



ADEC Rural Dust Survey Preliminary 2010 Results

In March 2010, Rural Dust Survey forms were distributed to 250 rural Alaskan communities. Eighty-two (33%) of the surveys were completed and returned to us. The returned surveys represented eighty-two different communities.

This was an informal survey. In most cases, the surveys we received back were the answers of single people answering as best they could for their communities. Some survey forms were not completely filled out and some questions had multiple answers, so the number of answers to each question does not usually add to 82, or 100%. Some answers can't easily be summarized by counting and averaging, so are not summarized here. Some answers provide specific information about individual community needs and concerns. In this report, the survey results are discussed together as a group, rather than identifying specific respondents and their communities.

Summary of Survey Results

How is the dust affecting people in rural communities?

Most respondents reported that some residents of their communities are highly affected by dust releases. The most frequently reported community health effects were Irritation of eyes, nose, and throat (72% of responses); Asthma (72% of responses); Coughing (68% of responses); Chronic Bronchitis (56% of responses); Shortness of breath (50% of responses); Emphysema (48% of responses); and Tightness of the Chest (44% of responses).

When are the dusty days?

More dusty days occur in June, July, and August, with averages above 20 days each month. For May, September, and October, 13-19 dusty days each month is typical. The fewest dusty days occur in Winter, an average of 19 dusty days during the six month period from November through April. Different regions of Alaska have slightly different dust seasons. The results match our assumptions about seasons, but they also represent direct information from the people most affected.

What are current conditions in rural Alaska?

Roads:

Most respondents to the survey reported that their communities have gravel roads. Many respondents also reported dirt roads. Most reported roads with shallow grades. The tables below show the kinds of roads found in the respondents' communities.

Typical Road Surfaces	Number of Communities
Gravel	66
Dirt	34
Sand	18
Others:	
boardwalk	crushed rock (gravel)
scoria or pumice (gravel)	broken chip seal
pitrun gravel (gravel)	chipped asphalt
D-1 (gravel)	paved

Average Road Grade	Number of Communities
level roads	22
shallow roads	36
some steep roads	16

Vehicles:

Most respondents report that their communities have a mix of vehicles using their roads. Most common are ATVs and Pickups. On average, 56% of the vehicles using community roads were ATVs. ATVs are far more common than other vehicle types reported. Pickup trucks were less than half as common as ATVs.

	Vehicles on the Roads (percentage)				
	ATV'S	Cars	Pickups	Light Trucks	Bulldozers
Median (Half the communities were above this percentage, half were below.)	55%	5%	23%	2%	1%
Mean (Average of the communities)	56%	9%	29%	5%	2%
Maximum percent reported from any community	100%	48%	96%	15%	15%

Speed:

Nine communities are reported to already control dust, in some locations, by applying and enforcing speed limits. Most respondents (84%) report that their communities are willing to try controlling dust by applying and enforcing speed limits. However, several respondents mentioned that speed limits are not enforceable because the community lacks funding for personnel or lacks a VPSO.

Other concerns

Survey respondents mentioned airstrips, nearby gravel pits, pumice in soil, and honeybucket dumps and waste lagoons as important sources of dust in their communities.

What is now being done for dust control in the communities responding to the survey?

Respondents reported eighteen communities that are using water for occasional dust control. Six communities are reported to have used calcium chloride or another chemical suppressant for dust control.

What equipment and materials do rural communities now have for applying dust suppressants?

(Results represent the communities that responded to the survey.)

How many communities have:	Water readily available in town?	Equipment to Grade or Shape Roads?	Equipment to lift 1 ton totes?	1 ton Truck for pulling trailer/tote?	Water Truck & Mobile Compactor?	ATV capable of pulling trailer with a tank?
Number of communities	45*	41	39	34	18	38
Percent of communities	96%	89%	85%	74%	39%	83%

*including sea water, wells

Dust control in the future

Are communities willing to try chemical dust palliatives?

Thirty five respondents indicated willingness by their communities to use chemical dust palliatives. Twenty four respondents indicated that their communities are not willing to use chemical dust palliatives.

Before trying chemicals what do respondents want to know?

- Everything (10 responses)
- Effects on human health, toxicity, health of community, contamination (8 responses)
- Effects on environment, including wetlands, contamination, duration (8 responses)
- Effects on both humans and environment (6 responses)

- MSDS (Material Safety Data Sheet) (3 responses)
- Product data/performance
- Product info, installation costs, maintenance
- Useful life of 1 application
- Product data/performance data/brochures
- Cost, how it works, duration of application
- Cost, where to get
- Effects on vehicles

Before trying chemicals what do respondents want to know?(continued)

- Village meeting to discuss concerns
- Ask community members first

- Hazards, applications
- History of use in Alaska
- Is it safe for pets?
- Long and short term effects
- Side effects

What resources are needed for dust control?

*What equipment do respondents say that their communities would require for dust control?
(Results represent the communities that responded to the survey.)*

Equipment	Dust Palliative Sprayer	Trailer for palliative totes	Totes (water)	Water Truck	Compactor
Number of Communities	35	31	37	37	27

Other equipment listed: Grader, Tote with water, Water hauler, Bobcat, Broom, Loader/Dozer, ATV trailer/tank,4wheeler

What storage do respondents say is available for dust control equipment?

Respondents report that most communities (55) have storage for equipment. Eleven communities have warm storage; forty-four have cold storage. Respondents from eleven communities reported no available storage.

What names or types of dust control would respondents like to try?

Water or salt water (8 communities), Calcium Chloride (6), EK-35 (3), Durasoil (3), Syntech (extreme dust control), Trailer for palliative totes, Soil Tac, E-N-1, End Dust MG Liquid, Envirokleen, Environmentally friendly products, Enviroseal(Organic dust control) (Biodegradable).