



Fueling Communities into the Future: A Survey of Firewood Banks To Identify Strengths, Weaknesses, Opportunities, and Threats To Organizational Sustainability

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Supplement 3. Complete survey results. Sections follow survey instrument sections (see Supplement 2).

General Structure and Organization

Table S1. Which, if any, larger assistance group(s) is the firewood bank associated with? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Other (please specify)	37.2 (16)	62.8 (27)
Food bank	19.3 (11)	80.7 (46)
Heating fuel assistance group	17.5 (10)	82.5 (47)
Clothing bank	3.6 (2)	96.4 (53)

Table S2. Please identify all stakeholders that contribute financial resources to your firewood bank operation. Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Private citizen(s)	81.4 (48)	18.6 (11)
Corporations(s)/Private business	31.6 (18)	68.4 (39)
Civic organization(s)	31.5 (17)	68.5 (37)
Other (please specify):	43.6 (17)	56.4 (22)
Federal agency	28.3 (15)	71.7 (38)
Private arborist(s)/Contractor(s)	22.6 (12)	77.4 (41)
Municipality	13.2 (7)	86.8 (46)
State agency	9.3 (5)	90.7 (49)
Professional association	7.5 (4)	92.5 (49)
Cooperative Extension	1.9 (1)	98.1 (52)

Table S3. How would you best describe your firewood bank? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Nonprofit (501(c)3)	76.9 (50)	23.1 (15)
Local/community group	80 (44)	20 (11)
Faith organization	55.4 (31)	44.6 (25)
Tribal group	10.2 (5)	89.8 (44)
Municipality	8 (4)	92 (46)
Other (please specify):	12.5 (3)	87.5 (21)
For-profit company	0 (0)	100 (48)

Table S4. Who else is involved with the firewood bank? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Volunteers from the community	81.3 (52)	18.8 (12)
Volunteers from the church	70 (42)	30 (18)
Volunteers from local high schools	40.7 (24)	59.3 (35)
Youth from other groups	38.6 (22)	61.4 (35)
Volunteers from local colleges	25.5 (14)	74.5 (41)
Other (please specify):	27.8 (10)	72.2 (26)
Inmates	10.9 (6)	89.1 (49)

Table S5. What geographical area does the firewood bank serve? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Our town	89.1 (57)	10.9 (7)
Neighboring towns	76.7 (46)	23.3 (14)
Our county	65.5 (38)	34.5 (20)
Neighboring counties	25 (13)	75 (39)
Our reservation	18.9 (10)	81.1 (43)

Table S6. Region firewood bank respondents are located in. Percent of respondents in each region, with number of respondents in parentheses.

Region	Percent
East	53.8 (35)
West	41.5 (27)
Canada	4.6 (3)

Table S7. Additional general structure and organization questions. Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Question	Variable/Key	Yes	No
Does your firewood bank typically utilize volunteers?	Yes/no	92.3 (60)	7.7 (5)
Does your firewood bank typically have paid staff?	Yes/no	13.8 (9)	86.2 (56)
Is this firewood bank associated with a Tribal government?	Yes/no	6.2 (4)	93.8 (61)
Does anyone in your group consult with any other firewood banks to develop and improve your firewood bank?	Yes/no	28.6 (18)	71.4 (45)

Table S8. Information on number of volunteers, volunteer hours worked, paid staff members, and staff hours worked.

Question	Mean	Median	Min	Max	
How many total volunteers do you have in a typical year?	46.0	22.5	7	2.5	400.
In a typical year, how many hours do volunteers contribute each week, on average?	13.9	5.0	4	0.2	100.
How many paid staff members do you have in a typical year?	4.8	1.0	6.8	1.0	20.0
In a typical year, how many total hours does your paid staff work each week, on average?	15.4	15.0	9	1.5	30.0

Financial

Table S9. How does the firewood bank receive funding? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Financial donation(s)	81.0 (47)	19.0 (11)
Grant(s)	57.9 (33)	42.1 (24)
Fundraising	46.9 (23)	53.1 (26)
Other (please specify):	58.3 (21)	41.7 (15)

Table S10. What has the firewood bank used its grant money for, if it has received any? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
To buy equipment	65.3 (32)	34.7 (17)
To buy fuel for equipment	39.6 (19)	60.4 (29)
To build wood storage	34.1 (15)	65.9 (29)
The firewood bank has not received grant money	30.4 (14)	69.6 (32)
To buy log length wood	22.2 (10)	77.8 (35)
Other (please specify):	15.4 (6)	84.6 (33)
To fund a paid position	11.6 (5)	88.4 (38)
To buy already split firewood	4.5 (2)	95.5 (42)

Table S11. If the firewood bank has received a grant in the past, what was the grant amount? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
\$10,000 - \$14,999	35.4 (17)	64.6 (31)
The firewood bank has not received grant money	33.3 (16)	66.7 (32)
\$5,000 - \$9,999	25.5 (12)	74.5 (35)
\$1,000 - \$4,999	27.3 (12)	72.7 (32)
\$20,000 or more	14.6 (6)	85.4 (35)
Less than \$1,000	9.3 (4)	90.7 (39)
\$15,000 - \$19,999	4.9 (2)	95.1 (39)

Firewood Recipients

Table S12. How is it determined who gets wood? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
People who ask for wood	78.0 (46)	22.0 (13)
People that we know of in the community who need assistance	75.0 (45)	25.0 (15)
People who apply and are approved	60.3 (35)	39.7 (23)
People who apply and are approved	61.8 (34)	38.2 (21)
Other (please specify):	22.9 (8)	77.1 (27)

Table S13. Which of the following conditions or qualifications, if any, must the firewood bank recipients meet in order to receive wood? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Wood used for home heating only (as opposed to saunas or other uses)	66.7 (42)	33.3 (21)
Age of recipient (for example, children or aging adults)	39.3 (24)	60.7 (37)
Income of recipient	40.0 (24)	60.0 (36)
There are no criteria or qualifications a recipient needs to meet to get wood	50.0 (23)	50.0 (23)
Health of the recipient	33.3 (20)	66.7 (40)
Year-round resident	26.8 (15)	73.2 (41)
Other (please specify):	27.3 (12)	72.7 (32)
Veteran	14.3 (8)	85.7 (48)

Table S14. How, if at all, do you promote the firewood bank and its services to potential recipients? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Word of mouth	98.4 (62)	1.6 (1)
Website	65.6 (40)	34.4 (21)
Social media (ex. Facebook, Twitter, Instagram)	56.7 (34)	43.3 (26)
Newspaper articles	57.9 (33)	42.1 (24)
Newsletter	37.5 (21)	62.5 (35)
Other (please specify)	26.8 (11)	73.2 (30)
Television station	14.3 (8)	85.7 (48)
Radio	13.0 (7)	87.0 (47)

Wood Sources

Table S15. What geographical area does the firewood come from? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Town where the firewood bank is located	86.4 (51)	13.6 (8)
Our county	76.3 (45)	23.7 (14)
Neighboring towns	72.4 (42)	27.6 (16)
Neighboring counties	32.7 (18)	67.3 (37)
Our state	18.5 (10)	81.5 (44)
Our reservation	9.6 (5)	90.4 (47)
Neighboring states	7.4 (4)	92.6 (50)

Table S16. Where does the wood originate? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Wood donations from community members	89.8 (53)	10.2 (6)
Wood donations from tree cutting companies, forestry/logging companies, or sawmills	73.7 (42)	26.3 (15)
Wood donations from contractors who are clearing land for development	55.4 (31)	44.6 (25)
Wood donations from town, county or state land	38.6 (22)	61.4 (35)
Roadside trees	35.8 (19)	64.2 (34)
Purchased log lengths of wood	34.6 (18)	65.4 (34)
Wood donations from Federal land	16.4 (9)	83.6 (46)
Purchased split firewood	12.7 (7)	87.3 (48)
Wood donations from power/light companies	13.0 (7)	87.0 (47)
Wood donations from a conservation committee	7.1 (4)	92.9 (52)
Other (please specify)	8.1 (3)	91.9 (34)
Wood donations from Tribal lands	3.6 (2)	96.4 (53)

Table S17. Does the firewood bank regularly use any of the following wood parts? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Tree stems (trunks)	87.1 (54)	12.9 (8)
Tree limbs	77.8 (49)	22.2 (14)
Wood scraps	35.6 (21)	64.4 (38)
Wood slabs	18.6 (11)	81.4 (48)
Bark	17.5 (10)	82.5 (47)
Tree stumps	16.1 (9)	83.9 (47)
Wood chips	11.9 (7)	88.1 (52)
Wood shavings	5.2 (3)	94.8 (55)
Millings	3.4 (2)	96.6 (56)
Sawdust	3.5 (2)	96.5 (55)
Wood residue	1.8 (1)	98.2 (56)

Table S18. Additional Wood Source questions. Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Question	Yes	No
Does the firewood bank regularly use wood from insect-damaged standing dead or fallen trees?	61.2 (30)	38.8 (19)
Does the firewood bank transport wood across county or state lines?	16.9 (11)	83.1 (54)

Wood Processing and Storage

Table S19. Information on amount of wood processed, number of cords on hand, number of cords stored per year.

Question	Mea n	Media n	SD	Mi n	Max
Approximately how much wood do you process in a typical year?	102.6	42.5	141. 0	3.5	825. 0
Approximately how many cords of wood do you aim to keep on hand in a typical year?	69.3	16.5	142. 3	0.0	825. 0
Approximately how many cords of wood can you provide dry storage for?	42.2	14.0	53.6	2.5	200. 0

Table S20. Which of the following activities, if any, does the firewood bank help with? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Other (please specify)	17.8 (8)	82.2 (37)
Distribute smoke alarms (Yes/no)	8.1 (5)	91.9 (57)
Stove change outs (Yes/No)	8.3 (5)	91.7 (55)
Chimney cleaning (Yes/no)	8.1 (5)	91.9 (57)
Providing wood pellets (Yes/no)	6.7 (4)	93.3 (56)
Chimney repair (Yes/no)	6.6 (4)	93.4 (57)
Woodstove installation (Yes/no)	3.3 (2)	96.7 (58)
Woodstove repair (Yes/no)	3.4 (2)	96.6 (57)
Distribute smoke alarm batteries (Yes/no)	3.3 (2)	96.7 (59)

Table S21. Which of the following activities does the firewood bank (or parent organization) regularly perform? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Splitting wood (Yes/no)	95.3 (61)	4.7 (3)
Stacking wood at the firewood bank (Yes/no)	92.1 (58)	7.9 (5)
Cutting logs to length (Yes/no)	90.6 (58)	9.4 (6)
Delivering firewood (Yes/no)	92.1 (58)	7.9 (5)
Drying/seasoning wood (Yes/no)	87.3 (55)	12.7 (8)
Stacking wood at recipients' homes (Yes/no)	57.4 (35)	42.6 (26)
Cut down trees (Yes/no)	33.3 (20)	66.7 (40)

Table S22. Where does the wood processing occur? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Volunteer's property	48.2 (27)	51.8 (29)
Church's property	29.3 (17)	70.7 (41)
Non-profit's property	23.7 (14)	76.3 (45)
Municipal land	14.0 (8)	86.0 (49)
Transfer station	12.7 (7)	87.3 (48)
Other (please specify):	17.1 (7)	82.9 (34)
Commercial property	10.9 (6)	89.1 (49)
Tribal land	8.9 (5)	91.1 (51)
Firewood not processed by the firewood bank (Not applicable)	7.4 (4)	92.6 (50)
State property	1.8 (1)	98.2 (54)

Table S23. What time of year does the firewood bank process wood? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Fall	95.1 (58)	4.9 (3)
Spring	80.3 (49)	19.7 (12)
Summer	72.1 (44)	27.9 (17)
Winter	69.5 (41)	30.5 (18)
Sporadically, whenever wood becomes available	67.4 (29)	32.6 (14)

Table S24. Where does the wood storage occur? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Volunteer's property	43.6 (24)	56.4 (31)
Non-profit's property	27.6 (16)	72.4 (42)
Church's property	28.1 (16)	71.9 (41)
Municipal land	16.1 (9)	83.9 (47)
Tribal land	13.0 (7)	87.0 (47)
Transfer station	10.9 (6)	89.1 (49)
Commercial property	11.1 (6)	88.9 (48)
Other (please specify):	11.1 (4)	88.9 (32)
State property	1.9 (1)	98.1 (53)
Firewood not processed by the firewood bank (Not applicable)	0 (0)	100.0 (46)

Table S25. Additional wood processing and storage questions. Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Question	Yes	No
Does the firewood bank process and distribute all wood available?	52.3 (34)	47.7 (31)
Does the firewood bank dry the wood before distributing it (drying the wood is also known as seasoning or curing)?	91.5 (43)	8.5 (4)
Does the firewood bank have access to a woodshed or other dry storage?	38.5 (25)	61.5 (40)

Wood Distribution

Table S26. Information on amount of wood given away, amount of wood per recipient, and number of households provided for per year.

Question	Mean	Median	SD	Min
Approximately how much total wood do you give away in a typical year?	97.2	40.0	127.1	3.5
Approximately how much wood do you give out to each recipient in a typical year?	3.3	1.5	7.2	0.3
Approximately how many households do you provide wood to in an average year?	80.7	37.5	170.1	2.0

Table S27. How is the wood distributed to firewood bank recipients? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Delivered to the recipient	95.1 (58)	4.9 (3)
Picked up from a central location by the recipient	63.9 (39)	36.1 (22)
Other (please specify):	0.0 (0)	100.0 (37)

Table S28. Additional wood distribution questions. Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Question	Yes	No
Do you allow recipients to receive more than one delivery/pick up?	96.4 (54)	3.6 (2)

Equipment and Safety

Table S29. What, if any, safety equipment is available for the volunteers from the firewood bank? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Gloves	77.4 (48)	22.6 (14)
Ear protection	75.4 (46)	24.6 (15)
Eye protection	71.0 (44)	29.0 (18)
Chainsaw chaps	65.0 (39)	35.0 (21)
Hard hat	51.7 (30)	48.3 (28)
Other (please specify):	41.4 (12)	58.6 (17)

Table S30. Please review the list of equipment below and let us know if the firewood bank owns that piece of equipment, if it borrows the equipment, if the firewood bank does not have it but needs it, and if the bank does not have it and does not need it. Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

	Own	Borrow	Need	Borrow and Need	No need
Splitters	67.6 (50)	25.7 (19)	4.1 (3)	1.4 (1)	1.4 (1)
Gas powered chainsaws	55.9 (38)	32.4 (22)	4.4 (3)	1.5 (1)	5.9 (4)
Trailers	45.5 (30)	30.3 (20)	9.1 (6)	0.0 (0)	15.2 (10)
Pickup trucks	29.7 (19)	50.0 (32)	14.1 (9)	0.0 (0)	6.3 (4)
Tractors	23.8 (15)	17.5 (11)	12.7 (8)	0.0 (0)	46.0 (29)
Conveyer belts	22.0 (13)	3.4 (2)	20.3 (12)	0.0 (0)	54.2 (32)
Dump trucks	20.3 (13)	18.8 (12)	23.4 (15)	0.0 (0)	37.5 (24)
Processor	13.6 (8)	8.5 (5)	30.5 (18)	0.0 (0)	47.5 (28)
4wheelers	10.5 (6)	8.8 (5)	10.5 (6)	0.0 (0)	70.2 (40)
Other (please specify)	10.0 (2)	0.0 (0)	15.0 (3)	0.0 (0)	75.0 (15)
Frontend loaders	8.5 (5)	8.5 (5)	20.3 (12)	0.0 (0)	62.7 (37)
Electric chainsaws	7.0 (4)	7.0 (4)	7.0 (4)	0.0 (0)	78.9 (45)
Skid steers	6.5 (4)	12.9 (8)	21.0 (13)	1.6 (1)	58.1 (36)
Backhoes	0.0 (0)	5.1 (3)	13.6 (8)	0.0 (0)	81.4 (48)

Table S31. What does the firewood bank do for equipment repair or maintenance? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Volunteers fix equipment/maintenance	82.3 (51)	17.7 (11)
Volunteers pay for equipment repair/maintenance	62.1 (36)	37.9 (22)
Applies grant money for equipment repair/maintenance	30.0 (18)	70.0 (42)
Other (please specify):	34.3 (12)	65.7 (23)
The church pays for equipment repair/maintenance	15.5 (9)	84.5 (49)
The tribe pays for equipment repair/maintenance	5.2 (3)	94.8 (55)
The town pays for equipment repair/maintenance	1.7 (1)	98.3 (58)

Table S32. Additional equipment and safety questions. Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Question	Yes	No
Do volunteers sign a waiver before they work at the firewood bank?	54.4 (31)	45.6 (26)
Have any firewood bank volunteers ever been injured while working with the firewood bank?	46.7 (28)	53.3 (32)
Does the firewood bank, or your parent organization, have casualty/liability insurance?	79.4 (50)	20.6 (13)

Table S33. Please indicate your level of concern about the following barriers to your firewood bank’s long-term sustainability in the community. Percent of respondents who answered Concern or Great Concern, with the number of respondents in parentheses.

Variable/Key	Yes	No
Lack of volunteers for wood delivery (Concern or great concern)	50.8 (33)	49.2 (32)
Lack of volunteers for wood processing (Concern or great concern)	49.2 (32)	50.8 (33)
Lack of leadership in the future (Concern or great concern)	41.5 (27)	58.5 (38)
Lack of money (Concern or great concern)	40.0 (26)	60.0 (39)
Lack of volunteers for administrative work (Concern or great concern)	32.3 (21)	67.7 (44)
Lack of equipment (Concern or great concern)	27.7 (18)	72.3 (47)
Low wood supply (Concern or great concern)	20.0 (13)	80.0 (52)
Lack of a place to store wood (Concern or great concern)	16.9 (11)	83.1 (54)
Lack of a place to process wood (Concern or great concern)	7.7 (5)	92.3 (60)

Table S34. What types of information, if any, would be useful to your firewood bank? Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Variable/Key	Yes	No
Information about available grants	76.2 (48)	23.8 (15)
Information about how other firewood banks operate	67.2 (41)	32.8 (20)
Information about regional wood donors	57.6 (34)	42.4 (25)
Information about liability waivers	43.3 (26)	56.7 (34)
Information about safety equipment	36.2 (21)	63.8 (37)
Information about seasoning firewood	34.5 (20)	65.5 (38)
Information about liability insurance	32.2 (19)	67.8 (40)
Information about becoming a non-profit	8.6 (5)	91.4 (53)

Table S35. Additional community and future questions. Percent of respondents who answered Yes or No, with the number of respondents in parentheses.

Question	Variable/Key	Yes	No
Is there additional need in the community beyond the capacity of the firewood bank?	Yes/no	82.5 (33)	17.5 (7)
How, if at all, has demand for firewood changed in the last five years?	Increased demand	63.1 (41)	36.9 (24)
Does the firewood bank have plans to stay in the community over the next 10 years?	Yes/no	98.4 (62)	1.6 (1)
How interested, if at all, is your firewood bank in being a part of a network of firewood banks?	Interested or very interested	60.0 (39)	40.0 (26)
Would your firewood bank like to expand if you had the resources?	Yes/no	77.8 (49)	22.2 (14)