Regional Adaptation Collaborative San Jose Watershed

Investigating the impacts of climate change on forests, water, and forest resources

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Overview

- This project is funded under the National Regional Adaptation Collaborative
- Goal of this (and other projects) is to inform decisionmaking and adaptation in the face of climate change
- Project is designed around working with local stakeholders to explore how climate change could impact flow of services and values from local forest resources in the San Jose watershed

Assisting Adaptation

- Developing tools and information to assist decision-makers and other interested stakeholders
- The tools are a set of inter-linked models that quantitatively assess the impacts and effects of different forest management activities in the watershed over the next 100 years on the forest resources
- These models also include a hydrological model that looks at forest conditions and climactic conditions and associated surface flows
- These models also account for climate change in the way future climate might change
- We then use these models to explore what could happen in the watershed and possible vulnerabilities and risks



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Important Values in the San Jose Watershed

- Important values in the watershed
 - Range, ranching, grasslands
 - Water
 - Habitat
 - Timber
 - Cultural and community values
- Climate change is likely to affect the watershed
 - Changes in tree regeneration dynamics and natural disturbance
 - Changes in form and timing of precipitation
 - Ultimately all will have an impact on water availability



Resource Concerns in the San Jose

- Water supply is a key concern
 - Notably: City of Williams Lake aquifer, 108 Mile Lake
 - Challenges identified in previous studies
 - ▼ Flow levels (low summer, high winter)
 - Water temperature variations
- Timber Productivity
- Changed Disturbance Patterns
 - Mountain Pine Beetle
 - Fire Suppression



Informing Modelling and Decision-Making

- Formed an Advisory group comprising influential local stakeholders & decision makers
- Two important roles
- First in informing modelling
 - Identifying key issues
 - Informing models through local knowledge, experience, and expertise



Decision-Making

The second role is thinking about how the knowledge generated can be used (informing existing processes such as timber supply planning or other types of long-term planning)

- **×** Helping formulate policy responses
- How to effectively engage with different sets of decisionmakers
- Successful so far in bringing together different groups that have typically not worked together (administrative boundaries, jurisdictional responsibilities)

Moving Forward

- The goal is **not** to come up with a *plan*, but identify what actions people want to take
- Part of this is identifying whose responsible for implementation
 - And what is required for implementation-what policy levers exist? Where are there policy gaps?
- Work towards addressing the need for formal governance mechanisms in the watershed



San Jose Watershed Regional Adaptation Collaborative Investigating the implications of climate change on forests and forest resources in the San Jose watershed



The San Jose Watershed

The watershed's main river, the San Jose river, flows northwest from Lac La Hache to Williams Lake, in British Columbia's Central-Cariboo region. The river's main tributaries include Borland Creek, Jones Creek, and Knife Creek.

Issue at Hand:

Water supply in the San Jose watershed is already heavily allocated. Potential impacts of climate change are locally unknown but are likely to cause an increase in mean annual temperature and change the amount and distribution of



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