAT THE OPTIONS FOR GOING FORWARD ARE. PERS IS BASICALLY FUNDED BY THREE -- BY THREE THINGS. ONE IS INVESTMENT EARNINGS, AND THAT'S THE BLUE BAR. THEN THERE'S EMPLOYER CONTRIBUTIONS AND MEMBER CONTRIBUTIONS. MEMBER CONTRIBUTIONS FOR APPROXIMATELY 70% OF EMPLOYEES WITHIN THE SYSTEM ARE COVERED BY THE EMPLOYER. SO ANOTHER WAIVE THINKING ABOUT THIS IS THAT THE GREEN BAR AND THE RED BAR TOGETHER REPRESENT WHAT THE EMPLOYERS ARE CONTRIBUTING FOR THE MOTIVATE PART. THE THING ABOUT INVESTMENT EARNINGS THAT'S ESSENTIAL TO UNDERSTAND, IF YOU LOOK AT WHAT HAPPENED IN 2008 THIS, CHART DOESN'T GO FAR ENOUGH. IN 2008 THE PERS FUND LOST \$17 BILLION. AT THE TIME IT WAS ABOUT \$60 BILLION. IN ORDER TO MAKE THAT UP OVER TIME, EITHER INVESTMENT EARNINGS HAVE TO ASSUME THE RATE OR MEMBER CONTRIBUTIONS HAVE TO INCREASE. AS YOU CAN SEE, SINCE 2008 INVESTMENT RETURNS HAVE ON AVERAGE BEEN HAVE EXCEEDED THE ASSUMED EARNINGS RATE. WE

HAVEN'T SEEN TO A LARGE EXTENT SIGNIFICANT RATE INCREASES. BUT AS THE DECISION IN THE SUPREME COURT CASE HIGHLIGHTED, YOU KNOW, YOU MAKE THE CHANGES AND SOME ASSUMPTIONS ABOUT BENEFIT LEVELS AND IT BECOMES EVEN OTHER IMPORTANT THAT THE INVESTMENT EARNINGS EXCEED THE ASSUMED RATE OR THE EMPLOYER RATES WILL HAVE TO INCREASE FAIRLY SIGNIFICANTLY.

Mr. Campbell: THIS NEXT CHART JUST HIGHLIGHTS WHAT IT IS UNFUNDED LIABILITY HAS BEEN. I THINK THE ONE THING FOR ME THAT WAS KIND OF INSTRUCTIVE WHEN I WAS THINKING ABOUT THIS, AND AS I HAVE THOUGHT ABOUT THIS PAST FEW YEARS, IF YOU LOOK AT 2007, THE FUND WAS WITH SIZE ACCOUNTS, FUND THE AT ABOUT THE 110% LEVEL. THE FOLLOWING YEAR THAT DROPPED DOES UNTO 80%. AND YOU KNOW HAVE AN ACTUARIAL STANDPOINT F A PENSION FUND IS FUNDED BETWEEN 80 AND 85%, IT'S CONSIDERED TO BE IN PRETTY GOOD SHAPE BUT THAT'S A PRETTY DRAMATIC KLEIN FOR ONE YEAR. I DIDN'T GO BACK BEFORE 2004. BUT PERS SUFFERED A SIGNIFICANT LOST IN 2001. YOU HAVE A REALLY DOWN YEAR LIKE 2008 AND IT TAKE AS WHILE TO KIND OF DIG OUT FROM THAT. THAT'S THE DYNAMIC WE BEEN EXPERIENCING.

THIS NEXT CHART HIGHLIGHTS WHY WE WILL BE STUCK WITH THIS DYNAMIC FOR SOME TIME. IF YOU LOOK AT THIS CHART RETIREE'S MAKE UP ROUGHLY 70% OF THE TOTAL UNFUNDED LIABILITY. YOU CAN SEE IT'S PRETTY MINOR BUT IT'S THOSE RETIREES AND INACTIVE PEOPLE NO LONGER WORKING THAT ARE ENTITLED TO BENEFITS THAT ARE DRIVING MOST OF THAT UNFUNDED LIABILITY. SCIEN 2013 THE LEGISLATURE APPROVED DURING THE REGULAR SESSION, THEY APPROVED SENATE BILL 822, WHICH PROVIDED A LIMIT. IT SET LEVELS WHICH GRADUATED BASED ON YOUR ASSUMED BENEFIT LEVEL. IT ELIMINATED THE TAX REMEDY PAYMENTS THAT WERE PAID TO NONOREGON RESIDENT RETIREES. THOSE TWO ACTIONS AND A COUPLE OTHER THINGS THEY D BUT THOSE TWO ACTIONS WERE PRIMARILY RESPONSIBLE FOR REDUCING UNFUNDED LIABILITY BY ABOUT \$3.2 BILLION. AND THAT REDUCED RATES BY AN AVERAGE OF 2.5% ACROSS THE SYSTEM, THE% BOARD COLORED AN ADDITIONAL RATE INCREASE. I'M NOT GOING TO DWELL TOO LONG ON THE COLORING. IT'S WHEN THE FUND IS OVERFUNDED AT A CERTAIN LEVEL. IT'S DESIGNED TO PROVIDE INTERIORS WITH SOME CERTAINTY ABOUT THE RATES THEY HAVE. IF THE ONING REPETITIVELY 20 BELOW GREAT%, IT WOULD BE LESS THAN 3%. BY DEFERRING THAT 1.9% AS THEY DID WITH SENATE BILL 822, ITJUST KIND OF PUSHES THE PROBLEM OUT FURTHER. BUT AS A RESULT OF THOSE CHANGE, THE AVERAGE RATE REDUCTION FOR EMPLOYERS WAS 4.4% OF PAYROLL.

FAST FORWARD TO 2014, THE GOVERNOR CALLED A SPECIAL SESSION AND ASKED THAT FURTHER PERS REDUCTIONS BE MADE. SENATE BILL 861 WAS PASSED IN THE SPECIAL SESSION. IT LIMITED IT FUTHER TO 1.25% ON THE FIRST \$60,000 OF BENEFIT. THAT \$60,000 WAS NOT INDEXED SO THAT IT WILL

ALWAYS BE \$60,000, THEN .15% ON ANY AMOUNTS ABOVE \$60,000. IT CREATED A SUPPLEMENTAL ANNUAL PAYMENT PROGRAM DESIGNED PRIMARILY TO BENEFIT FOLKS WHO WERE IN THE LOWER LEVELS OF RETIREMENT BENEFITS. AND THOSE CHANGES ALSO REDUCED RATES BY ABOUT 4.4% ON AVERAGE. BUT THEY DIDN'T PROVIDE FOR THE COLLARING THAT WAS IN SENATE BILL 822. AS A RESULT OF THESE CHANGES ALSO, A NUMBER OF JURISDICTIONS WOULD HAVE HAD RATES THAT WOULD HAVE BEEN LOWER THAN THE PREVIOUS BIENNIUM AND WHAT THE BILL SAID THAT IS YOU CAN'T HAVE A RATE LOWER THAN THAT SO, IT KEPT THAT. THERE WAS CONCERN ABOUT THE GROWTH OF THE UNFUNDED LIABILITY. WHAT SENATE BILL 861 DID WAS, PRIOR TO PASSAGE OF THIS LEGISLATION, THE UNFUNDED LIABILITY WAS GROWING AT ABOUT 12% A YEAR. AFTER PASSAGE OF THIS LEGISLATION, IT WAS IN LINE WITH PERS PERCENTAGE OF RATE GROWTH. THIS SHOULD HAVE HELPED TO STEM THE GROWTH IN UNFUNDED LIABILITY. BUT AS WE KNOW, FAST-FORWARDING TO TWO YEARS LATER THAT, TURNED OUT NOT TO BE THE CASE.

Mr. Jaspin: SO WHAT DID THE COURT DECIDE? THEY UPHELD THE ELIMINATION OF THE TAX LIMITED TO THE OREGON RETIREES, IT WAS A SPLIT DECISION WITH THE COLA. ESSENTIALLY WHAT THEY SAID THAT YOU CANNOT REDUCE THE COLAs PRIOR FOR BENEFITS EARNED PRIOR TO ENACTING OF THE LEGISLATION. ONCE YOU'VE EARNED IT THEY CAN'T TAKE IT AWAY. HOWEVER, THEY CAN IMPLEMENT COLA REDUCTIONS GOING FORWARD. SO ESSENTIALLY FROM 2013 YOUR BENEFITS ARE IN THE NEW REGIME WHERE YOU GET A LOWER COLA. BUT FOR BENEFITS THAT YOU EARNED YOU GET THE OLD COLA. SO FOR RETIREES, ESSENTIALLY THEY GO BACK TO THE STATUS QUO FOR. THOSE FOLKS WHO ARE GOING RETIRE IN THE FUTURE. IT CREATED A RATHER BURDENSOME ADMINISTRATIVE HEADACHE FOR PERS. EVERYBODY HAS A CUSTOMIZED COLA FACTOR NOW.

SO WHEN I RETIRE AT SOME POINT IN THE FUTURE, HALF OF MY COLA ADJUSTMENT WILL BE BASED ON 2013 AND THE OTHER HALF WILL BE BASED ON POST 2013. THE SUPREME COURT ALSO VOIDS THE SUPPLEMENTARY PAYMENT PROGRAM. IT WASN'T UNCONSTITUTIONAL. IT WAS JUST ONE OF THOSE THINGS WHERE YOU CAN'T SEPARATE IT OUT FROM THE PART THAT THEY RULED UNCONSTITUTIONAL. AND IN FACT, IF YOU RESTORE THE COLA PAYMENTS IT'S NOT NEEDED. SO WHAT WAS THE FINANCIAL IMPACT? ESSENTIALLY THEY OVERTURNED ABOUT \$5 MILLION OF THE \$6.3 MILLION OF SAVINGS. THAT WOULD RESULT IN AN UNCOLLARRED RATE INCREASE OF ABOUT 4.4% DUE TO THE INCREASE IN UNFUNDED LIABILITY. THE IMPACT WILL BE VARIED ACROSS EMPLOYERS BASED ON WHAT POOL. THE STATE LOCAL GOVERNMENT THAT WE LIVE IN IS ABOUT 3.8%. SCHOOL DISTRICT DUE TO THE DEMOGRAPHICS IS LIKELY TO BE IN THE 5.3% RANGE. SO AS MARK SAID EARLIER, THE RATE CHANGES TO US WILL NOT BE EFFECTIVE UNTIL JULY 1st OF 2017, WHICH WILL BE OUR FISCAL YEAR 2018. THE RATES ARE LIKELY TO BE COLLARED AT THE TOP OF RANGE SYSTEMWIDE. THAT'S ABOUT 3.7%.

Mr. Jaspin: THERE ARE OTHER THINGS IN ADDITION TO THE MORO DECISION THAT WILL IMPACT OUR RATES. AS MARK ALLUDED TO EARLIER, THERE IS A COLLAR, IT'S KIND OF A COMPLEX MECHANISM BUT ESSENTIALLY IT'S DESIGNED TO SMOOTH EMPLOYER RATES. ANY TIME YOU HIT THE COLLAR ON THE DOWN SIDE, ESSENTIALLY YOU'RE POSTPONING PAYING YOUR LIABILITY AND IT INCREASES THE LONG TERM COSTS. ABSENT THE COLLAR, BASED ON THE SYSTEMWIDE AVERAGES, OUR COST INCREASE IS PROBABLY GOING TO BE 5.5%. IT COULD BE 4%. IT COULD BE A LITTLE BIT ABOVE 5.5, AS WELL. WHAT WE USE IN THE GENERAL FUND FORECAST, USING THAT 5.5% NUMBER TRANSLATES TO ABOUT \$16.5 MILLION ACROSS ALL OF OUR FUNDS. THE GENERAL FUND IS JUST A LITTLE UNDER \$8 MILLION. IT'S ABOUT 150FTE. SO WHAT OPTIONS DO WE HAVE? WE LOOKED AT, THERE ARE FOUR BASIC OPTIONS. THE FIRST IS DOING NOTHING AND JUST IMPLEMENT THE RATES THAT WE'RE GIVEN FROM PERS. WHICH IS WHAT A LOT OF JURISDICTIONS ULTIMATELY WILL DO.

WE CAN ENGAGE IN RATE SMOOTHING AND BUFFERING. WE CAN CREATE A SIDE ACCOUNT USING CASH OR CREATE A SIDE ACCOUNT USING BOND PROCEED. I'LL TALK ABOUT THESE FOUR IN MORE DETAIL. THE ONE THING I WANTED TO POINT OUT IS FOR THE MOST PART WE'LL END UP LOOKING AT HOW CAN WE MANAGE THE INCREASE RATHER THAN MITIGATING THE INCREASE. AND THEN INHERENTLY ADDRESSING THE UNFUNDED LIABILITY IS DIFFICULT BECAUSE SO MUCH OF IT RESIDES WITH FOLKS WHO ARE CURRENTLY RETIRED OR WILL BE RETIRING SHORTLY. THE COURT'S BEEN PRETTY CLEAR THAT WE CANNOT ADJUST THOSE BENEFITS.

SO UNDER THE DO NOTHING OPTION, WE ESSENTIALLY WILL RELY ON THE PERS COLLARING TO SMOOTH OUR RATES, AND PART OF IT IS HOPING THAT WE GET BETTER INVESTMENT RETURNS, ALWAYS POSSIBLE. UNDER THIS APPROACH WE WILL NOT CHANGE OUR RATES FOR 16. WE WILL NOT NEED TO INCREASE OUR RATES IN 2017. BUT IN 2018, WE'LL PROBABLY HAVE A RATE INCREASE OF ROUGHLY \$3.8 MILLION. LOOKING AT THE COLLARING, IT MIGHT BE A LITTLE LESS THAN THAT. BUT BASICALLY WE'RE TALKING ABOUT \$14 MILLION. OFF TO THE RIGHT-HAND SIDE I'VE SHOWN WHAT THE RATE WOULD BE AS PERCENTAGE OF PAYROLL. SO FOR OUR UNIFORMED PERSONNEL, OUR TOTAL PERS RELATED COSTS WILL GO FROM JUST UNDER 30% TO GETTING CLOSE TO 34% OF PAYROLL. WE WOULD EXPECT ANOTHER SIGNIFICANT INCREASE IN 2020 BECAUSE THAT COLLAR ADJUSTS EVERY TWO YEARS. ONE OF THE THINGS I WANT TO POINT OUT ABOUT THIS APPROACH IS THAT WE UNDERCOVER THE TRUE COST OF PERS FROM NONGENERAL FUND SOURCES. ABOUT HALF OF OUR EMPLOYEE RESOURCE PAID FOR THROUGH FUNDS OTHER THAN THE GENERAL FUND. WE ARE NOT RECOVERING THOSE COSTS. IT IS ULTIMATELY A GENERAL FUND COST OVER THE LONG TERM.

ANOTHER OPTION IS TO DO INTERNAL RATE SMOOTHING AND BUFFERING. UNDER THIS APPROACH WELD ACTUALLY START RAISING RATES INTERNALLY

IN 2017. AND WE'VE DONE THIS IN THE PAST. AND SO A KIND OF HYPOTHETICALLY WHAT THIS WOULD LOOK LIKE IS IN THE TABLE ON THE RIGHT-HAND SIDE. FOR 2016, LEAVE THE RATES AS IS. IN 2017 INCREASE THE RATE 2% OF PAYROLL, 1% IN 18 AND A HALF PERCENTAGE POINT IN BOTH 19 AND 20.

Mr. Jaspin: ONE OF THE BENEFITS OF THIS IS IT ALLOWS US TO SMOOTH THE RATES TO DEPARTMENTS DON'T SEE LARGE JUMPS OR DECREASES. IT'S ALSO FLEXIBLE. WE CAN SEE HOW THE PERS RETURNS DO AND ADJUST EITHER COLLECT MORE OR LESS, AND RECALIBRATE MIDSTREAM. ESSENTIALLY WHAT WE'RE DOING IS COLLECTING MORE UP FRONT SO WE DON'T HAVE BUMPS IN THE OUTYEARS. IF YOU LOOK AT THE CHART OF THE RED LINE IS WHAT OUR COSTS WOULD BE UNDER SMOOTHING. AND THE GREEN LINE IS IF WE TOOK THE PERS RATES AS THEY CAME. IF YOU TAKE THIS APPROACH WHEN YOU GET TO 2020, YOU'D HAVE NEARLY \$5 MILLION MORE TO SPEND ON PROGRAMS THAN YOU WOULD IF YOU DID NOT TAKE THIS APPROACH. THIS ALWAYS ALLOWS US TO TAKE ADVANTAGE OF THE RELATIVELY GOOD FINANCIAL SHAPE FOR 2017. THE OTHER ASPECT TO NOTE IS WE CAN SET THE RATE A LITTLE HIGHER USING THE EXACT SAME MECHANISM. ESSENTIALLY ONE OF THE THINGS WE'RE DOING HERE IS DECOLLARRING FROM PERS. PERS SETS RATES EVERY TWO YEARS. IF YOU PUT A COLLAR ON IT, IT FORCES US BASICALLY TO DEFER PAYING INTO THE SYSTEM, AND WE MAY WANT TO START TO PAY EARLIER TO SMOOTH RATES.

SO THE NEXT TWO OPTIONS, WE WILL COVER SIDE ACCOUNTS. I WANT TO GIVE A QUICK 101 ON THE SIDE ACCOUNTS. ESSENTIALLY THESE ARE SPECIAL EMPLOYER SPECIFIC ACCOUNTS HELD BY PERS TO COVER OUR UNFUNDED LIABILITIES. THESE WERE NOT AVAILABLE TO US WHEN WE ISSUED PENSIONS IN 1999. PEOPLE FUND THESE USING A COUPLE OF DIFFERENT MECHANISMS. ESSENTIALLY YOU'RE BORROWING MONEY AT SAY 5% OR 6% AND HOPING THAT PERS WILL EARN 7% OR 8%. OR IF YOU'RE USING CASH, ARE CASH EARNING OF THE PERCENT IF WE DEPOSIT WITH PERS, OVER THE LONG RUN HOPEFULLY YOU'LL EARN 7 TO 8%. AS MARK MENTIONED EARLIER, THIS IS NOT ALWAYS GOING TO BE THE CASE. IF YOU GOT YOUR TIMING AT THE WORST POSSIBLE TIME, YOU COULD ISSUE BONDS AT 2007 IN TIME TO LOOSE 27% OF YOUR FUNDS. IN FAIRNESS, OVER THE LONG TERM MOST OF THE FOLKS THAT HAVE ISSUE PENSIONED BONDS ARE STILL IN THE BLACK.

Commissioner Shiprack: CAN I INTERRUPT? SO THIS SIDE ACCOUNT IS INVESTED BY PERS? IN OTHER WORDS, IT'S LIKE THE OREGON INVESTMENT BOARD THAT DETERMINES? BECAUSE I THINK IF YOU REPORT OUT ON THE RESULTS OF OREGON INVESTMENT BOARD RETURNS COMPARED TO ANYBODY, IT'S PRETTY POSITIVE.

Mr. Jaspin: YEAH. THE ACTUAL NUMBERS ARE USING BASED ON THE

PORTFOLIO RIGHT NOW, THEY ARE EXPECTING A 7.4% LONG TERM RETURN, IS WHAT THEY ARE EXPECTING BASED ON THE CURRENT PORTFOLIO. BUT I THINK THE POINT IS THE TIMING IN WHICH YOU FIRST INVEST REALLY MATTERS. YOU COULD BE UNDERWATER FOR 10 YEARS BEFORE THE AVERAGES COME BACK TO YOUR BENEFIT. THE SCHOOL DISTRICTS AND STATE AGENCIES ARE THE FOLKS THAT HAVE ISSUED THE MOST OF THE BONDS.

Commissioner Smith: MADAM CHAIR, I HAVE A QUESTION. WHEN YOU GAVE THE FORECAST YOU SAID THERE MAY BE A RECESSION IN 18 MONTHS. DOES YOUR CALCULATIONS PUT THAT INTO WHAT YOU'RE GIVING US RIGHT NOW?

Mr. Jaspin: NO. NO. AND THAT'S KIND OF A GREAT POINT ABOUT THE TIMING, IS IF WE COULD HIT THE REWIND BUTTON, IT WOULD HAVE BEEN GREAT TO ISSUE BONDS IN 2010. BUT IF YOU GO BACK AND LISTEN TO WHAT WE WERE TALKING ABOUT IN 2010, I DON'T THINK ANYBODY WAS ABOUT ISSUING THE BONDS. SINCE THAT TIME, THEY ARE UP 200 SOME ODD BONDS. IF WE ISSUE BONDS IN THE NEXT COUPLE YEARS, WOULD WE DO IT AT THE TOP OF THE MARKET WHERE WE'RE NOT GOING TO GET AS GOOD RETURNS, AND WE HAVE TO WAIT FOR THE AVERAGE TO PLAY OUT OVER A LONG TERM. SO ONE OF THE OPTIONS ARE TO CREATE A SIDE ACCOUNT WITH CASH. ESSENTIALLY WE WOULD USE SOME PRUDENT LEVEL OF FUNDS FROM OUR PERS BOND FUND, OR FROM THE SMOOTHING ACTIVITY WE DO WITH DEPARTMENTS OR IMPLEMENTING A SEPARATE CHARGE TO DEAL WITH THE CASH. THE GOAL WOULD BE THAT THE RATE REDUCTION DUE TO THE SIDE ACCOUNT WOULD BE TOUGH TO REDUCE TO COVER THE COST OF THE CASH, OR COVER THE DEBT SERVICE. ONE OF THE BENEFITS OF THIS, IS IT AVOIDS BORROWING CASH RISK. SO WE DO NOT HAVE TO PAY 5.5%. THE PERS RETURNS ARE MORE LIKELY TO BE CASH OVER THE LONG TERM, THAT'S A MUCH SURER BET. THE BENEFIT OF THIS APPROACH OVER THIS SMOOTHING, SMOOTHING DOES NOT REDUCE OUR COSTS. IT BASICALLY JUST HELPS US MANAGE IT. THIS WOULD REDUCE OUR COSTS AND IT WOULD DO IT OVER THE LONG TERM. THE OTHER BENEFIT IS WE CAN CREATE MULTIPLE SIDE ACCOUNTS.

Commissioner Shiprack: I THINK THIS IS AN INTERESTING CONVERSATION ABOUT WHETHER YOU USE A CASH RESOURCE OR WHETHER YOU GO OUT AND BORROW MONEY. BECAUSE IT JUST DEPENDS ON WHAT KIND OF CORPORATION YOU'RE RUNNING. AND OUR PARTICULAR LINE OF BUSINESS IS SORT OF CASH INTENSIVE LINE OF BUSINESS BECAUSE WE GO OUT AND PROVIDE SERVICES IN OUR COMMUNITY. SO IT SEEMS THAT THE ANALYSIS IS NOT MERELY A RETURN ON INVESTMENT ANALYSIS, BUT HAS TO DO WITH CASH ON HAND FOR MAKING OTHER PROGRAM DECISIONS WITH. THIS MIGHT TIP THIS OVER TO A WORLD THAT WOULD FAVOR BORROWING A LITTLE MORE HEAVILY THAN JUST A PURE FINANCIAL EVALUATION.

Mr. Jaspin: ABSOLUTELY, AND THE OTHER THING TO CONSIDER IS WHAT'S THE

SOURCE OF THE CASH, IF YOUR USING PURE GENERAL FUND TO CREATE THIS SIDE ACCOUNT RATHER THAN CASH GENERATED FROM A CHARGE ACROSS ALL FUNDS, THEN THE GENERAL FUND INHERENTLY IS SUBSIDIZING ALL THE OTHER FUNDS AND YOU MIGHT WANT TO USE YOUR PURE GENERAL FUND CASH ON OTHER INVESTMENTS WHETHER IT'S NEW BUILDINGS OR I.T. INFRASTRUCTURE. SO YEAH, THERE IS SOME INTERESTING ASPECT BUSY HOW YOU DO THAT ANALYSIS.

Commissioner Shiprack: MAYBE A FUTURE MEETING.

Mr. Jaspin: THE OTHER OPTION IS TO CREATE A SIDE ACCOUNT WITH BOND PROCEEDS. THE IMPORTANT THING TO REMEMBER IS THESE ARE TAXABLE BONDS. SO BASED ON CURRENT MARKET RATE, THEY EARN SOMEWHERE BETWEEN 5% AND 5.5%, THAT COULD LOOK VERY DIFFERENT A YEAR FROM NOW. AND ESSENTIALLY WE WOULD REPAY THE BONDS WITH A CHARGE TO DEPARTMENTS. CURRENTLY WE CHARGE 6.25% OF PAYROLL TO PAY OFF OUR CURRENT BONDS. WE ISSUE ABOUT \$185 MILLION DOLLARS IN OBLIGATION BONDS IN 1999. THIS IS A PLACE TO SHOW HOW WE KIND OF MITIGATED AND ADJUSTED OVER TIME AS WE DO SMOOTHING, WE TO KIND OF CALIBRATE AND SMOOTH RATES. IT'S INTERESTING. AS WE WERE GOING BACK AND LOOKING AT THESE OFFICES ESSENTIALLY THEY INVOLVE CONSIDERABLE RISK. AND THE GOAL OF GETTING THAT ARBITRAGE IS HE SPECULATIVE. THEY WERE INCORPORATING SOME JURISDICTIONS THAT HAVE USED PENSION BONDS TO ESSENTIALLY KICK THE CAN DOWN THE ROAD. I'M NOT SAYING WE WOULD DO THAT, BUT IT'S CERTAINLY SOMETHING FOLKS HAVE DONE.

EVEN THOUGH WE ALREADY HAVE PENSIONING BONDS AND WE MAY NEED TO ISSUE DEBT FOR OTHER. MORE IMPORTANTLY, HOW WOULD AGENCIES LOOK UPON IT? THE OTHER THING, LONG TERM DEBT. THAT STARTS TO TIE YOUR HANDS ABOUT FUTURE OPTIONS IN THE FUTURE. SO OUR RECOMMENDATION WHICH YOU DON'T NEED TO TAKE ANY ACTION ON TODAY, BUT WHAT KIND OF REPRESENTS OUR THINKING THAT IS WE WOULD WANT TO HEAD DOWN THE ROUTE OF SMOOTHING THE RATES AND EXPLORING TRADING A SIDE ACCOUNT FOR CASH. IT PROVIDES STABILITY IN OUR RATES AND PROVIDE SOME FLEXIBILITY TO SEE WHAT HAPPENS OVER THE NEXT YEAR AND A HALF. IT MANAGES OUR RISK. ASIDE ACCOUNT CASH HAS A BETTER SPREAD SO IT'S LESS RISKY. THIS WOULD TAKE ADVANTAGE OF OUR RELATIVELY GOOD POSITION IN 2017.

Mr. Campbell: THAT WAS OUR DISCUSSION OF THE DIFFERENT OPTIONS THAT I THINK ARE AVAILABLE FOR US AND WHAT OUR RECOMMENDATION WOULD BE, I WANT TO LEAVE YOU WITH SOME CLOSING THOUGHTS ABOUT ALL OF THIS. WE'VE HAD THREE COURT DECISIONS NOW THAT HAVE BEEN CONSISTENT WITH RETIREE BENEFITS. I THINK THAT SHIP HAS SAILED AS FAR

AS TRYING TO MITIGATE THE UNFUNDED LIABILITY. THAT'S REALLY IMPORTANT.

Mr. Campbell: AS I POINTED OUT BEFORE, 70% OF THAT UNFUNDED LIABILITY IS RELATED TO PEOPLE NO LONGER WORKING. TO THE EXTENT THAT WE CAN'T MITIGATE IT, WE'RE SORT OF OBLIGATIONED THAT GIVES US THE MOST POLICEMEN. AS MIKE JUST TALKED ABOUT, IT'S A RISKY PLAY. I MIGHT HAVE A DIFFERENT VIEW IF WE DID NOT HAVE EXISTING PENSION BONDS. THOSE BONDS WERE ISSUED IN 1999. THEY HAVE A VERY HIGH COUPON. THE AVERAGE IS ABOUT 7.75%. THEY CAN'T BE REFUNDED AND THEY CAN'T BE CALLED.

SO WE'RE ESSENTIALLY STUCK WITH THEM. THEY MATURE IN 2030. TO ADD ANOTHER DEBT OBLIGATION ON TOP OF THAT I THINK WOULD BE CONSIDERABLY RISKY IN TERMS OF AGAIN, POTENTIALLY LIMITING OUR FLEXIBILITY TO BE ABLE TO ADDRESS OTHER ISSUES. ANOTHER THING TO CONSIDER IS THAT THE PERS BOARD, AT THEIR MAY 29th MEETING, DID GET A PRESENTATION ON THE OVERALL PORTFOLIO. AND THE RISK ASSOCIATED WITH IT. AS MIKE MENTIONED, THEY CAME TO THE CONCLUSION THAT ON AVERAGE THEIR PORTFOLIO SHOULD PRODUCE A RATE OF RETURN OF ABOUT 7.4%. THE ASSUMED EARNINGS RATE TODAY IS 7.75%. IT'S POSSIBLE AS EARLY AS SEPTEMBER THEY MAY REDUCE THAT FROM 7.75% THE NUMBERS THAT I'VE SEEN SUGGEST THAT THEY REDUCE IT 7.5%, IT'LL INCREASE THE UNFUNDED LIABILITY AND WILL REQUIRE EMPLOYER RATES TO GO UP BY ANOTHER 1.8%. ON TOP OF THE PERCENTAGE WE TALKED ABOUT EARLIER, THERE WOULD BE ANOTHER 1.8%.

IF YOU DROP THE ASSUMED EARNINGS FROM INVESTMENT RETURNS, YOU NEED TO GET MORE FROM THE EMPLOYEES OR MEMBERS. THAT'S HOW THE EQUATION WORKS. THERE IS SOME BENEFIT IN TERMS OF THE REDUCED BENEFIT LEVEL ON THE FROZEN PERS ACCOUNTS BUT ITS WAY MORE THAN OFFSET BY THE INCREASE IN THE LIABILITY. AND FINALLY, WHAT WE'VE BEEN THINKING ABOUT IS CONSIDERING ADOPTING A FORMAL FINANCIAL AND BUDGET POLICY THAT'S RELATED TO PERS SPENDING WHERE WE WOULD CREATE SOME SORT OF INTERNAL COLLARING OR SOME WAY OF SMOOTHING OVER TIME, SOMEWHAT SIMILAR TO ESTABLISHING A SURCHARGE SO THAT WE COULD MANAGE THOSE RATE INCREASES INTO THE FUTURE. ONE OF THE THINGS, NOT TO PUT TOO FINE A POINT ON THIS, BECAUSE OF THE UNFUNDED LIABILITY AND THE GROWTH THAT I DESCRIBED BEFORE, THE UNFUNDED LIABILITY IS GOING CONTINUE TO GROW BY A LITTLE BIT EACH YEAR. RATES WILL NEED TO CONTINUE TO INCREASE. WHAT WE WANT TO DO IS FIGURE OUT A WAY INTERNALLY WE CAN MANAGE THAT AND SO WE'LL BE THINKING ABOUT THIS IN THE UPCOMING YEAR AND POSSIBLY BRINGING SOMETHING FORWARD IN NEXT YEAR'S BUDGET PROCESS TO ADDRESS THIS. AND THAT WAS ALL WE HAD TODAY.

Commissioner Shiprack: I'M JUST REALLY CURIOUS ABOUT THIS, NOT TO JUMP OVER THE CLIFF BUT IF WE COULD JUST WALK UP TO THE EDGE AND LOOK, THE UNFUND LIABILITY IS A MEASUREMENT OF THE HYPOTHETICAL EVENT IN THE FUTURE, WHICH JUST BY ITS NATURE IS ALWAYS A HYPOTHETICAL EVENT IN THE FUTURE THAT WE PUSH FORWARD. SO JUST BACKING UP TO NOW, TALK TO ME ABOUT THE BALANCE OF VALUES AGAIN FROM A BOARD PERSPECTIVE, BETWEEN WHAT WE DO WITH RESOURCES NOW, KEEPING IN MIND THAT WE'RE IN A CYCLE THAT INCLUDES UPS AND DOWNS. AND HOW IMPORTANT THAT TIME LINE IS, FOR EXAMPLE, THAT TIMELINE AGAIN IS NOT ARBITRARY BUT ALSO NOT A REAL TIMELINE. THE HYPOTHETICAL FUTURE EVENT THAT HAS NOT REALLY COLLAPSED INTO REALITY IN A SORT OF QUANTUM MECHANICS VIEW OF IT ALL. BUT IT IS ESTABLISHED BY THE GOVERNMENT ACCOUNTING EXPERTS AS A STANDARD MEASURE? IS THAT WHAT IT IS? OR IS THE ESTABLISHED BY CREDIT RATING AGENCIES? THE REASON I'M CURIOUS ABOUT IT, IS BECAUSE THESE ACTIONS THAT WE TAKE IN LIGHT OF A HYPOTHETICAL FUTURE EVENT, IMPACT US RIGHT NOW. AND THEY IMPACT US IN A VARIETY OF NEGATIVE WAYS. I NEED FOR YOU TO HELP ME UNDERSTAND THE POSITIVE WAYS AND WHO STANDS BEHIND THIS. AGAIN, HYPOTHETICAL FUTURE OCCURRENCE OF UNFUNDED LIABILITY. IN OTHER WORDS, A RETIREE WAITING FOR A CHECK AND MULTNOMAH COUNTY.

Mr. Jaspin: I THINK THE EASIEST WAY TO THINK ABOUT IT, IT IS PERS ACTUARIAL HAS TO MAKE ASSUMPTIONS USING TABLE BUSY HOW LONG PEOPLE WILL LIVE, HOW LONG THEY WILL GET THEIR BENEFITS. THEY HAVE TO MAKE ASSUMPTIONS ABOUT HOW FAST OUR EMPLOYEE COSTS WILL GROW. THEY ASSUME IF INFLATION IS 2.5%, INFLATION WILL GROW AT 2%. IT FACTORS IN RATES AND CERTAIN MARKET CONCERNS. IN THE SHORT TERM YOU CAN GET WILD FLUCTUATIONS. AS MARK WAS SHOWING IN THE UNFUND LIABILITY, WE WENT FROM 110% FUNDED TO 80% IN THE SPAN OF ONE YEAR. THAT'S PROBABLY ONE OF THE MOST EXTREME SWINGS WE'LL GET. AND I THINK THAT WHEN THE SYSTEM IS 85, 90% FUNDED, IT'S SOMETHING WE DON'T GET OVERLY ANXIOUS ABOUT BECAUSE WE MAY GET A COUPLE OF REALLY GOOD YEARS, IN WHICH CASE IT GETS CLOSER TO 100%. IT'S WHEN YOU FALL BELOW THE 85% THAT YOU START TO DIG YOURSELF A HOLE. WHEN WE'RE THINKING ABOUT HOW TO ADDRESS THIS BIG UNFUNDED LIABILITY, ONE OF THE REASONS TO BE CAUTIOUS ABOUT ISSUING BONDS, FOR EXAMPLE, IS THAT LOCKS YOU INTO A STRATEGY FOR 30 YEARS ESSENTIALLY. SO TO THE DEGREE THERE'S UNFUNDED LIABILITY AND IT'S NOT SO ENORMOUS THAT YOU MAY WANT TO JUST LET SOME TIME PASS TO SEE HOW SOME OF THOSE ASSUMPTIONS PLAY OUT AND NOT LOCK YOURSELF INTO A PARTICULAR STRATEGY. SO THAT'S HOW COME SOME OF THE RATES MOVING OR USING MULTIPLE SIDE ACCOUNTS OVER TIME, THAT'S KIND OF ADDRESSED TO SEE HOW THOSE ASSUMPTIONS PLAY OUT. IT COULD BE FAR WORSE OR IT COULD BE BETTER.

Mr. Campbell: AND I THINK THAT'S IMPORTANT. THE WHOLE IDEA BEHIND THE ASSUMPTIONS IS THAT YOU WANT TO TRY TO PREDICT THE FUTURE AND IT'S NOT GOING TO BE PERFECT LIKE HE'S SAYING. BUT THE COLLARING METHODOLOGY THEY IMPLEMENTED IN 2003, WHILE NOT PROSECUTE, I MEAN, DOES KIND OF HELP GIVE US SOME RATE PREDICTABILITY IN THE SENSE THAT WE KNOW RATES WILL NEVER GO UP BY MORE THAN, SAY, 4% IN A BIENNIUM, OR WON'T BE REDUCED BY MORE THAN 4% IN A BIENNIUM SO THERE WOULD BE ENOUGH MONEY IN THE FUND TO COVER THOSE OBLIGATIONS. I THINK ONE OF THE THINGS FROM THE PERSPECTIVE, WE NEED TO LOOK ACROSS THE RIVER AT THE CITY'S FIRE AND POLICE FUNDS, THEY DO HAVE ACTUARIAL STUDIES DONE BUT THEY ARE ONLY COLLECTING MONEY EACH YEAR TO PAY CURRENT BENEFITS. WHAT WOULD HAPPEN IN A HYPOTHETICAL SITUATION WHERE YOU LOST 900 POLICE AND FIREFIGHTERS IN ONE YEAR? THEY WOULDN'T HAVE ENOUGH MONEY TO COVER THAT.

Commissioner Shiprack: OUR PROPERTY TAX WOULD SAY GO UP.

Mr. Campbell: BUT THEY ARE CAPPED AND THAT'S THE IMPORTANT THING POINT OUT ABOUT THAT. I THINK THAT ACTUARIAL ASSUMPTIONS, PEOPLE CAN DEBATE WHAT THEY ARE BUT I THINK THEY ARE A NECESSARY TOOL.

Commissioner Shiprack: I'M REALLY FASCINATED BY THIS CONVERSATION AND I WANT TO SAY THAT JUST LISTENING TO YOU IT SEEMS TO ME THAT THERE'S SOME DYNAMICS HERE I HADN'T CONSIDERED BEFORE. ONE OF THEM I THINK IS INTERESTING, EVERY TIME PERS NOTCHES DOWN FROM 8% TO 7.75 TO 7.5, I ALWAYS BELIEVED THAT WAS FOR THEM, A, FOR PERS A MONEY-SAVING STEP FOR THE SYSTEM, NOT TO GUARANTEE SUCH A HIGH INTEREST RATE. AND THAT IN SOME WAY THAT MIGHT HURT RETIREES WHO WERE ANTICIPATING THAT SOMEHOW THEY HAD AN ACCOUNT THAT WAS COLLECTING AT THAT RATE. IN REALITY I THINK IT WOULD BE INTERESTING TO LOOK AT THE NUMBERS. BUT IF THE MONEY MATCH IS BECOMING LESS OF A CHOICE, THEN REALLY RETIREES ARE NOT SO MUCH DIRECTLY IMPACTED BY THAT VARIABLE CHANGING, BUT WE ARE. THAT'S THE AMOUNT OF INTEREST THAT WE'RE RECEIVING ON OUR PERS INVESTMENT ACCOUNT TO PAY FOR OUR FUTURE OBLIGATIONS. SO IT'S JUST A VERY DIFFERENT LOOK AT THE DYNAMIC.

Chair Kafoury: COMMISSIONER BAILEY.

Commissioner Bailey: THANK YOU, CHAIR. I HEAR THE RISKS INHERENT IN THE BOND STRATEGY. AM I CORRECT THAT THAT STRATEGY HAS LESS RISK BUT ALSO SOME RISK, AS WELL?

Mr. Campbell: WE HAVE BUILT UP IN THE PERS BOND RESERVE

APPROXIMATELY \$75 MILLION. AND THAT CAME FROM COMBINATION OF THINGS. ONE WAS THOSE BONDS ARE SET -- THE OTHER FEATURE I DIDN'T POINT OUT, THEY ESCALATE BY 5.75% ON AVERAGE EACH YEAR. WHAT WE TRIED TO DO WHEN WE ORIGINALLY SET UP, WE SET IT AT RATE THAT WE CAN MAINTAIN FOR A LONG TIME. WE SET UP RESERVES TO WE DON'T HAVE TO PAY 15 TO 20% IN THE OUT YEARS. NEXT YEAR IT'S SCHEDULED TO BE ABOUT \$20 MILLION. WHEN THEY MATURE WE'RE LOOKING AT A \$44 MILLION ANNUAL DEBT SERVICE PAYMENT. WHEN WE REALIZED THEY WERE GOING TO RISE SIGNIFICANTLY AFTER THE STOCK MARKET CRASH, WE DID A VERSION OF SMOOTHING LIKE MIKE DESCRIBED. THAT'S ALLOWED TO US BUILD UP THIS RESERVE. WE WILL NEED SOME OF THAT CASH. BUT SOME OF THAT CASH CAN BE INVESTED IN A SIDE ACCOUNT, WE BELIEVE, AND IT'LL PRODUCE A VALUE TO THE COUNTY THAT'S GREATER THAN WHAT IT'S PERFORMING FOR US TODAY. BY BACK OF THE ENVELOPE CALCULATIONS, IF WE TOOK ROUGHLY HALF OF THAT RESERVE, IT WOULD NET US AN ABSOLUTELY RATE OF ABOUT 1.5%.

Commissioner Bailey: THAT'S ASSUMING A LONG TERM INTEREST RATE FOR A SET ACCOUNT, RIGHT? IN THE SHORT RUN OVER THE NEXT FIVE TO 10 YEARS THERE IS SOME RISK IN A CASH ACCOUNT GIVEN INSTABILITY IN THE ECONOMY, RIGHT?

Mr. Campbell: THAT'S TRUE. BUT WE'RE EARNING A HALF PERCENT RIGHT NOW BECAUSE WE'RE LIMITED TO THINGS IN THE COUNTY AND CITIES CAN INVEST IN, ONLY THE SAFEST INVESTMENT VEHICLES. WHEREAS THE INVESTMENT COUNCIL CAN INVEST IN EQUITIES AND THINGS WE'RE NOT ABLE TO. SO TO YOUR POINT, YES, IT IS TRUE. BUT I THINK THE RISK IS LOWER THAN IF WE ISSUED ANOTHER SET OF BONDS.

Commissioner Bailey: YEAH, THAT CLEARLY SEEMS TO BE TRUE. I'M JUST TRYING TO THINK ABOUT ABSOLUTELY RISK, NOT RELATIVE RISK IN TERMS OF THAT OPTION. ESPECIALLY CONSISTENT WITH YOUR PREVIOUS TESTIMONY, THE IMF HAS DOWNGRADED ITS OUTLOOK FOR THE U.S. ECONOMY AND RECOMMENDED 0% DUE TO ECONOMIC INSTABILITY. IN THE SHORT RUN THERE DOES SEEM TO BE SOME CLOUDS ON THE HORIZON AND IN THE LONG RUN THINGS TEND TO WORK OUT OVER TIME.

Commissioner Smith: MADAM CHAIR, I HAVE A QUESTION. WHAT'S THE UNFUNDED LIABILITY RIGHT NOW? WHAT WAS THAT NUMBER?

Mr. Campbell: THINK WITH THE MORO DECISION IMPACT IT WENT BACK UP TO ABOUT \$11 BILLION.

Commissioner Smith: SO WE COULD ACTUALLY PAY THAT OFF?

Mr. Jaspin: MARK WAS REFERRING TO OUR LAST ACTUARIAL.

Mr. Campbell: OH, THE LAST ACTUARIAL WAS ABOUT 90 BUT WE WANT TO IT GO BACK UP TO 155 OR 160. WITH A NEW VALUATION, THE 2014 VALUATION IS ADVISORY AND IT DOESN'T USE THE SET RATES BUT IT'LL GIVE US AND PRETTY GOOD INDICATION OF WHAT THAT NEEDS TO BE. THAT'S WHAT WE DID IN 1999. OUR UNFUNDED LIABILITY WAS ROUGHLY 155 OR \$160 MILLION AND WE ISSUED 185 IN BONDS.

Commissioner Smith: WHEN IS THE TIMELINE THAT WE'RE EXPECTED TO PUT THAT BACK?

Mr. Campbell: I THINK PERS AMORTIZES OVER 20 YEARS.

Commissioner Smith: THEY EXPECT TO US PUT THAT 110 BACK OVER 20 YEARS? OR JUST DO ONE LUMP SUM?

Mr. Campbell: I DON'T KNOW THAT THERE'S AN EXPECTATION BUT THAT'S THE AMOUNT OF TIME IT WOULD TAKE TO GENERALLY COVER THAT.

Commissioner Smith: OKAY.

Chair Kafoury: ANY OTHER QUESTIONS OR COMMENTS? THANK YOU. THIS HAS BEEN FASCINATING. EVEN MORE INTERESTING POTENTIALLY THAN THE CYBERSECURITY. AND I APPRECIATE YOU GOING THROUGH ALL OF THE DIFFERENT OBJECTIONS AND THE RISKS ASSOCIATED WITH THOSE. I'M HURTING TO HEAR THAT THE SMOOTHING SEEMS LIKE WITH THE POTENTIAL FOR A SIDE ACCOUNT SEEMS LIKE THE BEST WAY TO MOVE FORWARD. SO THAT WE ARE ACTUALLY TAKING ACTION AND MAKING A DECISION THAT SMOOTHING IS GOING TO BE, EVEN THOUGH WE'RE NOT PUTTING DOLLARS ASIDE THIS YEAR. IT SOUNDS TO ME LIKE WHAT YOU SAID WAS THAT THE BEST THING WE CAN DO WITH THE ONE TIME ONLY MONEY WE HAVE THIS YEAR IS TO DO WHAT WE ARE DOING, WHICH IS TO PUT A LOT OF MONEY INTO INFRASTRUCTURE AND PUT THE DOLLARS INTO THE COURTHOUSE I'VE OUTLINED IN THE BUDGET WOULD SAVE US MONEY IN THE LONG RUN.

Mr. Campbell: I WOULD ECHO THAT. THE WAY YOU THINK ABOUT PERS, I THINK PERS IS MANAGEABLE. WITHIN A CERTAIN BANDWIDTH. THE IT THIS REAL CHALLENGE THAT WE AND OTHER LOCAL GOVERNMENTS HAVE IS AROUND INFRASTRUCTURE.

Chair Kafoury: I THINK WE'VE MADE SOME SMART DECISIONS IN THE PAST IMPLEMENTING THIS SMOOTHING TYPE OF SYSTEM SO THAT WE HAVE NOT BEEN AS JERKED BACK AND FORTH AS SOME OF ANY OTHER COMMUNITIES IN OUR STATE, I THINK MORE APPLAUSE FOR OUR CONSERVATIVE FISCAL OUTLOOK HERE. THANK YOU. SO ANY OTHER QUESTIONS OR COMMENTS?

Commissioner Shiprack: I HAVE A PROCEDURAL QUESTION. YOU'LL BRING A PROPOSAL WITH REGARD TO AN ACTION ON THE PERS FUNDING AS WE MOVE INTO THE NEXT FISCAL YEAR? SO WE CAN IMPLEMENT THIS SMOOTHING?

Mr. Jaspin: YEAH, I WON'T BE BACK UNTIL NOVEMBER AND WITH THE NEXT -- WHEN WE START WORKING ON 17, WHICH I REALLY DON'T WANT TO THINK ABOUT UNTIL AFTER NEXT WEEK, BUT YEAH. THEN I'LL LAY OUT SOME ASSUMPTIONS AND WE CAN HAVE OBVIOUSLY FIGURE OUT WHAT THE ECONOMY IS DOING AND BE MORE FORMAL ABOUT IT. AND I THINK WE NEED TO DO MORE RESEARCH ON THE SIDE ACCOUNTS AND DO ALL OF OUR DUE DILIGENCE AND THAT WILL PAY OFF LIKE WE THINK IT WILL.

Chair Kafoury: THANK YOU SO MUCH. ALL RIGHT, KARYNE COME ON UP.

Ms. Kieta: GOOD MORNING. SO THE LAST PIECE OF BUSINESS THAT WE HAVE TO DO WARD TO WORK SESSIONS, WE ARE STILL TENTATIVELY HAVE A BUDGET WORK SESSION SCHEDULED FOR THIS AFTERNOON. SO FOLKS, WE NEED A DETERMINATION IF WE WANT TO GO AHEAD AND HAVE THAT OR CANCEL IT.

Commissioner Smith: WHAT IS THE LAST DAY TO SUBMIT AMENDMENTS?

Ms. Kieta: COMMISSIONER, WE HAVE ANOTHER WORK SESSION SCHEDULED TO GO OVER ALL OF THE BUDGET AMENDMENTS AND DEPARTMENT AMENDMENTS AND BUDGET NOTES TUESDAY, BEFORE WE ADOPT ON NEXT THURSDAY.

Chair Kafoury: UNLESS FOLKS ARE FEELING A NEED TO HAVE ANOTHER WORK SESSION THIS AFTERNOON I WOULD SAY THAT WE POSTPONE THAT UNTIL TUESDAY. I KNOW WE DO HAVE A PUBLIC HEARING TONIGHT IN THIS VERY ROOM AT 6:00 P.M., THE LAST OF OUR THREE PUBLIC HEARINGS.

Commissioner Shiprack: I WANT TO MAKE MY STANDING REQUEST THAT WE HAVE TIME SET ASIDE TO ENABLE ALL OF US, EACH COMMISSIONER TO THOROUGHLY UNVEIL OUR AMENDMENTS AND PROPOSALS FOR THE PUBLIC, AS WELL AS FOR ONE ANOTHER BECAUSE IT'S ALWAYS DIFFICULT FOR US TO COMMUNICATE DIRECTLY. THIS IS OUR GROUP MEETING OPPORTUNITY. I MEAN, AGAIN, THAT'S MY STANDING REQUEST AS TIME GROWS SHORT THAT WE HAVE TIME SET ASIDE FOR THAT EXERCISE.

Commissioner Smith: MADAM CHAIR, I THOUGHT WE DID THAT YESTERDAY, WENT OVER ALL THE AMENDMENTS TO DATE.

Chair Kafoury: I DON'T WANT TO PUT WORDS INTO COMMISSIONER SHIPRACK'S MOUTH BUT I WILL. I THINK EVERYONE WHO'S PROPOSED BUDGET

AMENDMENTS HAS DONE A VERY GOOD JOB OF OUTLINING WHY YOU BELIEVE THAT BUDGET AMENDMENT IS SO IMPORTANT. WE HAVEN'T HAD AN OPPORTUNITY TO QUESTION EACH OTHER, IF WE HAVE QUESTIONS ABOUT WHAT THE PROS AND CONS OF THOSE VARIOUS AMENDMENTS ARE. I DO BELIEVE WE'LL HAVE TIME ON OUR CALENDAR ON TUESDAY FOR THAT. AND I WOULD ENCOURAGE US ALL TO DO THAT. I THINK IT'S OBVIOUSLY THE LAW THAT WE DO PUBLIC DELIBERATION. BUT IN ADDITION, I THINK IT'S IMPORTANT FOR A BOARD TO LEARN HOW TO HAVE DISCUSSIONS AND AGREEMENTS AND DISAGREEMENTS PUBLICLY AND POLITELY. I'M LOOKING FORWARD TO HAVING MORE CONVERSATION ON TUESDAY. AND I'M VERY MUCH LOOKING FORWARD TO WHAT I EXPECT IS GOING TO BE A LOT OF FOLKS TURNING OUT TONIGHT. THE MESSAGES I'VE RECEIVED VIA EMAIL, TEXT, PHONE, CARRIER PIGEON, ALL INDICATIONS ARE WE WILL HAVE A FULL HOUSE THIS EVENING. ANY OTHER QUESTIONS OR COMMENTS? SEEING NO FURTHER BUSINESS, I WILL SEE YOU AT 6:00 TONIGHT.

ADJOURNMENT

The meeting was adjourned at 11:44 a.m.

Transcript prepared by LNS Captioning and utilized in creating minutes by the Board Clerks. For access to the video and/or board packet materials, please view at: http://multnomah.granicus.com/ViewPublisher.php?view_id=3

Submitted by:
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Board of County Commissioners
Multnomah County