Wild Fire, Emergency Fire-Fighting and Rural Communities in Alaska

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Talk Overview

- Emergency Fire Fighting (EFF)
  - What role does EFF play in rural communities?
  - How is EFF employment distributed state-wide?

- Forces of change
  - Implications for EFF & rural communities
Methods

- Survey of emergency fire fighters (EFF) (n=57) (Trainor)
- Community workshops in Huslia (H. Huntington, O. Huntington, Natcher, Trainor, Chapin, DeWilde)
- Semi-structured interviews:
  - State and BLM FMOs and EFF managers (Trainor)
  - EFF crew members, crew boss trainees (Trainor, DeWilde)
Percent of Families Below the Poverty Level in 1999: 2000

U.S. Census, TM-P069.

U.S. Census TM-P049.
In 86% of villages with crews, EFF wages are <5% of total village income.
Yukon-Koyukuk Census Area

Average earnings per job (dollars)
Average EFF individual earning

Personal current transfer receipts
Personal income
EFF Wages
EFF is an Important Source of Income for Entry Level Workers

- Employment bringing in majority of income is
  - Full time
  - Requires higher education
    - Schools
    - Tribal Administration, City Government
EFF is an Important Source of Income for Entry Level Workers

- On individual scale, EFF income is very important
  - EFF is only source of income for ~50% of crew members

http://fire.ak.blm.gov/unique/photos/f_solstice/5.jpg
EFF Wages Pay for...

- Food
- Utility bills
- Gasoline
- Winter clothes
- Heating fuel
- Ammunition
- Hunting & fishing supplies
- Snow machines
- Boat motors
- Travel

Photo from La’Ona DeWilde

http://fire.ak.blm.gov/afs/afs.php
Non-monetary Benefits of EFF

- Intergenerational mentoring
- Self-esteem
- Employment skills
- Teamwork
- Relationships with people in other villages

http://www.alaskanativeresources.com/images/wfire2.jpg
Emergency Fire Fighting

- What role does EFF play in rural communities?
  - Small percentage of overall village income
  - Large percentage of individual income
  - Important social, non-monetary benefits
Emergency Fire Fighting

- How is EFF employment distributed statewide?
Total In-State Assignments >10
1986-2003

red = on road
<table>
<thead>
<tr>
<th>Rank</th>
<th>City</th>
<th>EFF Earners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fairbanks</td>
<td>$1,586,842</td>
</tr>
<tr>
<td>2</td>
<td>Delta</td>
<td>$ 502,363</td>
</tr>
<tr>
<td>3</td>
<td>Tok</td>
<td>$ 333,823</td>
</tr>
<tr>
<td>4</td>
<td>Fort Yukon</td>
<td>$ 301,870</td>
</tr>
<tr>
<td>5</td>
<td>Hooper Bay</td>
<td>$ 249,265</td>
</tr>
<tr>
<td>6</td>
<td>Palmer</td>
<td>$ 220,229</td>
</tr>
<tr>
<td>7</td>
<td>Northway</td>
<td>$ 212,442</td>
</tr>
<tr>
<td>8</td>
<td>Nulato</td>
<td>$ 202,629</td>
</tr>
<tr>
<td>9</td>
<td>Allakaket</td>
<td>$ 180,886</td>
</tr>
<tr>
<td>10</td>
<td>Glennallen</td>
<td>$ 168,550</td>
</tr>
</tbody>
</table>

Red = On Road
Black = Off Road
Emergency Fire Fighting

- How is EFF employment distributed statewide?
  - Tendency for on-road villages to earn more money and get more assignments
Balancing Equity and Efficiency – Contrasting Stakeholder Priorities

- **State DOF & BLM**
  - Cost efficient training and crew dispatch
  - Time efficient crew dispatch
  - Workforce available on demand

- **EFF Crew Members**
  - Fire assignments = Paycheck
  - Equitable distribution of assignments across villages

http://fire.ak.blm.gov/afs/afs.php

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Human-Fire Interactions Symposium, University of Alaska, Fairbanks. August 15, 2006
## Differences Between State & Federal EFF Management

<table>
<thead>
<tr>
<th>DOF</th>
<th>AFS/BLM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single resource</td>
<td>Full crews</td>
</tr>
<tr>
<td>Road network</td>
<td>Air travel required</td>
</tr>
<tr>
<td>- Ignitions</td>
<td>- Federal requirements</td>
</tr>
<tr>
<td>- Crew transport</td>
<td>- Medical standard</td>
</tr>
<tr>
<td>Population centers</td>
<td>- Training</td>
</tr>
<tr>
<td>State pay scale</td>
<td>Federal pay scale</td>
</tr>
</tbody>
</table>
Alaska In-State EFF Wages & Ignitions

- Wages earned in AK
- Ignitions C+F (ig v zn)
- Total Ignitions

Year:
- 1984
- 1986
- 1988
- 1990
- 1992
- 1994
- 1996
- 1998
- 2000
- 2002
- 2004

$ (infl. adj. to 2004):
- $1
- $10
- $100
- $1,000
- $10,000
- $100,000
- $1,000,000
- $10,000,000
- $100,000,000

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Change Over Time

- Climate change
  - Increase in frequency, severity, and duration of fires
- Fire labor policies
  - Increasing training and medical requirements
  - Decreasing budgets
  - Pressure to maximize efficiency
- State demography
  - Expanding Wildland Urban Interface
- Economic
  - Increasing dependence on market sector
  - Increasing transfer payments

Image from F. S. Chapin, III

Photo by Mike Eng
http://dailydeco.com/fire/housefire5.jpg
Implications for EFF Management

- Increasing demand for suppression resource on road system
- Continued demand for rural employment
  - Willing and available labor force
  - Interest in advancement
Potential Solutions

- Local hazard fuel reduction projects
- Partnerships with BIA & Native non-profit organizations
  - Develop Native initial attack crews
  - Build Native training capacity
- Innovations in fire management to anticipate change
Conclusion/Summary –

- **Role of EFF in communities**
  - Small percentage of regional & village income
  - Large percentage of individual income
  - Important social, non-monetary benefits
  - Tendency for on-road villages to earn more money and get more assignments

- Changes in the fire regime and state demographics may influence future utilization of suppression labor

- Innovative solutions can anticipate changes
Acknowledgements

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- And many more…