Thurston County Confronts Climate Change

Washington State Department of Ecology

Global Meltdowns ‘12

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The effects of climate change are knocking at our front door. Here, in Washington State, we are particularly vulnerable due to much of our subsistence depending on the resources that require a healthy environment to continue to flourish. However, these resources are not flourishing; they are diminishing as a result to anthropogenic caused climate change. The effects of climate change can actively be seen all around the state, as well as right here in Thurston County. The important factors are to locate what is going on in the immediate present to help confront the issue of climate change and who is doing what. "Legislator and Gov. Chris Gregoire have directed state agencies to develop an integrated climate change response strategy to help state, tribal and local governments, public and private organizations, businesses and individuals prepare."[1] In response to said integrated planning the Washington State Dept. of Ecology (DOE) has taken up the challenge as they continuously strive to meet the goals that have been set to stand out as leaders in Thurston County's focus to take climate change seriously. The DOE is holding strong to their mission statement, "The mission of the Department of Ecology is to protect, preserve, and enhance Washington's environment"[2]. The DOE has eight sectors to which they focus different plans for their framework in preparing for climate change. Changes in temperature, weather and biological processes in ecosystems can drastically affect Washington State's agriculture, wildlife, water supply, forest, infrastructure, climate hazards, human health, and costal hazards.

The main focus of DOE is to conserve and adapt to requiring less resources as structured in "Preparing for a Climate Change: Washington's State's Integrated Climate Change Response". Conserving is one of the only options that humanity has to be able to decrease possible

[1] http://www.ecy.wa.gov/climatechange/ipa_responsestrategy.htm
[2] https://fortress.wa.gov/ecy/publications/summarypages/0902019.html

catastrophic events that may become the future. There are seven priorities that are being assessed:

I. Protecting people and communities.
II. Reduce risk of damage to buildings, transportation systems and other infrastructure.
III. Reduce forest and agriculture vulnerability.
IV. Improve water management.
V. Safeguard fish, wildlife, habitat and ecosystems.
VI. Reduce risk to ocean and coastlines.
VII. Support the efforts of local communities and strength capacity to respond and engage the public.

[3]Each of these priorities has specific plans that are being implemented and adapted to. For protecting people and communities they have invested in monitoring health issues such as disease that is spread through changes in climate and making emergency response more readily available. Through community outreach they have built better support systems through communities to respond more accurately through storm surges and have restored some floodplains to help absorb the blow. There are new regulations for zoning of future development and maps for relocation of infrastructure at risk. To protect forests and agriculture there is a continued effort to promote conservation of farmland and forests, increased surveillance of invasive pests, disease and other plant species as well as a stronger knowledge of native plant and pest species. Improving water management is an important issue for Washington State and has been addressed through corporate responsibility of run-off, through promotion of vulnerable basins and ensuring a salmon-friendly temperature in streams, rivers and estuaries. Habitat restoration and preservation is currently being implemented although out Thurston County to protect species that are vulnerable and at risk to help encourage adaptation.

[3] https://fortress.wa.gov/ecy/publications/publications/1201004.pdf

Two major goals that have been met is the switch of Trans-Atla, a coal industry operating in Centralia, has converted from using coal to natural gas in their plant. Currently, they are replacing turbines that used to run on coal, to create coal for exports, to run off natural gas. Another program is the implementation of community outreach to understand ocean acidification and recently released a report on the effects climate change is having on shellfish and other marine life in the Puget Sound. Through community involvement in-depth research has concluded the major effects that carbon dioxide is having on the marine ecosystems which directly effects on Washington's economy. As the country's largest supplier of shellfish it is very important that Washington State residents understand the damage that carbon dioxide has on the marine life as the ocean absorbs more GHGs[4] from the atmosphere. The findings, although they can be dis-heartening, can lead to further funding for combatting higher carbon levels.

Sea-levels rising are a concurrent problem for states with extensive coastlines (i.e. Washington). Just as Hedia Adelsman[5] suggests, even though sea levels may rise "just" six inches above, it doesn't counter all the factors that will actually cause damage. Adelsman is the executive policy advisor for sea level rise and climate change for the Washington Dept. of Ecology. Many other factors like excessive rainfall, higher tides and storm surges will wash up into already developed areas and cause large social and economic damages. She offered small changes that will push people into taking climate change seriously. For example, many businesses have most of their transformers, computers, and services on their first floor. The small-time solution for this change to prevent water damage is to designate conference rooms

[4] Greenhouse Gas
[5] Interview in person and recorded 2/1/13

to store technology or move them to a higher floor, in case of these emergencies. Another focal point Adelsman seemed to draw from is many businesses will have to relocate and slowly start moving to higher grounds to prevent total economic despair. She offered that in order to save businesses, Bellingham and other larger waterfront cities are implementing relocation mapping and zoning. Adelsman, like many who are concern with coastal outlook, questions how much will be lost by the lack of preparation. If families and businesses have to move, where are they going to move to? This becomes a bigger issue that doesn't just involve the DOE. Through a CAPRI (NOAA's Climate Assessment and Proactive Response Initiative for the Northwest)[6], mapping analysis based on threats, vulnerability, and options for coastal areas around Washington State can show who is at greater risk . The DOE is an avid enthusiast for this, and uses it to help inform business, individuals, and the state to assess what should be done to provide safety for everyone from sea level rise and expansion. Adelsman believes that this will assess all possibilities involved in prevention. One example she gave was building higher dikes may actually increase chances of flooding within fields, possibly moving into developed areas. The CAPRI supplies greater accuracy through modeling other at risk areas.

Adaptation provides us with a safety net from the irreversible damage that is a result of climate change. Through the DOE, methods are being enacted to be able to respond to climate change more precisely. State agencies have been required since December 2011 to develop a way to help the state and local governments prepare for the detrimental aspects of global warming. They are to be a "clearinghouse" for incoming scientific and technical information that are a result from this large entity of a problem; creating necessary programs and policies

[6] http://www.darrp.noaa.gov/northwest/puget_sound/index.html

that the state can use as a backbone for the climate's unpredictability.

Many smaller, self-promoting attributes have incurred to motivate individuals to reduce their carbon footprints. Two encouraged programs are Carbon Smart at Work and Low Carbon Diet at Home. Carbon Smart at Work is a voluntary program to help influence eco-friendly business compete against each other to lower individual GHG emissions. Competition involves managing facilities to reduce staff's energy use, tallying their participation of office actions during the competition, newsletter articles from Inside Ecology[7] for ideas, and overall just encouragement. From the results with 385 staff participating, they were able to have a fairly large number of participants. Throughout the ECY 147 turned off their computer monitors hen leaving work, 39 used "standby" instead of a screen saver, 70 reduced printing by thirty percent, and 43 commuted by bike, bus, car/vanpool, or rail at least once a week. This is planned to encourage less carbon use by all people and setting a standard. Low Carbon Diet at Home is encourages awareness for the same issue.

On another small scale, sixty-five actions were proposed to reduce emissions produced by the three state headquarter structures. Overall, they implemented seventeen of the most cost effective actions thus far. By incorporating the seventeen actions already enacted, it is estimated to drop emissions from the building by about 8% a year and save more than $100 thousand in energy costs for the department. In Lacey, goals are focused currently on rewiring the lighting system, upgrading vents and heat systems, obtaining high-efficiency hand dryers, and more sustainable plumbing. DOE buildings in Padilla Bay and Spokane are mirroring these actions as well, including some weatherization mechanisms to act a part to reduce GHG

[7] NEED A SITE FOR THIS

emissions released from the infrastructure.

Are these small steps towards climate change awareness enough? Are the reductions enough to majorly cut down our footprints in this Earth? In opinion based on the interview and information researched, it's a good step but it's not large enough. It seems more around picking at the issue, encouraging more so to "live with it" and placing the actions on individuals themselves. They have produced some money and programs to achieve some starts – but it isn't sufficient. The Ecology department will have to step up its game to achieve the ultimatum of major carbon cuts, adapting to rising sea levels, and for basic sustainability for all beings placed on the Earth. Only time will tell when actual programs can become a more in-depth, efficient way to solve these unwavering problems. Hopefully, however, the time won't arrive too late.

JORDAN:

I haven't touched this last paragraph but will before the day is over. I am just going to throw in the following barriers of implementation. If you want to look this over and make any adjustments if any noticed (which I am sure there are) along the way and then just you're your bibliography below and shoot it back at me, I will incorporate it! Thanks!!

1.) Inadequate information and experience
2.) Inadequate institutional support for adaptation
3.) Lack of Resources
4.) Public beliefs and attitudes