



April 18, 2014

MEMORANDUM

To: Patricia Farrell, City of Salem Public Works Department
From: Gretchen Greene and Maitri Dirmeyer
Subject: North Santiam Spill Response Survey Results

Purpose

The North Santiam Watershed Council, the City of Salem, and Marion County developed a survey to understand the roles, responsibilities, and level of preparedness within the multiple agencies or organizations that are involved in spill response. This information will be used to begin a dialogue about increased coordination, equipment availability and sharing, training, and understanding each other's roles and responsibilities in the event of a spill or contamination of the North Santiam River. The results of the survey will be presented at the North Santiam Watershed Summit on April 18, 2014.

We received 26 responses from 19 different agencies or organizations including:

- BLM
- City of Gates
- City of Salem
- City of Stayton
- DEQ
- Gates RFPD
- Jefferson Fire District
- Marion County
- Norpac Foods
- ODF
- ODOT
- OWRD
- Salem Hospital
- Stayton Fire District
- SWCD
- US Forest Service
- USACE, and
- USGS

Agency Abbreviations:

- BLM-Bureau of Land Management
- DEQ- Oregon Department of Environmental Quality
- Gates RFPD- Gates Regional Fire Police District
- ODF- Oregon Department of Forestry
- ODOT- Oregon Department of Transportation
- OEM- Office of Emergency Management
- OR Water/Wastewater Agency Response Network (ORWARN)
- OWRD- Oregon Water Resources Department
- Salem- City of Salem
- SWCD- Santiam Water Control District
- USACE- United States Army Corp of Engineers
- USFS- United States Forest Service
- USGS- United States Geological Survey

Survey Overview

- Agency/Organizational Roles are covered in Question 1-6.
- Spill Response Responsibilities are covered in Question 7-8.
- Levels of Preparedness in case of a spill are covered in Question 9-16.

Key Findings

- 56% of respondents have responsibility to respond to spills in the North Santiam.
- 45% of respondents have jurisdiction to respond to spills in Marion County.
- 60% of respondents have Awareness Level Emergency Response Training.
- 56% of respondents have On Scene Incident Command Training.
- 52% of respondents have Operations Level Emergency Response Training.
- 65% of respondents have an emergency or spill response plan and can provide a copy.
- 50% of respondents might participate in a North Santiam Spill Response Team.
- 44% of respondents would consider loaning equipment or resources during a spill.
- 45% of respondents have an updated inventory of spill response equipment/resources and could share the information.
- 52% of respondents would loans equipment or respond to an incident if proper agreements were in place.
- 60% of respondents are prepared for minor oil spills and spills on land.
- 48% of respondents are prepared for minor chemical spills and spills on water.
- 68% of respondents are notified by 911 Dispatch in the event of a spill
- 88% of respondents use cell phones and 72% use land lines to communicate.
- 52% of respondents have communication limitations.
- 48% of respondents would consider a mobile emergency response system to be somewhat valuable.

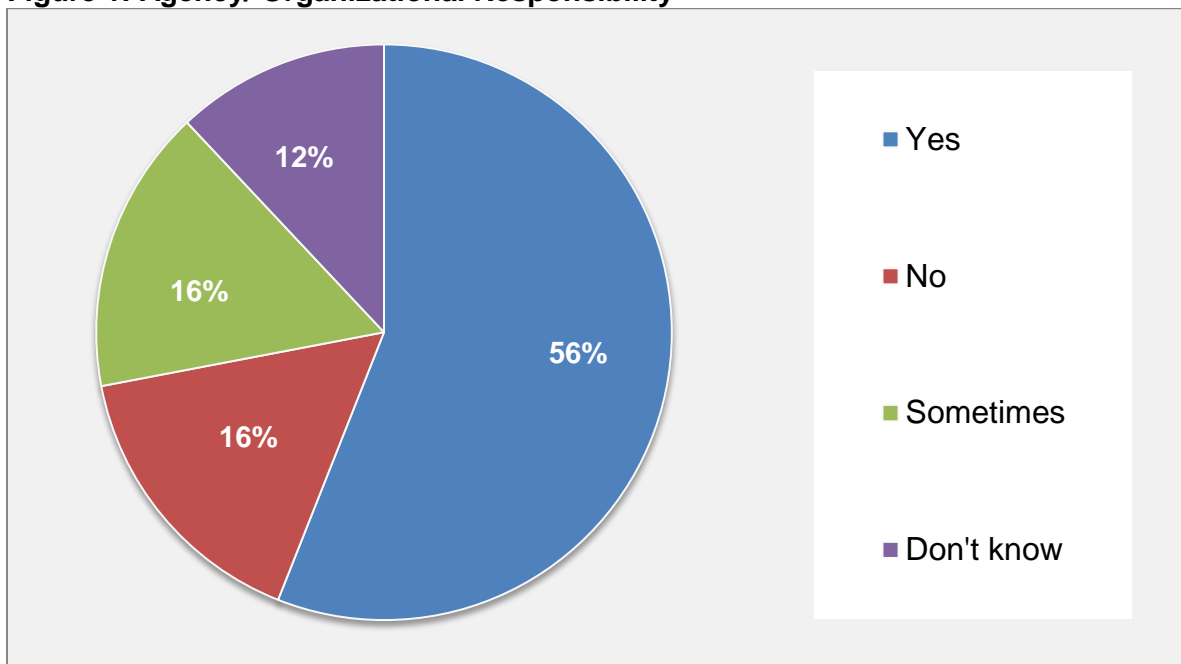
I. Agency Roles and Responsibilities

Question 4- Does your agency/ organization have a responsibility to spills in the North Santiam Watershed?

Most of the respondents indicated that they do have responsibility to respond to spills in the watershed. Some of the respondents indicated that they might have responsibility depending on jurisdiction (Table 1 and Figure 1).

Table 1: Agency/ Organizational Responsibility		
Answer Options	Response Percent	Response Count
Yes, see question 5 below	56.0%	14
No	16.0%	4
Sometimes	16.0%	4
Don't know	12.0%	3
Other (please specify)		5
<i>answered question</i>		25
<i>skipped question</i>		9

Figure 1: Agency/ Organizational Responsibility

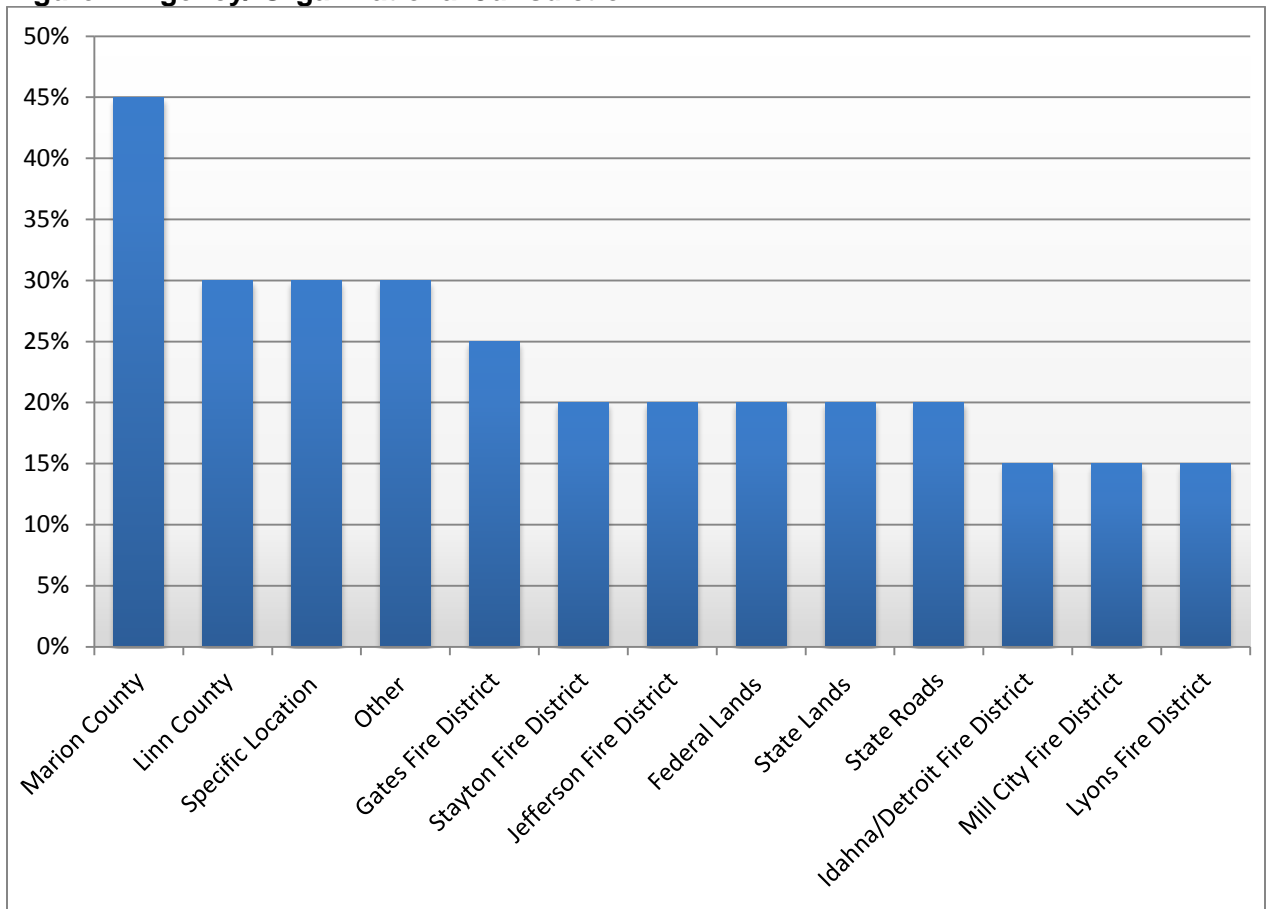


Question 5: If you answered yes to Question 4, please list all area(s) for which your agency/organization is responsible to respond in the event of a spill (i.e. your jurisdiction).

The majority of the respondents have responsibility to respond to spill in either Marion or Linn County, closely followed by several fire districts. Some of the respondents indicated that they have additional jurisdictional limitations and specific areas of responsibility (i.e. roads and rights of way) (Table 2 and Figure 2).

Table 2: Agency/ Organizational Jurisdiction		
Answer Options	Response Percent	Response Count
Marion County	45.0%	9
Linn County	30.0%	6
Idahna/Detroit Fire District	15.0%	3
Gates Fire District	25.0%	5
Mill City Fire District	15.0%	3
Lyons Fire District	15.0%	3
Stayton Fire District	20.0%	4
Jefferson Fire District	20.0%	4
Federal Lands (US Forestry, BLM)	20.0%	4
State Lands (State Parks, State Forest)	20.0%	4
State Roads	20.0%	4
Specific location only (City, property or building)(list below)	30.0%	6
Other (list below)	30.0%	6
Don't know	0.0%	0
Other (please specify)		11
	<i>answered question</i>	20
	<i>skipped question</i>	14

Figure 2: Agency/ Organizational Jurisdiction

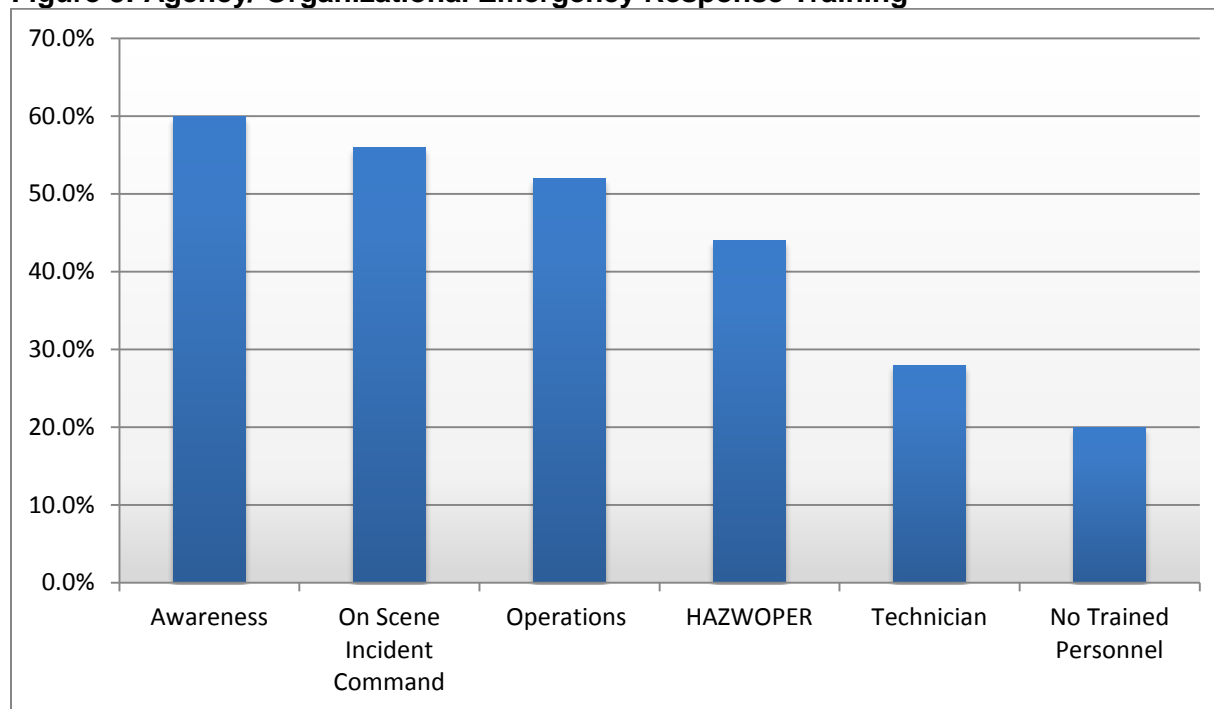


Question 6: Does your agency/ organization currently have personnel trained in the following?

The majority of respondents indicated that they have some kind of emergency response training. Many have awareness level, operations level, on scene incident command, and HAZWOPER training. Not very many agencies or organizations have technician level training, which could be an area for growth. Some respondents indicated that they have jurisdictional limitations that prevent them from completing training in certain areas (Table 3 and Figure 3).

Table 3: Agency/ Organizational Emergency Response Training		
Answer Options	Response Percent	Response Count
Awareness Level Training	60.0%	15
Operations Level Training	52.0%	13
Technician Level Training	28.0%	7
On Scene Incident Command Training	56.0%	14
HAZWOPER	44.0%	11
No, we do not have trained personnel	20.0%	5
Don't know	0.0%	0
Other (please specify)		4
answered question		25
skipped question		9

Figure 3: Agency/ Organizational Emergency Response Training



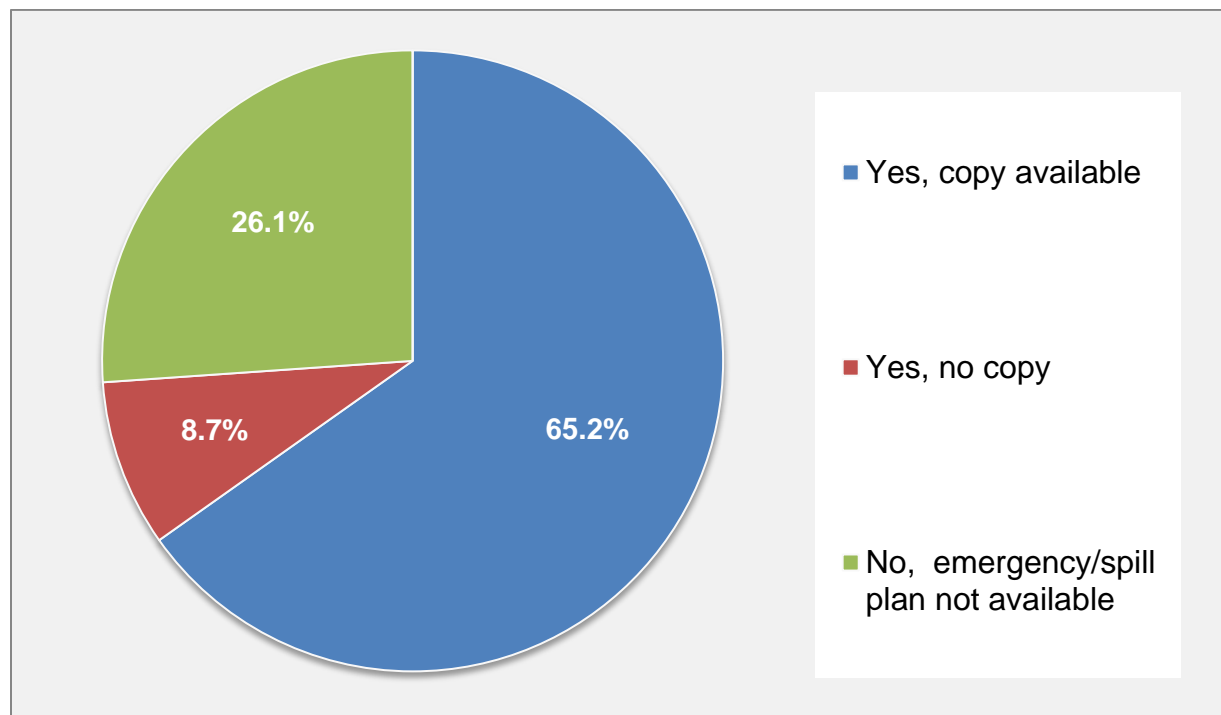
II. Spill Response Responsibilities

Question 7: Does your agency/ organization have an emergency or spill response plan? Could a copy be made available to this planning group?

Most of the agencies and organizations have a plan in place and are able to produce a copy for distribution. Those that don't have a plan in place are either currently developing one or use one from another agency (Table 4 and Figure 4).

Table 4: Availability of Agency/ Organizational Emergency or Spill Plan		
Answer Options	Response Percent	Response Count
Yes, copy available	65.2%	15
Yes, no copy	8.7%	2
No, no emergency/ spill plan	26.1%	6
Don't know	0.0%	0
Other (please specify)		5
<i>answered question</i>		23
<i>skipped question</i>		11

Figure 4: Availability of Agency/ Organizational Emergency or Spill Plan

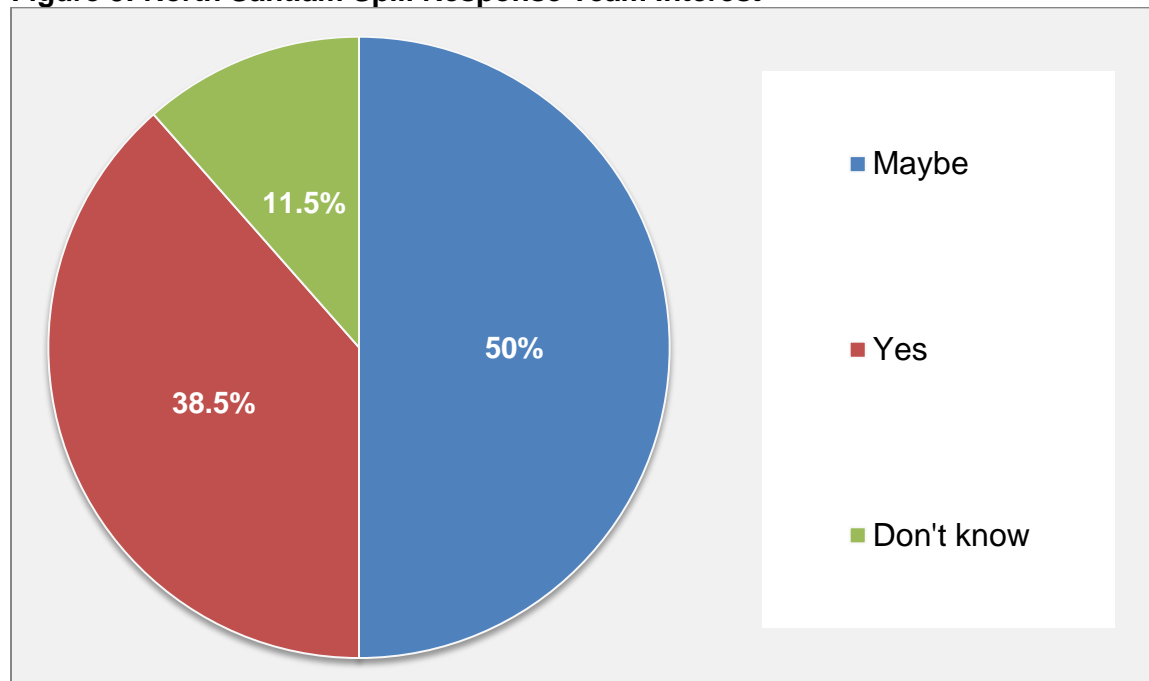


Question 8: Is your agency/organization interested in being part of a North Santiam Spill Response Team? Being part of a response team could involve training, tabletop or field exercises, equipment sharing, etc.

Most of the respondents indicated that they do have interest in participating in the response team. Quite a few said they might have interest depending on their other responsibilities, jurisdictional limitations, and what's involved (Table 5 and Figure 5).

Table 5: North Santiam Spill Response Team Interest		
Answer Options	Response Percent	Response Count
Yes	38.5%	10
No (please explain below)	0.0%	0
Maybe (please explain below)	50.0%	13
Don't know	11.5%	3
Explanation		16
	<i>answered question</i>	26
	<i>skipped question</i>	8

Figure 5: North Santiam Spill Response Team Interest



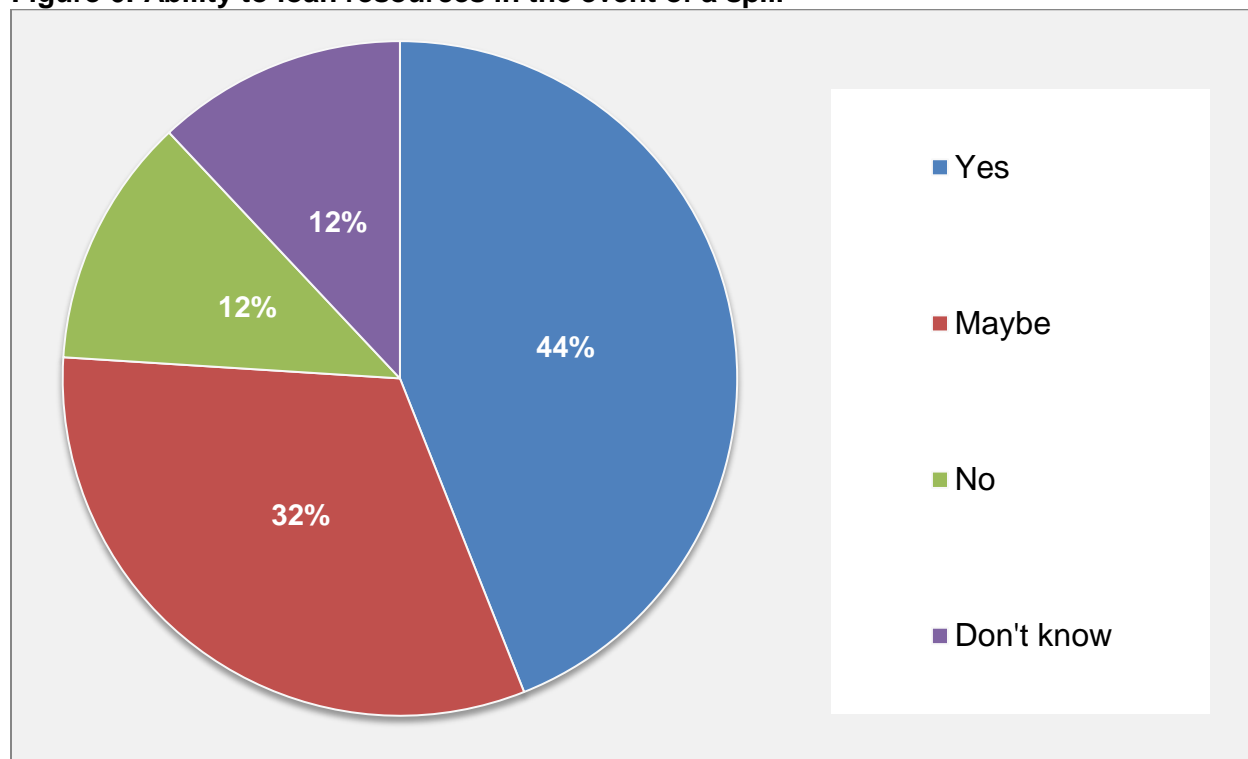
III. Level of Preparedness in Case of a Spill

Question 9: Would your agency/organization consider loaning resources (e.g. personnel, equipment, spill containment or clean up materials, booms, boats, etc) to a North Santiam Spill Response Team in the event of an incident? If no or maybe, briefly explain why.

Many of the respondents are open to the idea of loaning resources in the event of an incident. Those that may be interested have limitations (i.e. liabilities, insurance, etc.) to borrowing or loaning equipment, personnel, and other resources that are outside their jurisdictional control (Table 6 and Figure 6).

Table 6: Ability to loan resources in the event of a spill		
Answer Options	Response Percent	Response Count
Yes	44.0%	11
No (please explain below)	12.0%	3
Maybe (please explain below)	32.0%	8
Don't know	12.0%	3
Explanation		16
<i>answered question</i>		25
<i>skipped question</i>		9

Figure 6: Ability to loan resources in the event of a spill

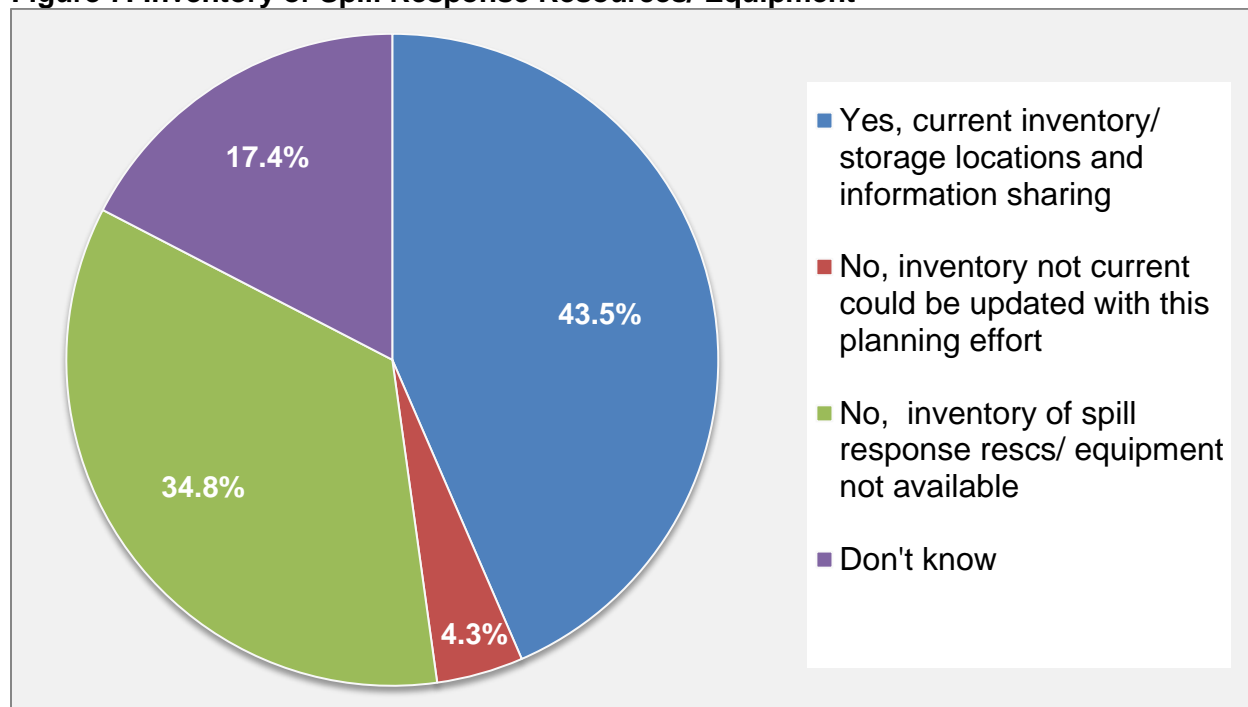


Question 10: Does your agency/organization have a current inventory of your spill response resources/equipment and list of storage locations in the North Santiam watershed? Would you consider sharing this information with a North Santiam spill response team?

Most of the respondents do not have inventory of spill response equipment or have very limited inventory. Less than half of the respondents have inventory they could share (Table 7 and Figure 7).

Table 7: Inventory of Spill Response Resources/ Equipment		
Answer Options	Response Percent	Response Count
Yes, current inventory and storage locations and could share the information	43.5%	10
Yes, current inventory and storage locations but cannot share the information	0.0%	0
No, inventory is not current, could be updated as part of this planning effort	4.3%	1
No, inventory is not current and cannot be easily updated	0.0%	0
No, inventory of spill response resources or equipment not available	34.8%	8
Don't know	17.4%	4
Other (please specify)		7
	<i>answered question</i>	23
	<i>skipped question</i>	11

Figure 7: Inventory of Spill Response Resources/ Equipment

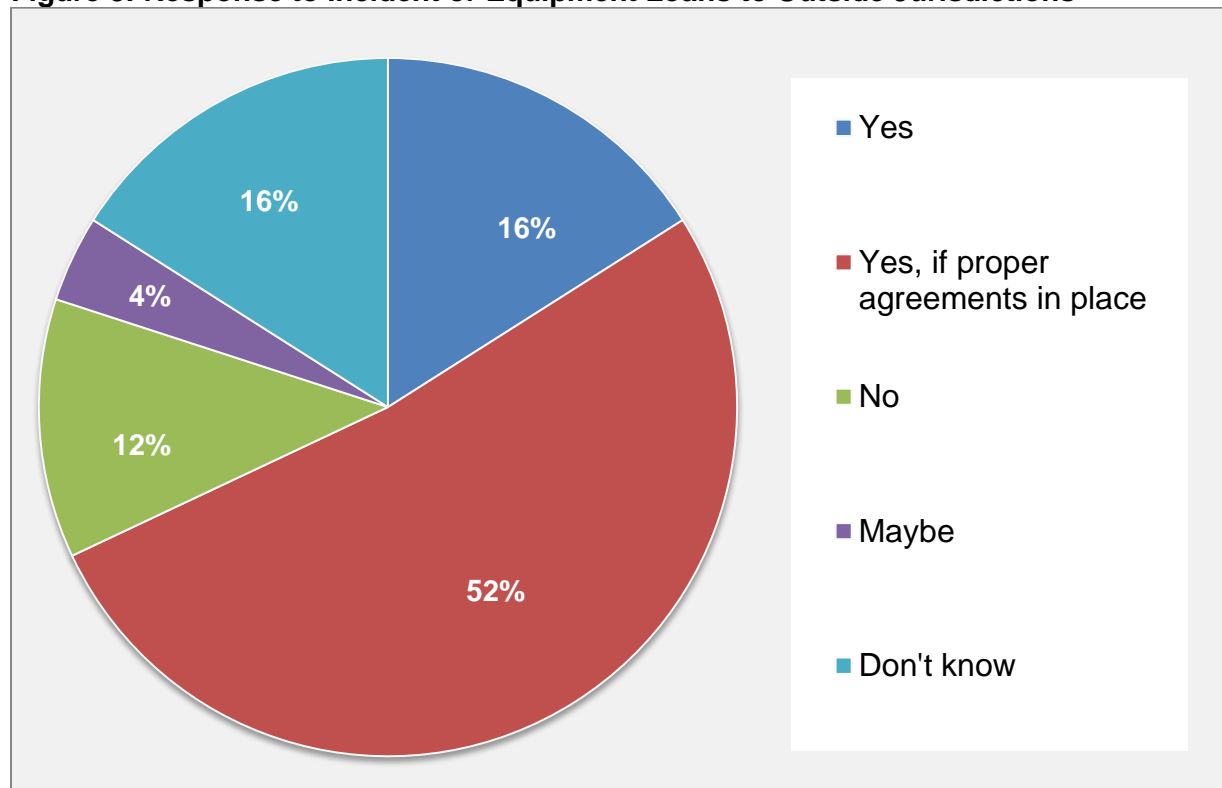


Question 11: Would your agency/organization consider responding to an incident or loaning equipment or resources outside your area of jurisdiction?

Most of the respondents cannot respond to incidents or loan equipment to outside jurisdictions because of jurisdictional limitations or limited inventory/ resources. Many of those that would respond or loan resources need to have proper agreements in place (Table 8 and Figure 8).

Table 8: Response to Incident or Equipment Loans to Outside Jurisdictions		
Answer Options	Response Percent	Response Count
Yes	16.0%	4
Yes, if proper agreements in place	52.0%	13
No	12.0%	3
Maybe	4.0%	1
Don't know	16.0%	4
Other (please specify)		7
<i>answered question</i>		25
<i>skipped question</i>		9

Figure 8: Response to Incident or Equipment Loans to Outside Jurisdictions

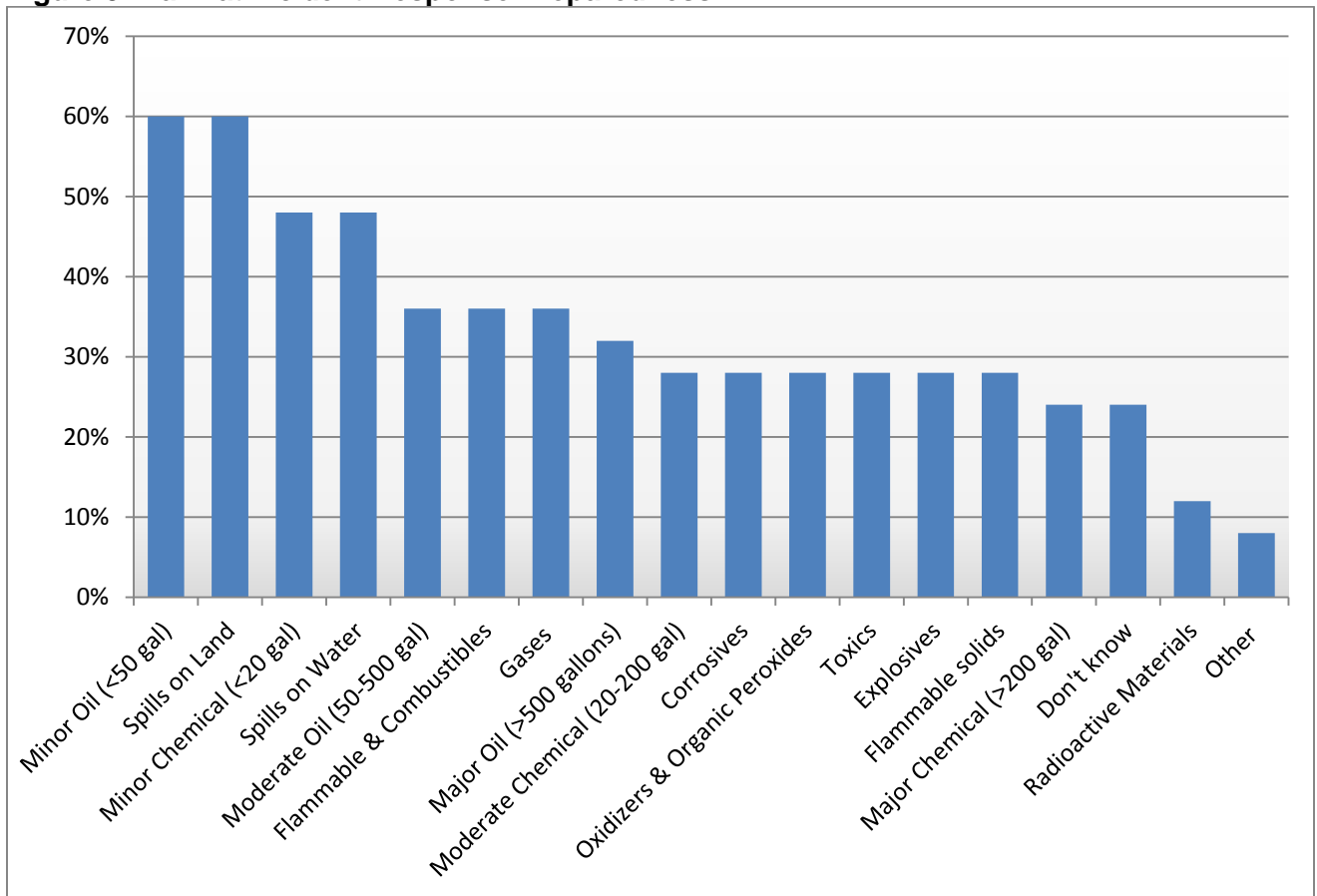


Question 12: What types of hazmat incidents is your agency/organization prepared to respond to? Please check all the categories that apply.

Most of the respondents are prepared for minor oil and chemical spills and spills on land and water. The majority of survey respondents are much less prepared for spills outside of their jurisdictional control or they lack the resources necessary to respond (Table 9 and Figure 9).

Table 9: Hazmat Incident Response Preparedness		
Answer Options	Response Percent	Response Count
Minor Oil (<50 gallons)	60.0%	15
Moderate Oil (50-500 gallons)	36.0%	9
Major Oil (>500 gallons)	32.0%	8
Minor Chemical (<20 gallons)	48.0%	12
Moderate Chemical (20-200 gallons)	28.0%	7
Major Chemical (>200 gallons)	24.0%	6
Corrosives	28.0%	7
Flammable & Combustibles	36.0%	9
Oxidizers & Organic Peroxides	28.0%	7
Toxics	28.0%	7
Explosives	28.0%	7
Gases (flammable, toxic, corrosive)	36.0%	9
Flammable solids	28.0%	7
Radioactive Materials	12.0%	3
Spills on Land	60.0%	15
Spills on Water	48.0%	12
Other (list below)	8.0%	2
Don't know	24.0%	6
Other (please specify)		10
	<i>answered question</i>	25
	<i>skipped question</i>	9

Figure 9: Hazmat Incident Response Preparedness

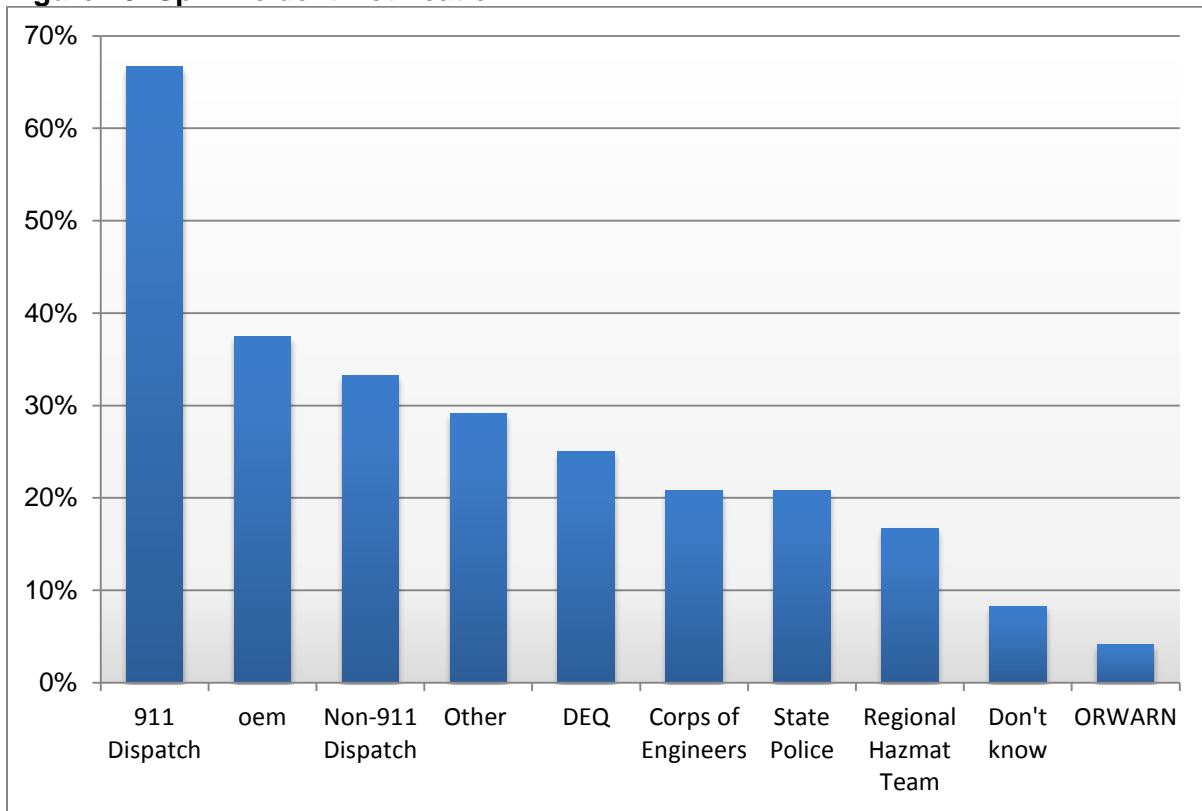


**Question 13: In the event of a spill incident, who notifies your agency/organization?
Select all that apply.**

Most of the respondents are notified by 911 Dispatch, followed by the Office of Emergency Management and Non-911 Dispatch. Several respondents also listed the Oregon Emergency Response System as the agency that notifies them in case of a spill (Table 10 and Figure 10).

Table 10: Spill Incident Notification		
Answer Options	Response Percent	Response Count
Office of Emergency Management (OEM)	37.5%	9
Department of Environmental Quality (DEQ)	25.0%	6
Corps of Engineers	20.8%	5
State Police	20.8%	5
OR Water/Wastewater Agency Response Network (ORWARN)	4.2%	1
Regional Hazmat Team	16.7%	4
911 Dispatch	66.7%	16
Non-911 Dispatch	33.3%	8
Other (please list below)	29.2%	7
Don't know	8.3%	2
Other (please specify)		13
	<i>answered question</i>	24
	<i>skipped question</i>	10

Figure 10: Spill Incident Notification

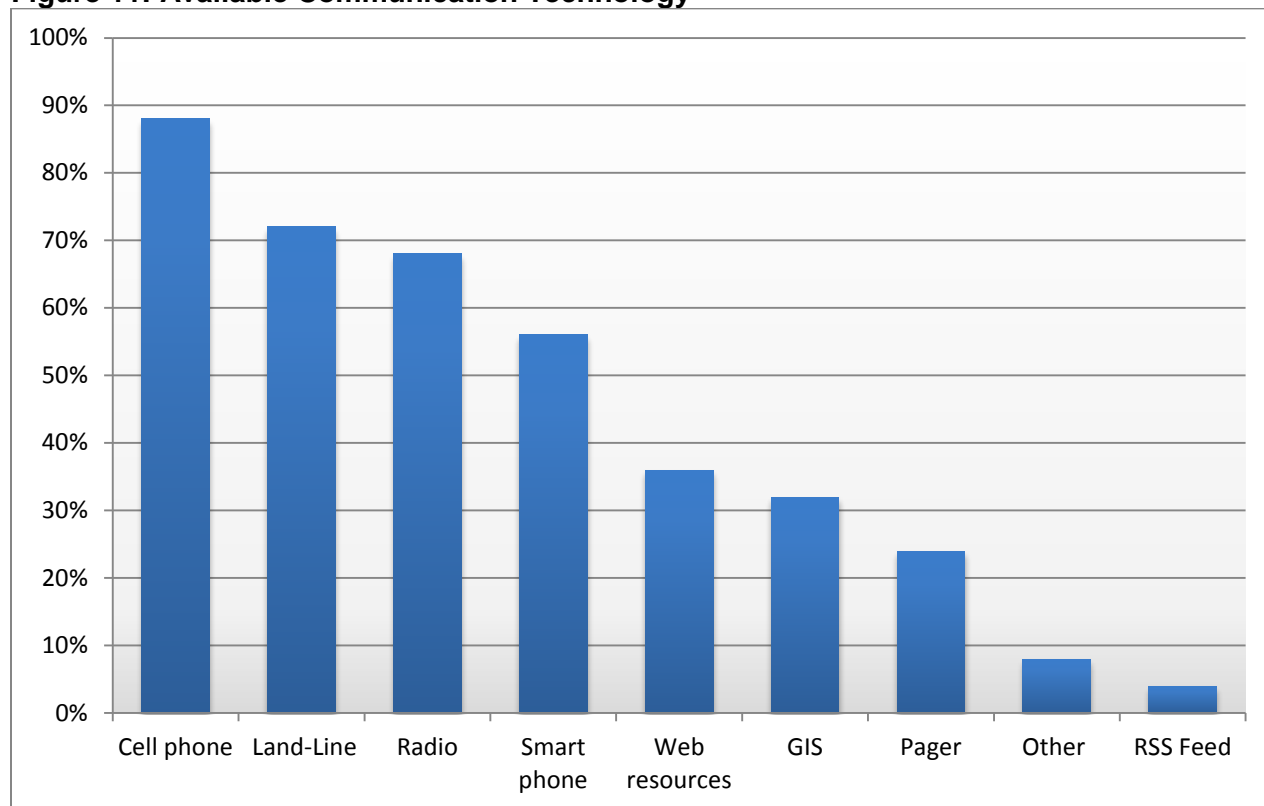


Question 14: What communication technologies does your agency/organization currently use to communicate with staff and other responders in the event of a spill?

Most respondents use a cell phone, smart phone, land line, or radio to communicate with staff and responders in the event of a spill. A few use web resources and GIS. Other technologies that were listed include satellite phones, Ops Center software, and Twitter (Table 11 and Figure 11)

Table 11: Communication Technology Usage		
Answer Options	Response Percent	Response Count
Telephone, land-line	72.0%	18
Cell phone	88.0%	22
Smart phone	56.0%	14
Pager	24.0%	6
Radio (please list your primary frequency or channel below)	68.0%	17
RSS Feed	4.0%	1
Geographic Information System (GIS)	32.0%	8
Web resources	36.0%	9
Other (please list below)	8.0%	2
Don't know	0.0%	0
Other (please specify)		11
answered question		25
skipped question		9

Figure 11: Available Communication Technology

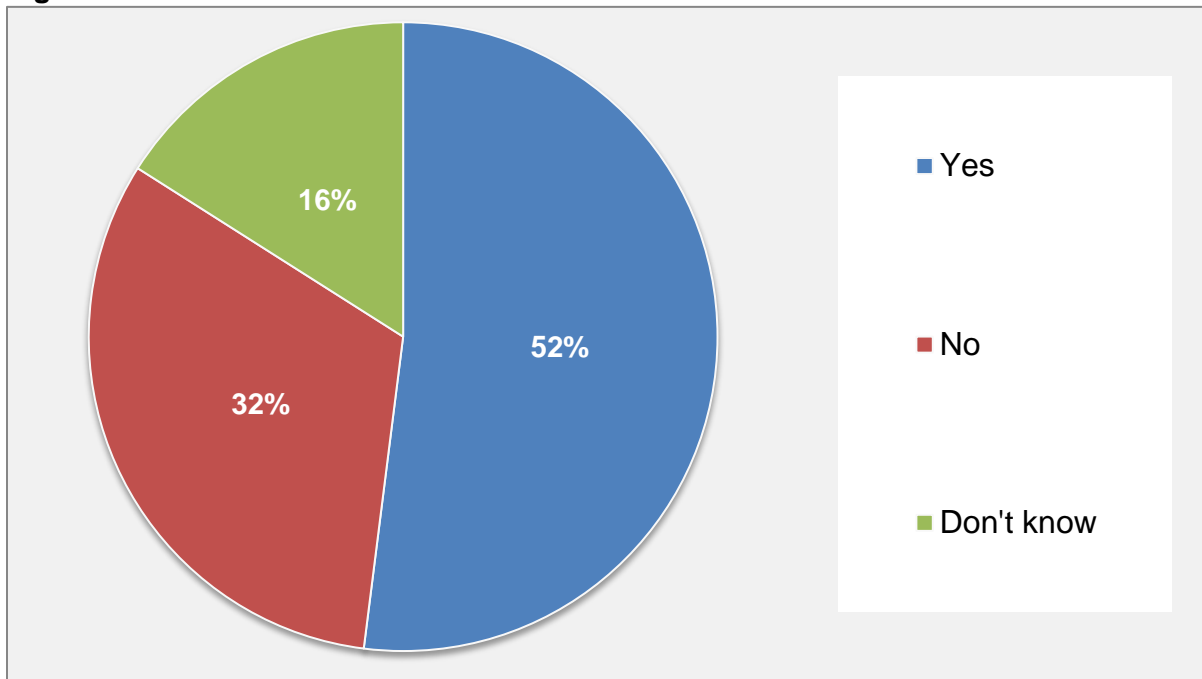


Question #15: Are there known areas within your jurisdiction that have communication limitations, such as lack of cell phone coverage? If yes, briefly describe these area locations.

Over half of the respondents indicated that they had some kind of communication limitation, the most common being limited cell phone service coverage. Some of the areas that have limited cell phone service are the Santiam Canyon, Detroit area, Silverton Hills, Little North Fork, South Salem Hills, near dams, and other remote areas (Table 12 and Figure 12).

Table 12: Communication Limitations		
Answer Options	Response Percent	Response Count
Yes	52.0%	13
No	32.0%	8
Don't know	16.0%	4
Other (please specify)		16
<i>answered question</i>		25
<i>skipped question</i>		9

Figure 12: Communication Limitations



Question 16: If a centralized Emergency Response System website was developed for the watershed, how valuable would a mobile version of that system designed for a "smart phone" be for your agency/organization?

Most respondents indicated that a smart phone app would be somewhat valuable and a few said it would be very valuable. The limitations to a smart phone app include lack of work provided smart phones (most employees have one for personal use) and poor cell coverage (Table 13 and Figure 13).

Table 13: Mobile Emergency Response System Interest		
Answer Options	Response Percent	Response Count
Very valuable and useful (i.e. we use "smartphone" technology and have full coverage in our area)	28.0%	7
Somewhat valuable (some limitations on technology or coverage in area)	48.0%	12
Not valuable (do not have access to technology or coverage in area)	0.0%	0
Don't know	24.0%	6
Other (please specify)		2
<i>answered question</i>		25
<i>skipped question</i>		9

Figure 13: Mobile Emergency Response System Interest

