

**Agency: Commerce, Community and Economic Development****Grants to Municipalities (AS 37.05.315)****Grant Recipient: Fairbanks North Star Borough****Federal Tax ID: 920030612****Project Title:****Project Type: Other**

# Fairbanks North Star Borough - Wood Stove Conversion Program

**State Funding Requested: \$5,000,000****House District: Fairbanks Areawide (7-11)**

Future Funding May Be Requested

**Brief Project Description:**

The Fairbanks North Star Borough is requesting state funding for the voluntary solid fuel appliance removal, replacement, or repair program in an effort to reduce PM2.5 emissions in the non-attainment area. The FNSB provided \$1,000,000 of its general funds for the program and these funds will be used up by June 2011. Additional funding is needed to have a positive impact on our Air Quality issues.

**Funding Plan:**

Total Project Cost:	\$7,000,000
Funding Already Secured:	(\$1,000,000)
FY2012 State Funding Request:	(\$5,000,000)
Project Deficit:	\$1,000,000

*Funding Details:*

The FNSB has spent \$1,000,000 of its general reserve funds to begin the program.

**Detailed Project Description and Justification:**

The Fairbanks North Star Borough is requesting \$5,000,000 from the state to accelerate the voluntary solid fuel appliance removal, replacement, or repair program and address a significant source of PM2.5 emissions in the FNSB non-attainment area. The FNSB provided \$1,000,000 in funding from its general funds for the voluntary solid fuel appliance removal, replacement, or repair program this fiscal year in an effort to reduce PM2.5 emissions in the non-attainment area. This program has been extremely successful and the FNSB will use up the funding by June 2011.

In 2008, the Environmental Protection Agency listed portions of the FNSB as a non-attainment area for PM2.5 emissions. As a result of the EPA listing portions of the FNSB as being in non-attainment for PM2.5 emissions, the State of Alaska, the Borough, and the EPA are collaborating to identify sources of PM2.5 emissions, work to minimize those emissions, and ensure attainment. Solid fuel burning appliances are significant sources of PM2.5 emissions, and recent studies completed by the Borough show that over 20% of homes located in the Borough's "urban core" use wood stoves as their primary winter heat source and roughly 80% use Solid fuel burning appliances as their secondary heat sources. Roughly half of these stoves are inefficient, polluting, and non-EPA certified Solid fuel burning appliances.

State funding is sought to replace these out-of-date, inefficient, and polluting solid fuel burning appliances with more efficient, EPA-certified models. A survey of home heating practices in the Fairbanks bowl conducted in 2005 estimates 9500 homes in the Fairbanks bowl use solid fuel burning appliances as their primary heat source in the winter. From this same

survey it is estimated that over half of these stoves are older non-EPA certified models. The Borough plans to replace 5300 Solid fuel burning appliances over the life of the program.

The EPA has found that upgrading wood stoves with EPA-certified solid fuel burning appliances increases energy efficiency by 50%, stoves use 1/3 less wood, and PM 2.5 emissions are reduced by 55-70%. Additionally, the EPA notes that changing out one inefficient woodstove has the same reductions of PM 2.5 emissions as taking five diesel buses off the road.

### Project Timeline:

The FNSB will immediately apply the funds to the Voluntary Solid Fuel Burning Appliance Removal, Replacement, or Repair program and will replace the stoves as fast as possible. The program is already in place and operating.

### Entity Responsible for the Ongoing Operation and Maintenance of this Project:

The homeowner will be responsible for maintenance and operation costs of their new stoves

### Grant Recipient Contact Information:

Name: Luke T. Hopkins  
 Title: Mayor  
 Address: 809 Pioneer Road  
 Fairbanks, Alaska 99701  
 Phone Number: (907)459-1300  
 Email: lhopkins@co.fairbanks.ak.us

Has this project been through a public review process at the local level and is it a community priority?  Yes  No

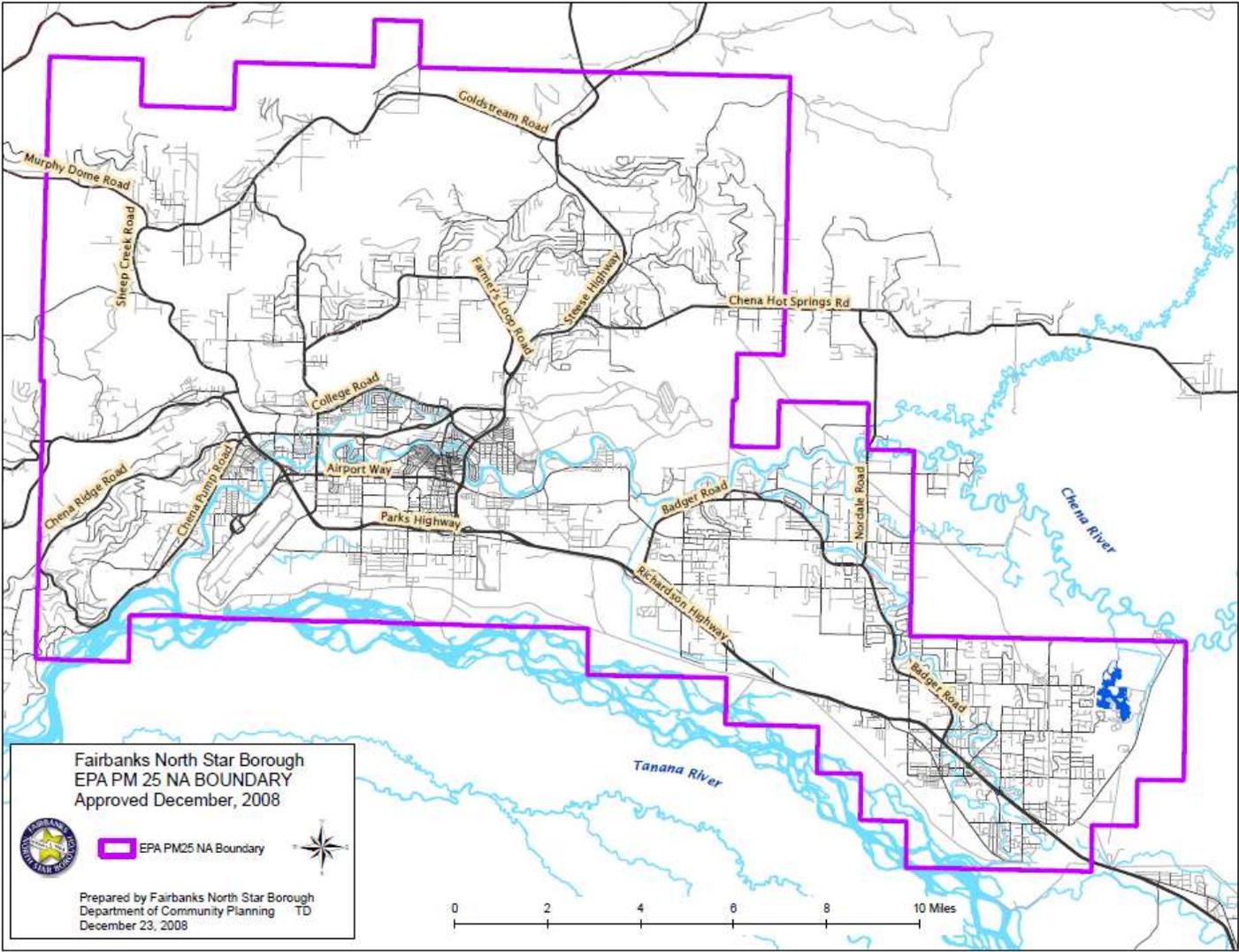
## **Voluntary Wood Stove Change-Out Funding**

The Fairbanks North Star Borough is requesting \$5,000,000 from the state to accelerate the voluntary wood stove change-out program and address a significant source of PM<sub>2.5</sub> emissions in the FNSB non-attainment area. The FNSB provided \$1,000,000 in funding from its general funds for the voluntary wood stove change out program this fiscal year in an effort to reduce PM<sub>2.5</sub> emissions in the non-attainment area. This program has been extremely successful and the FNSB will use up the funding by December 2010.

In 2008, the Environmental Protection Agency listed portions of the FNSB as a non-attainment area for PM<sub>2.5</sub> emissions. . As a result of the EPA listing portions of the FNSB as being in non-attainment for PM<sub>2.5</sub> emissions, the State of Alaska, the Borough, and the EPA are collaborating to identify sources of PM<sub>2.5</sub> emissions, work to minimize those emissions, and ensure attainment. Wood stoves and boilers are significant sources of PM<sub>2.5</sub> emissions, and recent studies completed by the Borough show that over 20% of homes located in the Borough's "urban core" use wood stoves as their primary winter heat source and roughly 80% use wood stoves as their secondary heat sources. Roughly half of these stoves are inefficient, polluting, and non-EPA certified wood stoves

State funding is sought to replace these out-of-date, inefficient, and polluting wood stoves with more efficient, EPA-certified models. A survey of home heating practices in the Fairbanks bowl conducted in 2005 estimates 9500 homes in the Fairbanks bowl use woodstoves as their primary heat source in the winter. From this same survey it is estimated that over half of these stoves are older non-EPA certified models. The Borough plans to replace 5300 woodstoves and outdoor boilers over the life of the program.

The EPA has found that upgrading wood stoves with EPA-certified wood stoves increases energy efficiency by 50%, stoves use 1/3 less wood, and PM 2.5 emissions are reduced by 55-70%. Additionally, the EPA notes that changing out one inefficient wood stove has the same reductions of PM 2.5 emissions as taking five diesel buses off the road.





## FNSB Air Quality Improvement Program 2010 APPLICANT INSTRUCTIONS

(Revised 8-30-10)

Fairbanks North Star Borough (FNSB) area residents can make a clean air choice and save money! The Air Quality Improvement Program (AQIP) is offering a reimbursement incentive for removing a solid fuel burning device (SFBD), replacing an unqualified SFBD with a Borough-qualified SFBD or repairing a Borough-qualified SFBD. A SFBD is defined as a wood or coal stove; wood or coal-fired furnace; or wood, pellet, or coal-fired hydronic heater.

1. Fill out the Pre-application Questionnaire to determine if you meet the basic eligibility requirements. This form is an informational tool and does not need to be submitted.
2. Applications are available at our office at 3175 Peger Road, or online at [www.fnsb.us/airquality](http://www.fnsb.us/airquality). They can be mailed or delivered to: FNSB Air Quality Improvement Program (AQIP) 3175 Peger Road, Fairbanks, AK 99709. You must fill out the application in its entirety, including the W-9. Applications that are incomplete and/or not signed will not be accepted. NOTE: All information is subject to public disclosure.
3. AQIP staff will review applications to ensure all eligibility requirements are met.
4. If eligible, you will be instructed to make an appointment with AQIP for a pre-verification of the device. A visual determination will be made that the device meets the program requirements, and pictures of the device will be taken for our records and used throughout the verification process. A Pre-Verification certificate may be issued. **DO NOT REMOVE YOUR DEVICE PRIOR TO THE PRE-VERIFICATION PROCESS.**
5. Upon passing the pre-verification process, you will be given a Deed Restriction form (for REMOVAL AND REPLACEMENT programs only) that you will need to sign and submit to AQIP. The Deed Restriction is a signed, recordable document restricting future installations of SFBDs (for REMOVAL program) or non-qualifying SFBDs (for REPLACEMENT program), which requires notice in a Seller's Disclosure Statement for future sales of the real property.
6. Upon completion of the pre-verification process, your application will be given a priority ranking by the AQIP staff. Funds are to be distributed to higher priority applicants first, in order of first come, first served. Applicants with lower scores will be waitlisted, if funding becomes limited. Waitlisted applications will be rescored every 90 days until funds are exhausted.
7. If you receive a priority ranking and funding is authorized, AQIP will notify you by mail with instructions on how to proceed. You will receive a copy of the authorization indicating the maximum amount you have been authorized to receive. You will have 90 days from the date of the authorization in which to comply with **ALL** program requirements in order to receive your reimbursement. The steps taken depend upon which one of the programs you apply for, see below.
  - a. REPLACEMENT PROGRAM – If you want to replace your unqualified SFBD with a Borough-qualified SFBD.
    - i. Call AQIP to schedule an appointment to deliver the old device to the AQIP office. A Borough representative will ensure the device is the same one from the pre-verification

process (ie check pictures and/or serial numbers provided by AQIP). You will be issued a Certificate of Destruction.

- ii. Purchase your new device. Sign the Notice of Restrictions provided by the vendor. You are responsible for ALL payments to the vendor as per the terms of the sales contract. If you do not purchase your device from a local vendor, contact AQIP for the Notice of Restrictions form.
  - iii. After the device has been installed, call AQIP to schedule an appointment for a post-verification of the device. A visual verification will be made that the device is Borough-approved, and that it has been installed in the same residence from which the old device had been removed. You will be presented with a Sworn Statement to sign, in which you represent that you are complying with the terms of the program.
  - iv. Once AQIP has all of the necessary paperwork (application, W-9, Verification Certificate (all sections), Deed Restriction, Certificate of Destruction, Notice of Restrictions, original receipt(s) indicating a device and/or chimney hardware was purchased), a check will be mailed to you for the applicable amount, and if applicable, you will receive a credit on your property tax bill. The Deed Restriction will be recorded at this time.
- b. REPAIR PROGRAM – If you want to repair your Borough-approved SFBD.
- i. Submit a quote of the necessary repairs to AQIP.
  - ii. AQIP will verify that the quote meets the program requirements, and instruct you to proceed with the purchase and installation of the new hardware. You will also be given a Notice of Restrictions acknowledgment form to sign.
  - iii. Purchase and install the hardware.
  - iv. Once AQIP has all of the necessary paperwork (application, W-9, Verification Certificate (pre-verification section only), Quote, Notice of Restrictions, original receipt(s) for hardware purchased) a check will be mailed to you for the applicable amount.
- c. REMOVAL PROGRAM – If you want to remove your SFBD and heat your home with an acceptable alternative.
- i. Call AQIP to schedule an appointment to deliver the old device to the AQIP office to be destroyed. A Borough representative will ensure the device is the same one from the pre-verification process (ie check pictures and/or serial numbers provided by AQIP). You will be issued a Certificate of Destruction.
  - ii. Once AQIP has all of the necessary paperwork (application, W-9, Verification Certificate (pre-verification section only), Deed Restriction, and Certificate of Destruction) a check will be mailed to you for the applicable amount, and you will receive a credit on your property tax bill. The Deed Restriction will be recorded at this time.

**FNSB Air Quality Improvement Program  
2010-2011 PRE-APPLICATION QUESTIONNAIRE**

(Revised 7-29-10)



Fairbanks North Star Borough (FNSB) area residents can make a clean air choice and save money! The Air Quality Improvement Program (AQIP) is offering a monetary incentive for removing, replacing or repairing your older, non-certified solid fuel burning device (SFBD).

Below are several questions that outline the basic qualifying criteria as outlined by FNSB Ordinance 2010-28. If you answer "NO" to any of the questions, you may not qualify for the program. This questionnaire is an informational tool only, designed to help expedite the application process. You do NOT need to turn this form in with the application.

	YES	NO
1. Do you live within the PM2.5 non-attainment boundary? (see map....) ** If NO - Only those living within the boundaries of the non-attainment area are eligible for the program.	<input type="checkbox"/>	<input type="checkbox"/>
2. Are you the legal owner of the property in question? ** If NO - The program is limited to the legal homeowner of the residence in question. Renters are not eligible to apply on behalf of the landlord.	<input type="checkbox"/>	<input type="checkbox"/>
3. Is this your primary residence? ** If NO - You must reside in the residence for which you are applying. Rental and other commercial properties are not eligible.	<input type="checkbox"/>	<input type="checkbox"/>
4. Are you up-to-date on your property taxes? ** If NO - If there are problems regarding your property taxes, you will not be eligible for the program.	<input type="checkbox"/>	<input type="checkbox"/>
5. Are you removing, repairing, or replacing a solid fuel burning device? ** If NO - Only solid fuel burning devices, as defined by the FNSB are eligible for the program. As per the Borough's definition, solid fuel burning devices include, but are not limited to: wood stoves, coal stoves, wood or pellet-fired hydronic heaters, wood-fired furnaces, coal-fired hydronic heaters, and coal-fired furnaces. Excluded from the definition are: masonry heaters, pellet stoves, cook stoves, and fireplaces.	<input type="checkbox"/>	<input type="checkbox"/>
6. Are you willing to comply with the destruction requirements of the device as outlined in the ordinance? ** If NO - If you are removing or replacing your device, you will have to take the appliance to the Borough landfill to be destroyed.	<input type="checkbox"/>	<input type="checkbox"/>
<b>FOR REMOVAL PROGRAM ONLY</b>		
7. Do you only have the one SFBD? ** If NO - If you have more than one SFBD, you may still qualify for the program; however, you will be required to remove all SFBDs in order to qualify for the program.	<input type="checkbox"/>	<input type="checkbox"/>

**FNSB Air Quality Improvement Program  
2010-2011 APPLICATION FORM**

(Revised 8-27-10)



Fairbanks North Star Borough area residents can make a clean air choice and save money! The Air Quality Improvement Program (AQIP) is offering a reimbursement incentive for removing, replacing or repairing your solid fuel burning device (SFBBD) (i.e. wood or coal stoves; wood or coal-fired furnaces; wood, pellet, or coal-fired hydronic heaters).

**Complete all sections of this application and retain a copy for your records.** AQIP is not responsible for materials lost in the mail. Applications are processed in the order received. Applications will be given priority ratings, with higher scoring applications receiving funding first. Funding is limited and not guaranteed unless an authorization has been issued. **PLEASE NOTE:** All information is subject to public disclosure.

Name of Legal Property Owner: \_\_\_\_\_ Best Daytime Phone Number: \_\_\_\_\_

Physical Address, City, Zip: \_\_\_\_\_ Neighborhood (if known): \_\_\_\_\_

Is address listed above your primary residence?  Yes  No

Mailing Address (if different from above): \_\_\_\_\_

E-mail (if applicable): \_\_\_\_\_

Are you current on your property taxes?  Yes  No

Type of Current Device: (check one)

- Wood Stove
- Coal Stove
- Outdoor Hydronic Heater
- Other Solid Fuel Burning Device

Explain: \_\_\_\_\_

Make/Model: \_\_\_\_\_

Choose one program below that you are interested in:

Removal:  Hydronic Heater (up to \$7,500)  
 Other SFBBD (up to \$2,500)

Replacement:  Hydronic Heater (up to \$2,500)  
 Other SFBBD (up to \$2,500)

Repair:  Catalytic Converter (up to \$750)  
 Other Emissions-Reducing Component (up to \$750)  
 Chimney Repair/Extension (up to \$750)

**OPTIONAL INFORMATION**

1. How many days/week do you burn during the winter season?  1-3 days  3-5 days  5-7 days  Weekends Only
2. In a typical season, how much solid fuel (ie wood or coal) do you use? \_\_\_\_\_ Cords/Tons |  Don't Know
3. How did you hear about the program?  TV  Radio  Newspaper  Retailer  Web  Neighbor
4. Why are you applying?  Not satisfied with device  Remodeling  Reduce Pollution  Save Money
5. Was the reimbursement a significant factor in replacing your device?  Yes  No  Somewhat
6. Are you interested in the voluntary FNSB Air Quality Educational program?  Yes  No

**PROGRAM TERMS: IMPORTANT! Please read terms carefully. By applying, you are representing and agreeing to the following provisions:**

1. I am the legal owner of a residence in the Fairbanks North Star Borough PM2.5 non-attainment area.
2. I represent that the address listed above is my primary residence.
3. I have a fully operational, solid fuel burning device (SFBBD) in my primary residence.
4. I understand that monies and/or tax credits received are considered taxable income and that I must fill out a W-9 in order to receive payment from the Borough.
5. I understand that I will be ineligible for the program if I have delinquent property tax or penalty or interest owed.
6. I agree to allow a Borough-approved verifier perform physical pre-and post-verifications at my residence, as needed.
7. I agree to take my old SFBBD to a decommissioning station to receive a Certificate of Destruction, if required.
8. I understand that existing gas devices, furnaces, fireplaces and pellet stoves do not qualify under this program.

9. I understand that applications are processed in the order received. A scoring process will determine priority of fund distributions. Funding is limited, therefore reimbursement incentives are not guaranteed.
10. I understand that if I qualify, I will receive an instruction packet and authorization, and I will have only 90 days to complete all of the program requirements.
11. I understand that I am responsible for paying all upfront costs that might be associated with either removing my device or purchasing and installing a new device or hardware, and that I will be required to submit any original receipts from such activities to AQIP.
12. I understand that the FNSB does not warranty any devices, components or repairs reimbursed under this Air Quality Improvement Program.
13. I understand that even though I might be purchasing or repairing a Borough approved SFBD, that I am still held to the standards set forth in the FNSB Air Quality nuisance policy.

By signing below acknowledge that I understand, accept and will abide by the program terms outlined above.

Printed Name: \_\_\_\_\_ Date \_\_\_\_\_

Signature: \_\_\_\_\_

Mail or bring completed and signed application packet to:

FNSB Air Quality Improvement Program 3175 Peger Road Fairbanks, Alaska 99709  
 Phone: (907) 459-1005 Fax: (907) 459-1006

**\*\* PLEASE ALLOW 3-4 WEEKS FOR PROCESSING \*\***

FOR OFFICE USE ONLY

Date/Time Received: \_\_\_\_\_ Received by: \_\_\_\_\_

Priority Ranking: \_\_\_\_\_ Entered into database on \_\_\_\_\_ by \_\_\_\_\_



FNSB Air Quality Improvement Program

NOTICE OF RESTRICTIONS FOR SOLID FUEL BURNING DEVICES IN THE FNSB NON-ATTAINMENT AREA

On June 10, 2010, the Fairbanks North Star Borough (FNSB) adopted Ordinance No. 2010-28, which created, in part, guidelines and restrictions on the installation and operation of solid fuel burning devices (SFBDs) in the FNSB non-attainment area (see Figure 1) for reducing fine particulate pollution (PM<sub>2.5</sub>), in order to bring the Borough into compliance with Environmental Protection Agency (EPA) standards and to generally create a more healthful environment for Borough residents.

In order to meet the emission limits and standards imposed by the EPA, only Borough-approved SFBDs will be allowed to be installed in the non-attainment area. Only clean wood (natural wood that has not been painted, varnished or coated with a similar material, has not been treated with preservatives, and does not contain resins or glues as in plywood or other composited wood products) will be allowed to be burned in a wood burning appliance. After September 1, 2011, no person shall cause, permit, or allow the emission from a SFBD in the non-attainment area to create opacity greater than 50 percent for a period of more than 15 minutes in any hour except during the initial 20 minutes after firing a cold unit (see FIGURE 2).

The following fuels are PROHIBITED in the non-attainment area: any wood that does not meet the definition of clean wood and, after September 1, 2011, has more than 20% moisture content, garbage, tires, materials containing plastic or rubber, waste petroleum products, paints and paint thinners, chemicals, glossy or colored papers, construction and demolition debris, plywood, particleboard, saltwater driftwood, manure, animal carcasses, or asphalt products.

The installation of SFBDs may not be appropriate in some areas due to terrain, meteorological conditions, or other relevant conditions that render the operation of the appliance a nuisance. Emissions from SFBD are not allowed to impact the resident(s) of an adjacent property through the creation of an emissions plume that: (1) crosses the adjacent property line; (2) is observable using EPA method 22 (40 CFR 60 Appendix A); or (3) is 175 micrograms per hour greater than the surrounding neighborhood background PM<sub>2.5</sub> levels. Even when an appliance is otherwise legally installed and operated in accordance with the manufacturer's specifications, it is your responsibility to operate any SFBD in a manner that does not create a nuisance.

The installation of Hydronic heaters (fuel burning appliances designed to (1) burn wood or other solid fuels; and (2) heat building space and/or domestic hot water via the distribution, typically through pipes, of a fluid heated in the appliance) is not permitted on lots of less than 80,000 square feet (or approximately 1.83 acres). No installation is allowed within 50 feet of an adjacent property line or 70 feet of any habitable structure that is not served by the appliance. Stack heights must extend two feet higher than the roof line of any then existing residence located within 140 feet of the appliance (see FIGURE 3). Variances may be granted on a case-by-case basis by the Air Pollution Control Commission; for an appointment contact FNSB Air Quality at (907) 459-1005.

The Borough offers a variety of solid fuel burning educational programs, which may include: informational packets, workshops, and demonstrations. Participation in such programs is voluntary.

If at any time you have questions or concerns, please contact FNSB Air Quality at (907) 459-1005 or visit [www.fnsb.us/airquality](http://www.fnsb.us/airquality).

By signing below I confirm that I have received and read the above notice.

PRINTED NAME

SIGNATURE

DATE

I would like to participate in the Borough's voluntary educational program YES  NO

E-MAIL ADDRESS

MAILING ADDRESS

PHONE NUMBER