

# 2021 CARHA Hockey Green Intent Assessment

Conducted by Community Researchers



Community Improvement Research Program

Community Researchers is a nonprofit research organization which provides community-minded research students and graduates with opportunities to undertake important projects. This research project was part of the Fall 2021 Community Improvement Research Program. Nonprofits, charities, and other organizations submitted applications for projects which were reviewed by an independent panel of evaluators. Complimentary research projects were awarded to multiple applicants and studies were undertaken by research students and graduates, with support from their academic institutions. All researchers participated in a four-part training program developed by Community Researchers.

Research methodology	
Type of research project	Electronic survey
Survey sampling method	Survey distributed through targeted emails
Survey sample size	Approximately 63 responses
Survey sampling period	November through December, 2021
Lead researcher	Kailey Webster
Supporting academic institution	Brock University
Supporting faculty	Dr. Martha Barnes

## Highlights

### **1. Most respondents are interested in implementing professional development in relation to greener facilities**

- Overall, only 79% were interested in implementing professional development including training, webinars, conferences, workshops, trade magazines, and discussion groups.

### **2. Three quarters of facilities do not employ a position that is responsible for representing environmental sustainability**

- 75% of respondents do not employ a sustainability representative.
- This is 69% due to lack of funding and 65% due to lack of staff capacity.

### **3. Most facilities do not implement on-ice green initiative that are outlined by NHL Greener Rinks**

- According to the survey, 60% of respondents keep their ice thicker than  $\frac{3}{4}$ ", 76% do not use laser leveling technology, 81% do not use electric ice resurfacers, and 76% do not use green water purification systems. This is reported to be due to a lack of funding.
- However, 67% of respondents use LED lighting on-ice, and 83% use natural refrigeration systems.

### **4. Facilities implement a significant amount of green initiatives that are outlined by NHL Greener Rinks in off-ice areas**

- 55% of respondents use low-flow water systems, 62% use LED lighting, 55% use light dimmers/automatic timed lighting, 76% recycle waste, 49% have low-e ceilings, and 68% have reclaimed rubber flooring.
- The areas that need improvement are energy recycling, automatic timed hand washing sensors, electric car charging stations due to lack of funding, and composting due to lack of staff capacity.

**5. The average time period between maintenance procedures on various facility amenities is one year**

- In most facilities maintenance is conducted annually on the following amenities; plumbing, lighting, seat heating systems, heat recovery systems, conversion floors, and water purification systems.
- While HVAC is maintained monthly by 32% of respondents, refrigeration systems are maintained daily by 45%, and Ice resurfacers are maintained weekly by 39%.

**6. The majority of facilities are interested in implementing the green initiatives mentioned in the survey**

- The respondents who have not already implemented the green initiatives mentioned in the survey were very interested in switching to LED lighting, switching to electric ice resurfacers, and completing frequent maintenance of facility equipment.
- The respondents were somewhat interested in switching to natural refrigeration systems, using laser leveling technology, switching to greener water purification systems, using heat recovery methods, employing a sustainability representative, participating in energy recycling, installing low-flow water systems, automatic hand washing systems, and dimmers/automatic lights.
- However, most facilities were not interested in installing electric car charging stations (39%), or switching to greener seat heating systems (34%).

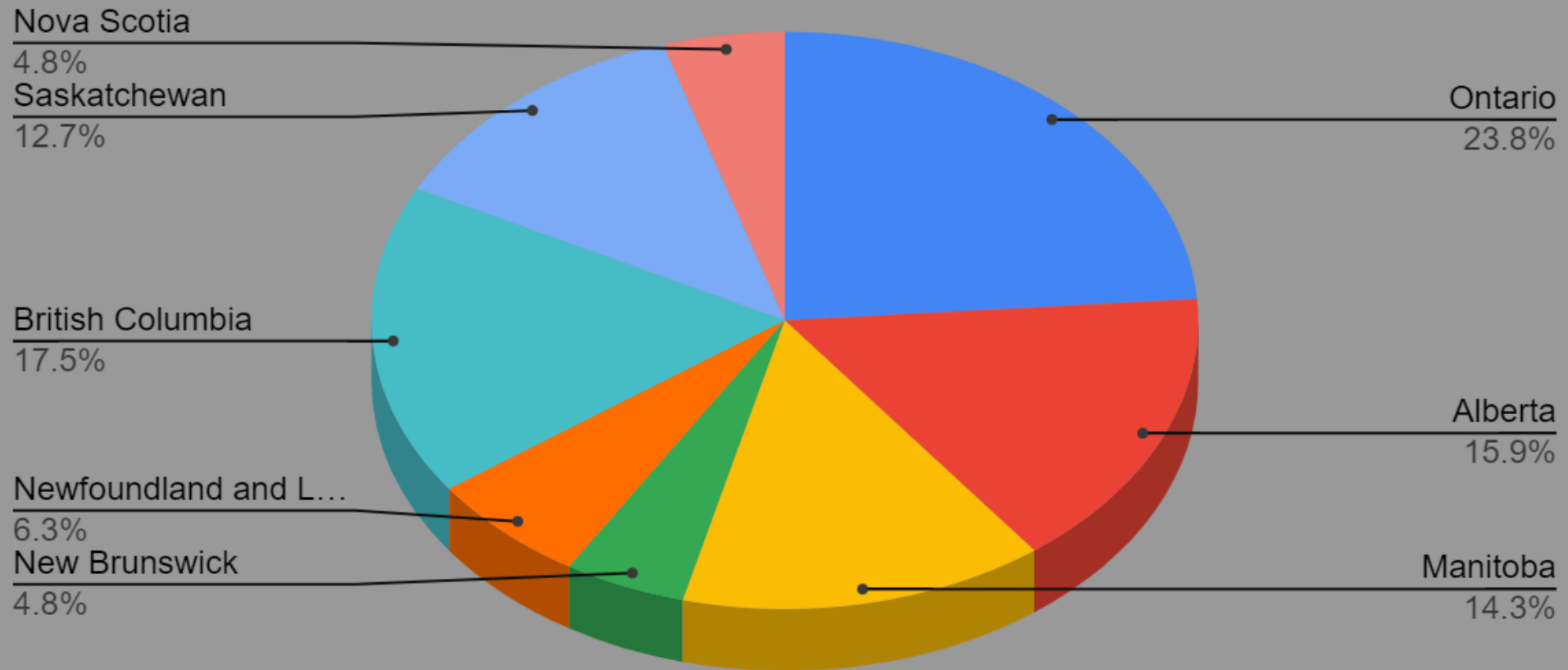
**7. Overall the barriers that arenas face in becoming greener are lack of funding, lack of staff capacity, and structure of facility**

- 87% of respondents faced barriers due to lack of funding, 56% due to lack of staff capacity, and 46% due to structure of facility.

**8. Respondents offered comments on the barriers they are facing in becoming greener**

- At the end of the survey, respondents were asked to provide comments and suggestions about the barriers they are facing in becoming greener
- Verbatim responses are provided in the final section of this report

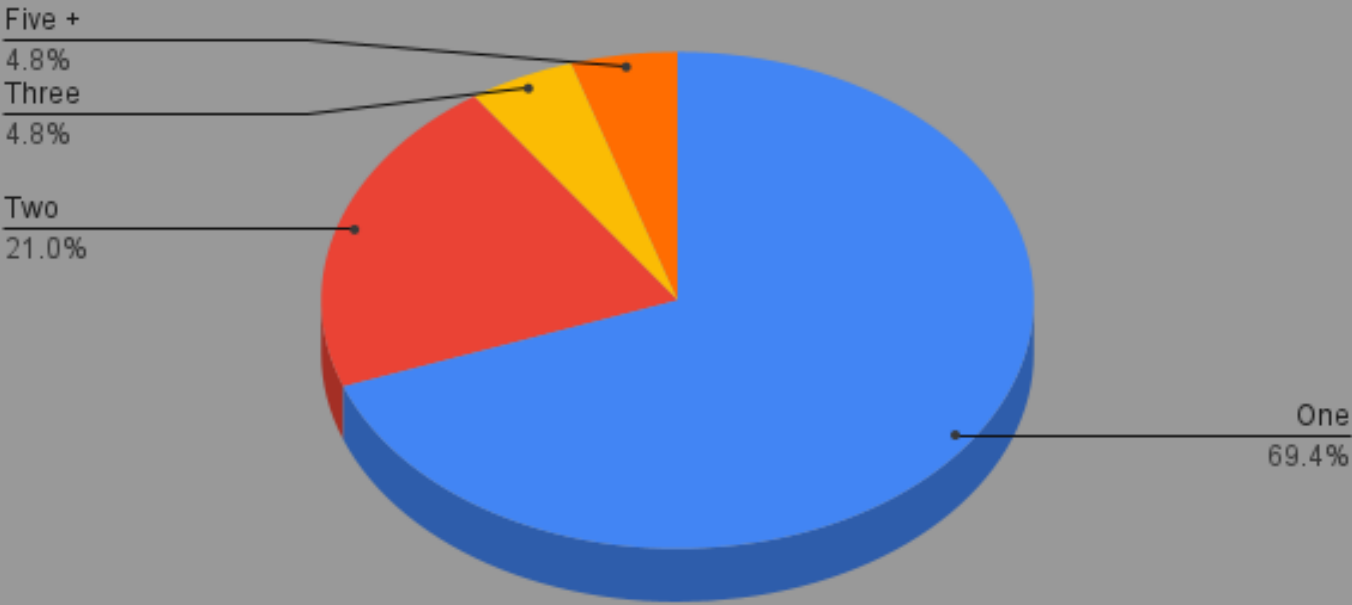
## Location of Facility(s)



Where is your facility located?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	All
Ontario	<u>26%</u>	<u>21%</u>	<u>26%</u>	21%	<b>24%</b>
Alberta	11%	<u>21%</u>	12%	21%	<b>16%</b>
Manitoba	<u>26%</u>	11%	12%	21%	<b>14%</b>
New Brunswick	11%	2%	7%	0%	<b>5%</b>
Newfoundland and Labrador	11%	4%	7%	5%	<b>6%</b>
British Columbia	5%	<u>21%</u>	14%	<u>26%</u>	<b>17%</b>
Saskatchewan	5%	15%	16%	5%	<b>13%</b>
Nova Scotia	5%	4%	7%	0%	<b>5%</b>

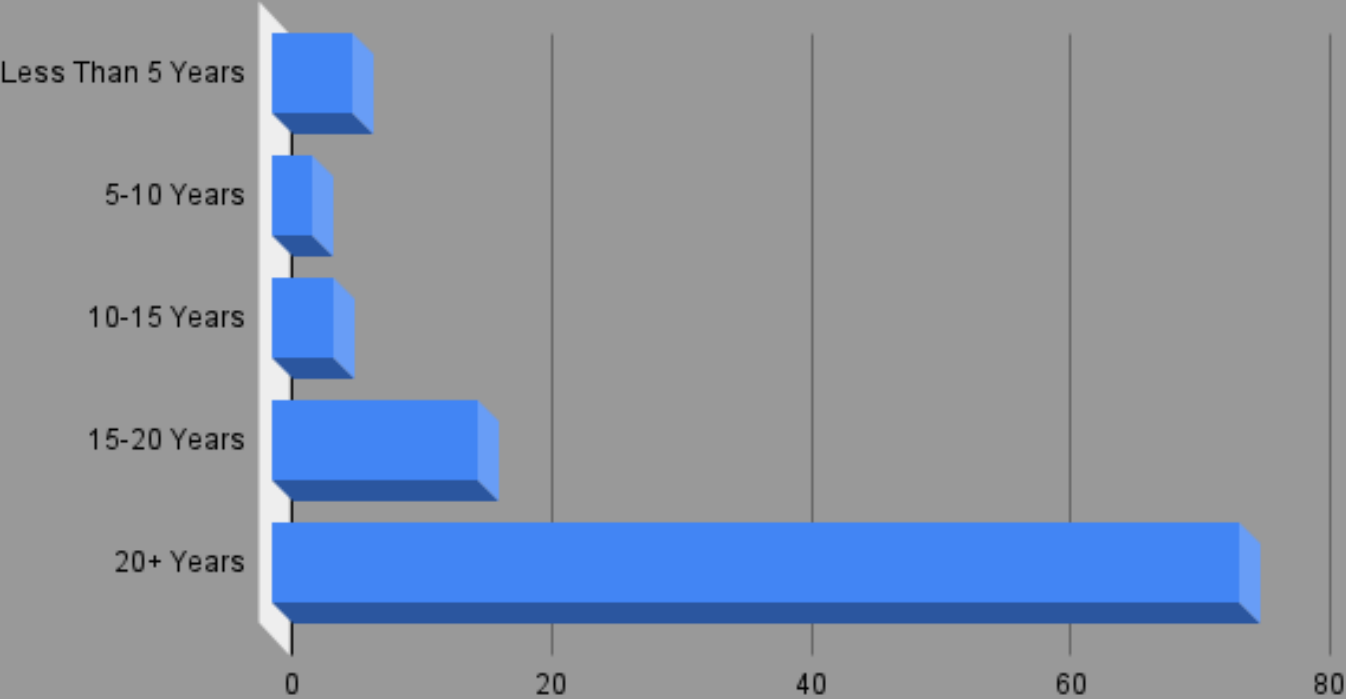
The survey did not receive any responses from Yukon, Nunavut, Quebec, Prince Edward Island, or the North West Territories.

# How Many Ice Surfaces Are In Your Facility/Facilities?



How many ice surfaces are in your facility/facilities?	Age of Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	
One	26%	21%	69%
Two	11%	21%	21%
Three	26%	11%	5%
Four	11%	2%	0%
Five +	11%	4%	5%

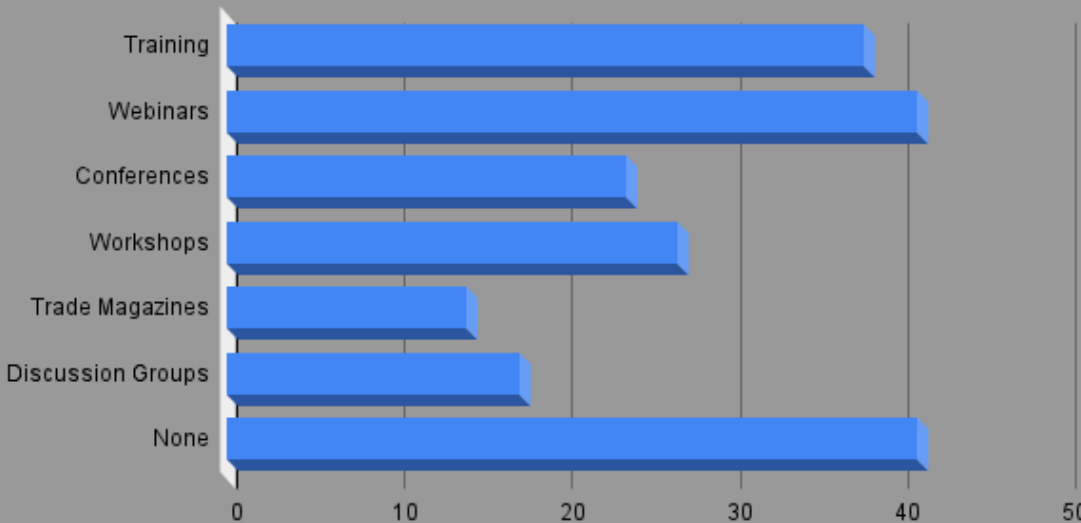
# How Old Is Your Facility/Facilities?



How old is your facility?	Number of Ice Surfaces in Facility/Facilities		
	One	More Than One	All
Less Than 5 Years	5%	11%	6%
5 - 10 Years	5%	0%	3%
10 - 15 Years	5%	5%	5%
15 - 20 Years	19%	11%	16%
20 + Years	70%	84%	75%

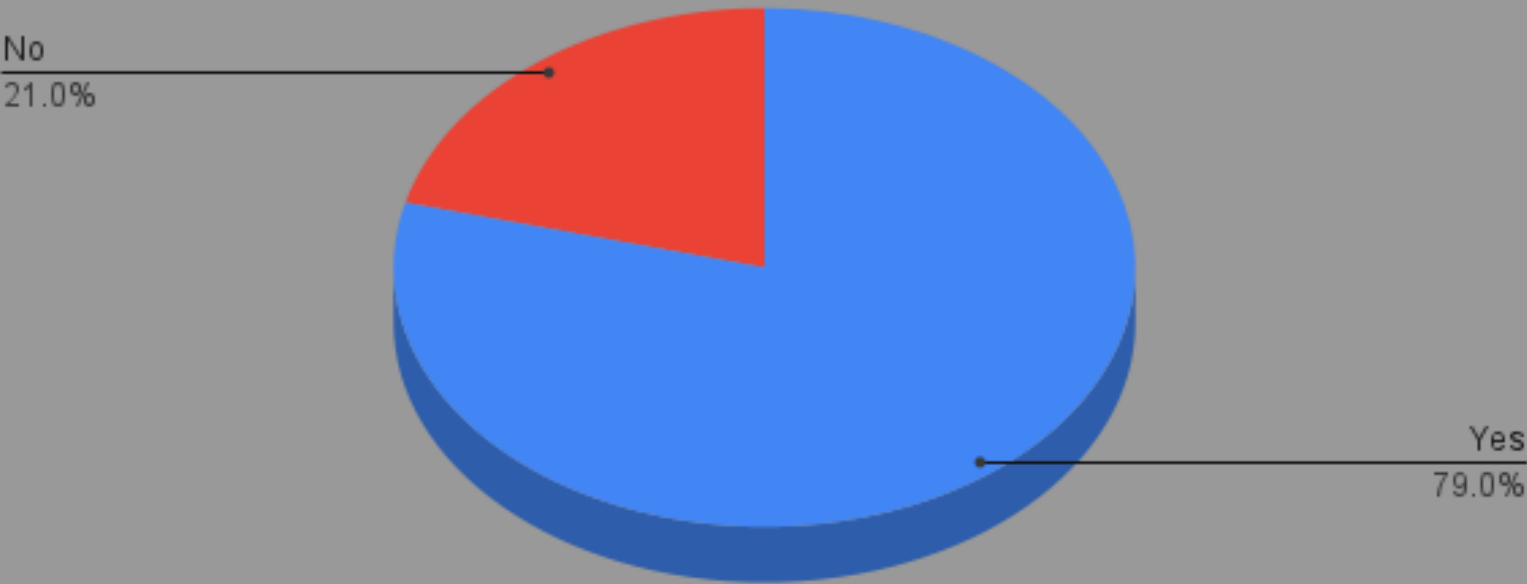


Which of the following professional development activities has your facilities employees been part of?



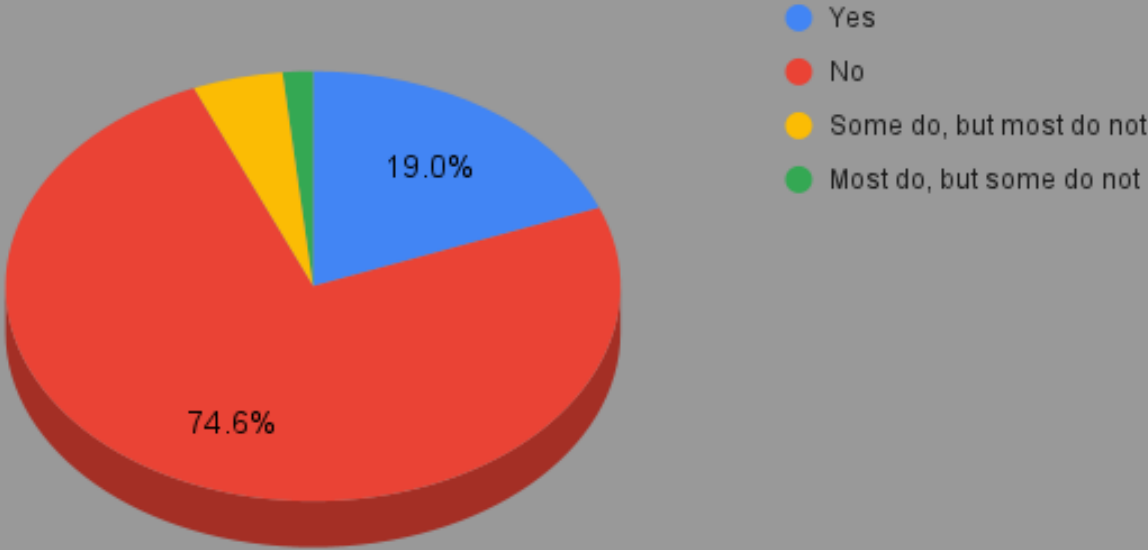
Which professional development activities have your employees been part of?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Training	42%	38%	28%	58%	38%
Webinars	37%	45%	33%	58%	41%
Conferences	21%	30%	16%	37%	24%
Workshops	32%	30%	21%	42%	27%
Trade Magazines	16%	17%	16%	11%	14%
Discussion Groups	21%	17%	12%	32%	17%
None	42%	38%	53%	16%	41%

# Are you interested in implementing any of the previously mentioned professional development in your facilities?



Are you interested in implementing the mentioned professional development in your facilities?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	<u>79%</u>	<u>80%</u>	<u>81%</u>	<u>78%</u>	<b>79%</b>
No	21%	20%	19%	22%	<b>21%</b>

# Do your facilities employ a Sustainability Representative or a similar position?

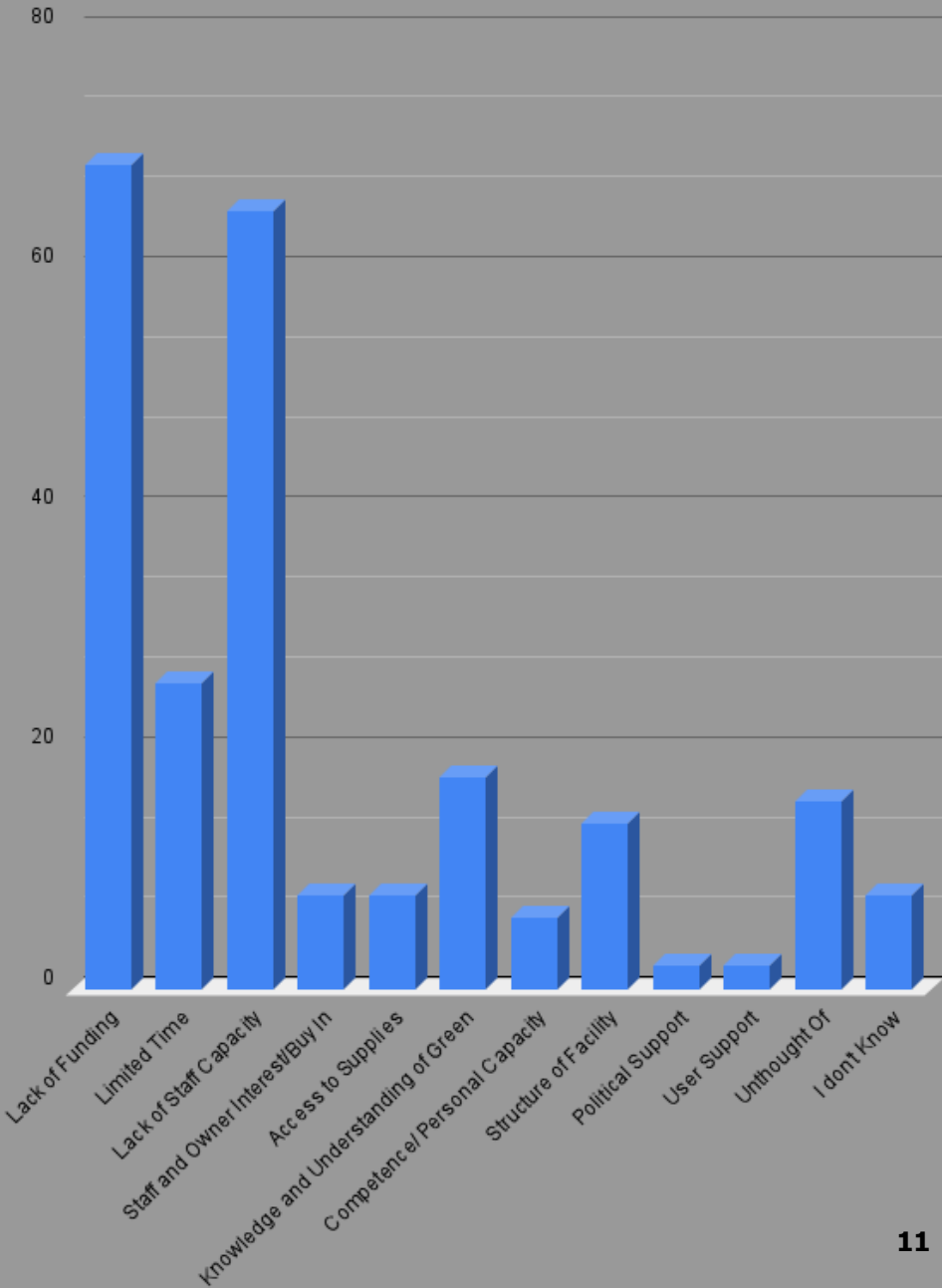


A Sustainability Representative is an employee who is responsible for managing sustainability of your facilities.

## Other Responses Include:

- "This responsibility sits with several staff, however there is not one dedicated person employed with this responsibility"
- "Separate person is not hired, the Parks & Recreation Manager oversees this as part of his job"
- "Lack of Employable individuals"
- "volunteer operated"

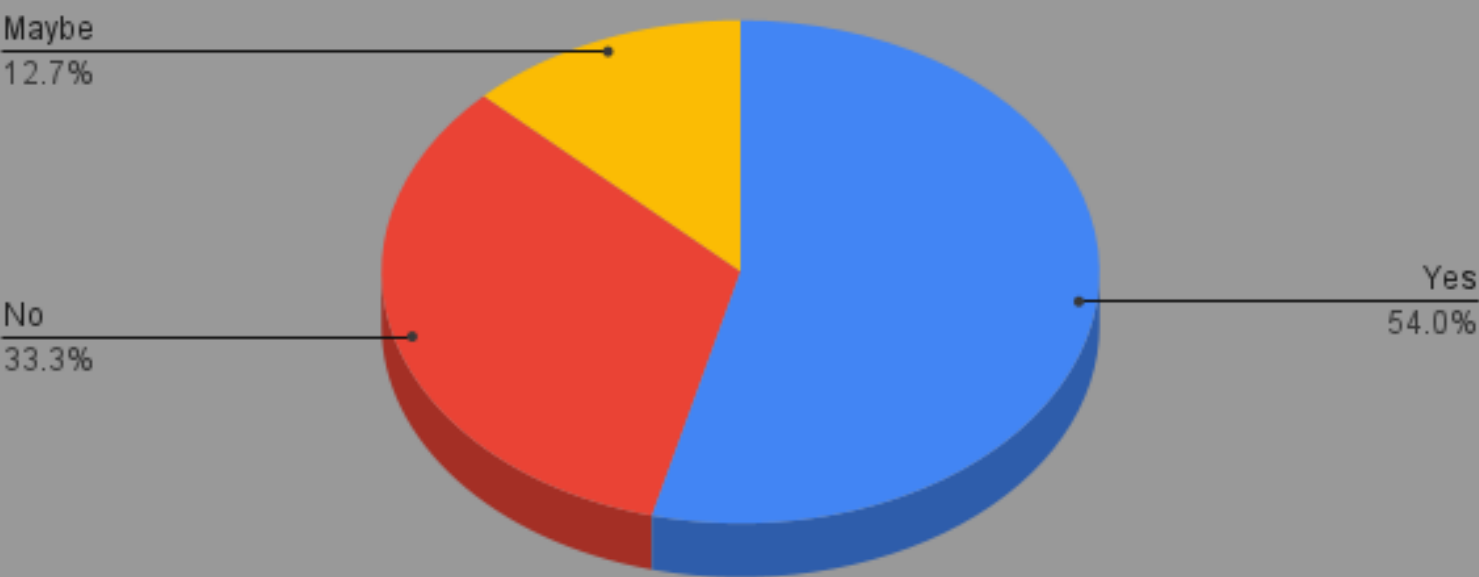
# What are the reasons for not employing a Sustainability Representative?



What are the reasons for not employing a Sustainability Representative?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	<u>65%</u>	<u>70%</u>	<u>69%</u>	<u>67%</u>	<b><u>69%</u></b>
Limited Time	24%	27%	25%	27%	<b>25%</b>
Lack of Staff Capacity	53%	<u>70%</u>	67%	60%	<b>65%</b>
Staff and Owner Interest/Buy In	12%	8%	8%	7%	<b>8%</b>
Access to Supplies	6%	5%	8%	7%	<b>8%</b>
Knowledge/Understanding of Green Initiatives	24%	11%	22%	7%	<b>18%</b>
Competence/Personal Capacity	6%	3%	8%	0%	<b>6%</b>
Structure of Facility	6%	19%	11%	20%	<b>14%</b>
Political Support	0%	3%	0%	7%	<b>2%</b>
User Support	0%	3%	3%	0%	<b>2%</b>
Unthought Of	0%	22%	11%	20%	<b>16%</b>
I Don't Know	6%	5%	6%	7%	<b>8%</b>

Do your facilities employ a Sustainability Representative or a similar position?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	All
Yes	11%	21%	16%	21%	19%
No	<u>74%</u>	<u>74%</u>	<u>74%</u>	<u>79%</u>	<u>75%</u>
Some do, but most do not	16%	2%	7%	0%	5%
Most do, but some do not	0%	2%	2%	0%	2%

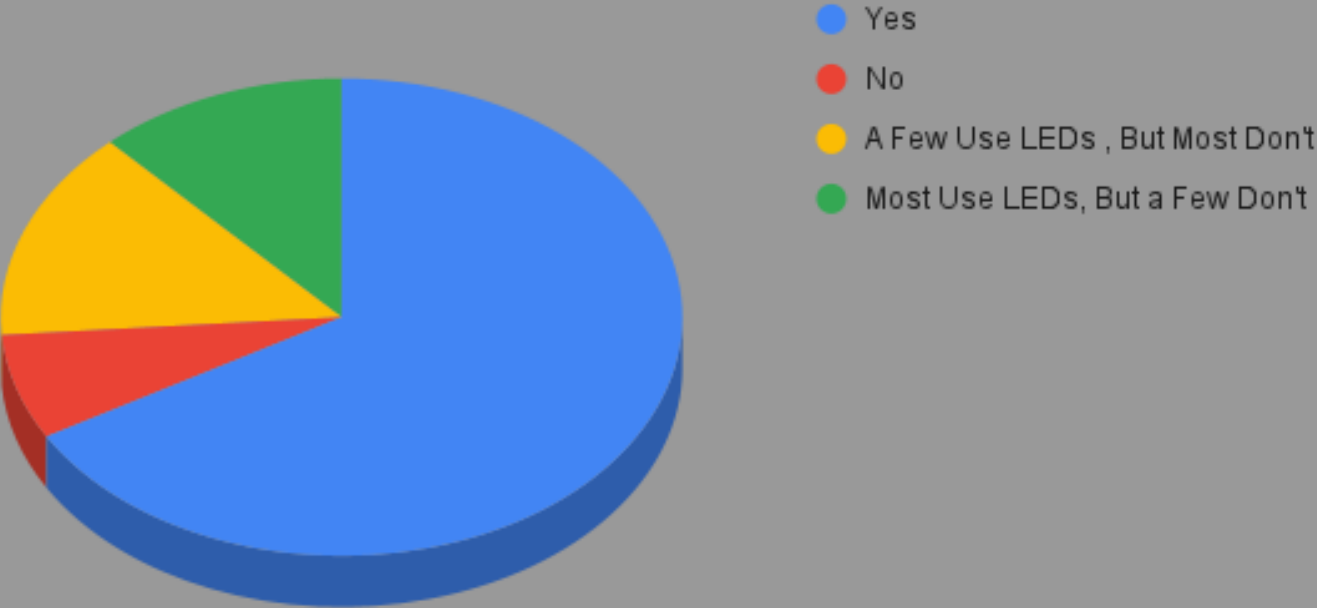
# Are you familiar with the green initiatives your municipality/facilities have implemented/plan to implement?



Are you familiar with the green initiatives your municipality/facilities have implemented/plan to implement?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	37	<u>64</u>	40	<u>84</u>	<u>54</u>
No	<u>47</u>	26	<u>42</u>	16	<b>33</b>
Maybe	16	11	19	0	<b>13</b>

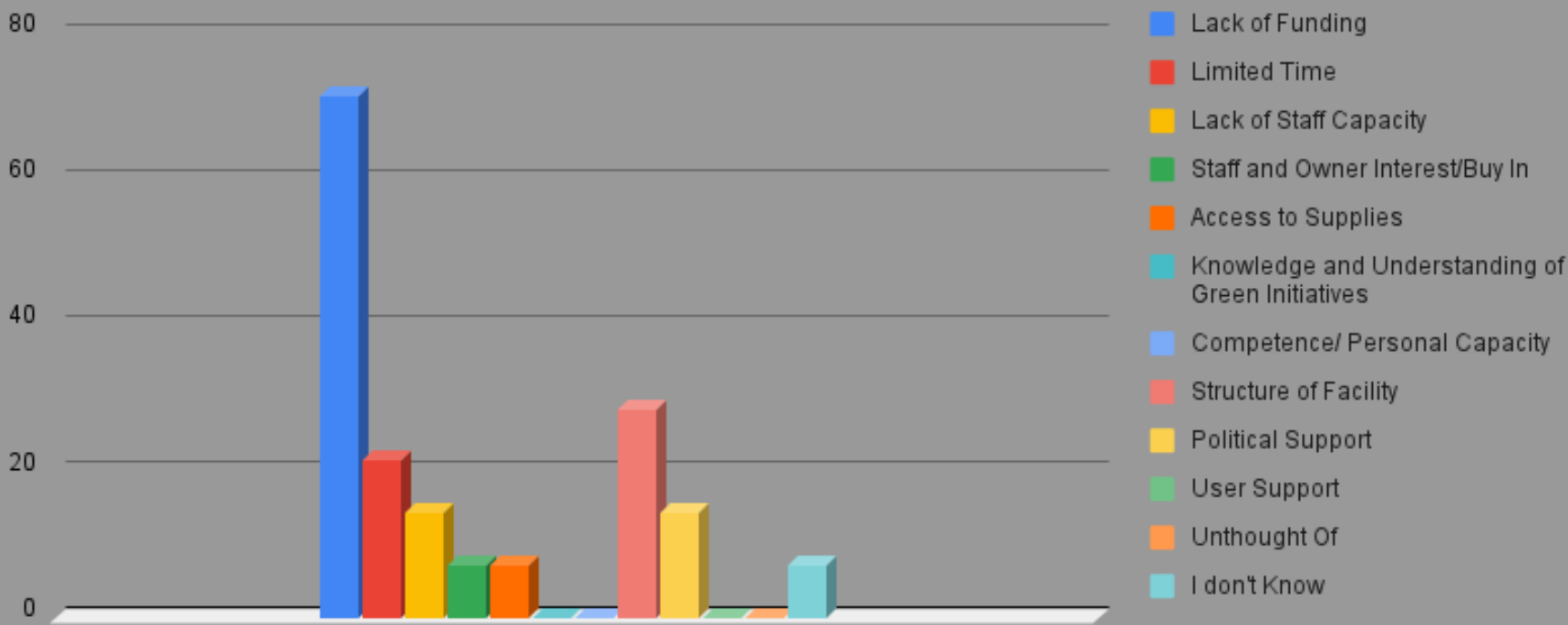
Section 2: Current On-Ice Green Initiatives

Do your facilities currently use Light Emitting Diodes (LED) lighting?



Do your facilities currently use LED Lighting?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	90	63	68	63	67
No	10	6	12	0	7
A Few Use LEDs, But Most Do Not	0	17	12	19	14
Most Use LEDs, But a Few Do Not	0	14	8	19	12

Why don't your facilities use LED lighting?



Why don't your facilities use LED lighting?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	100	69	75	67	71
Limited Time	100	15	13	33	21
Lack of Staff Capacity	0	15	0	33	14
Staff and Owner Interest/Buy In	0	8	0	17	7
Access to Supplies	0	8	0	17	7

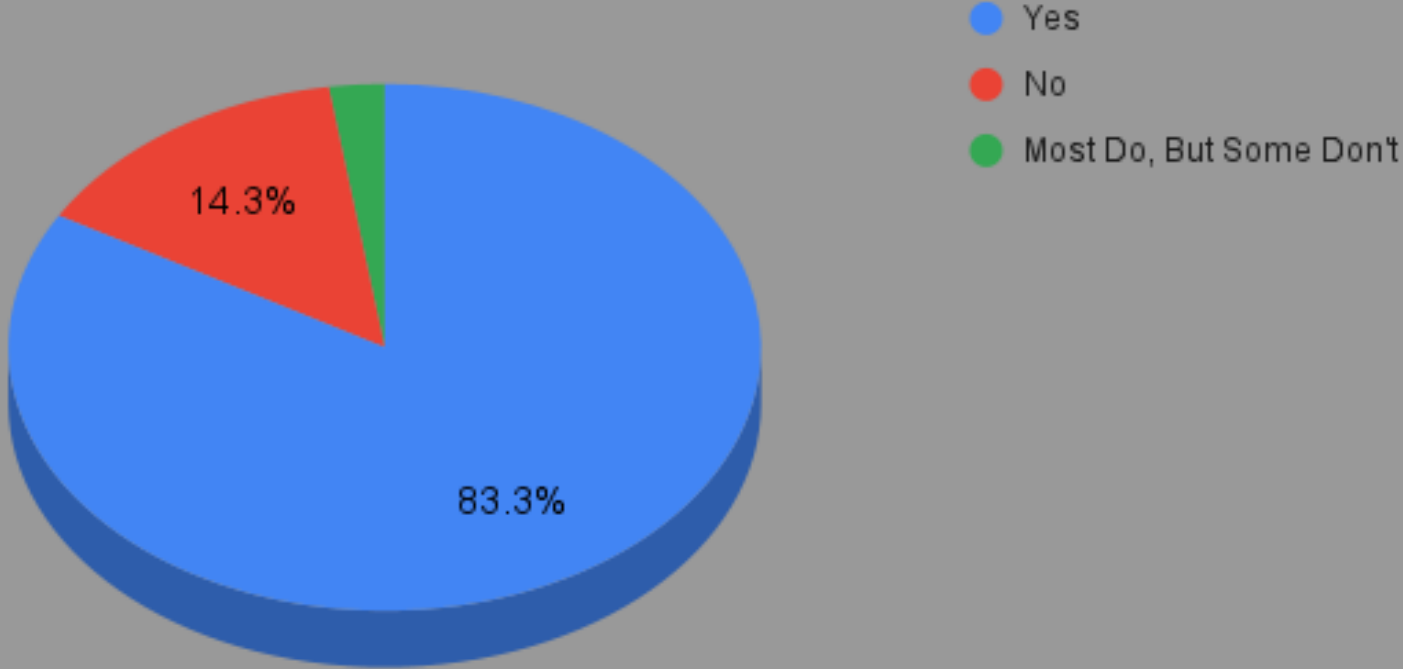


Knowledge/Understanding of Green Initiatives	0	0	0	0	<b>0</b>
Competence/Personal Capacity	0	0	0	0	<b>0</b>
Structure of Facility	0	31	0	<u>67</u>	<b>29</b>
Political Support	<u>100</u>	8	13	17	<b>14</b>
User Support	0	0	0	0	<b>0</b>
Unthought Of	0	0	0	0	<b>0</b>
I Don't Know	0	8	13	0	<b>7</b>

**Other Responses Include:**

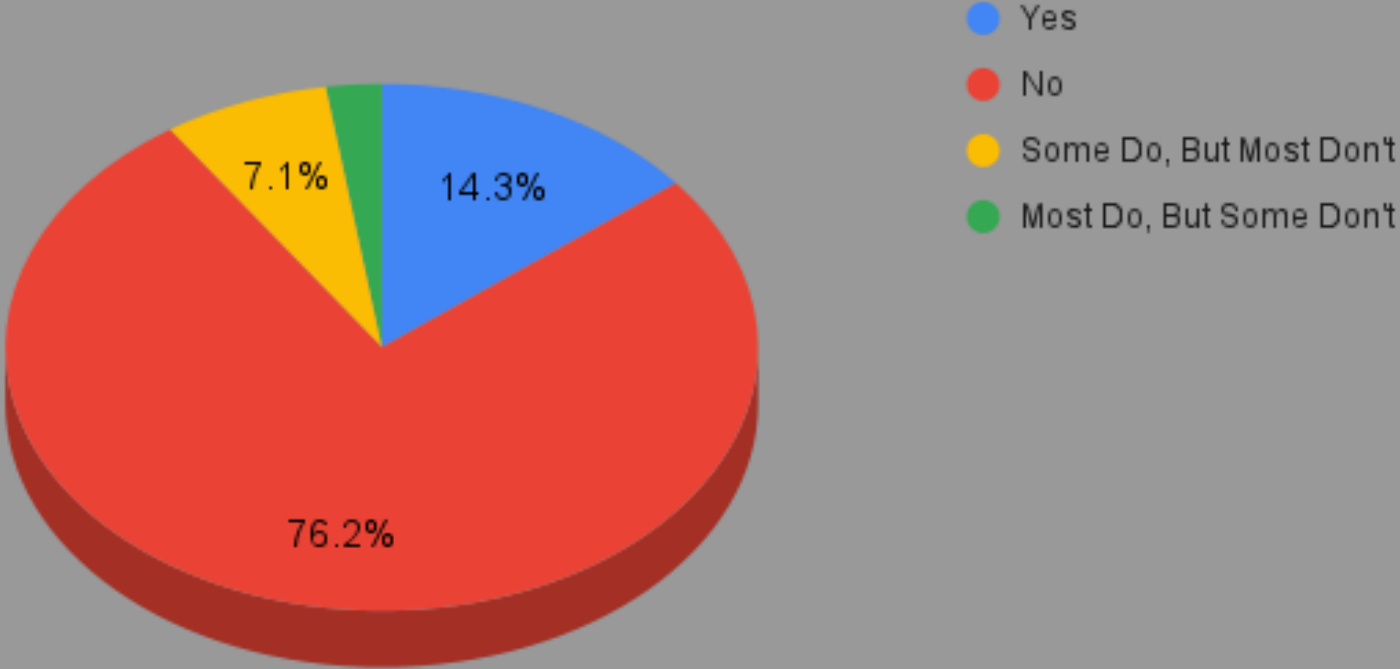
- “Changing over to LED over time as funding allows”
- “Slowly transferring over all our lights”
- “Should be implemented starting next year, in the process of being approved by council”
- "Funding approved for conversion in 2022"

# Do your facilities use Natural Refrigeration Systems (Ammonia and CO2, etc.)?



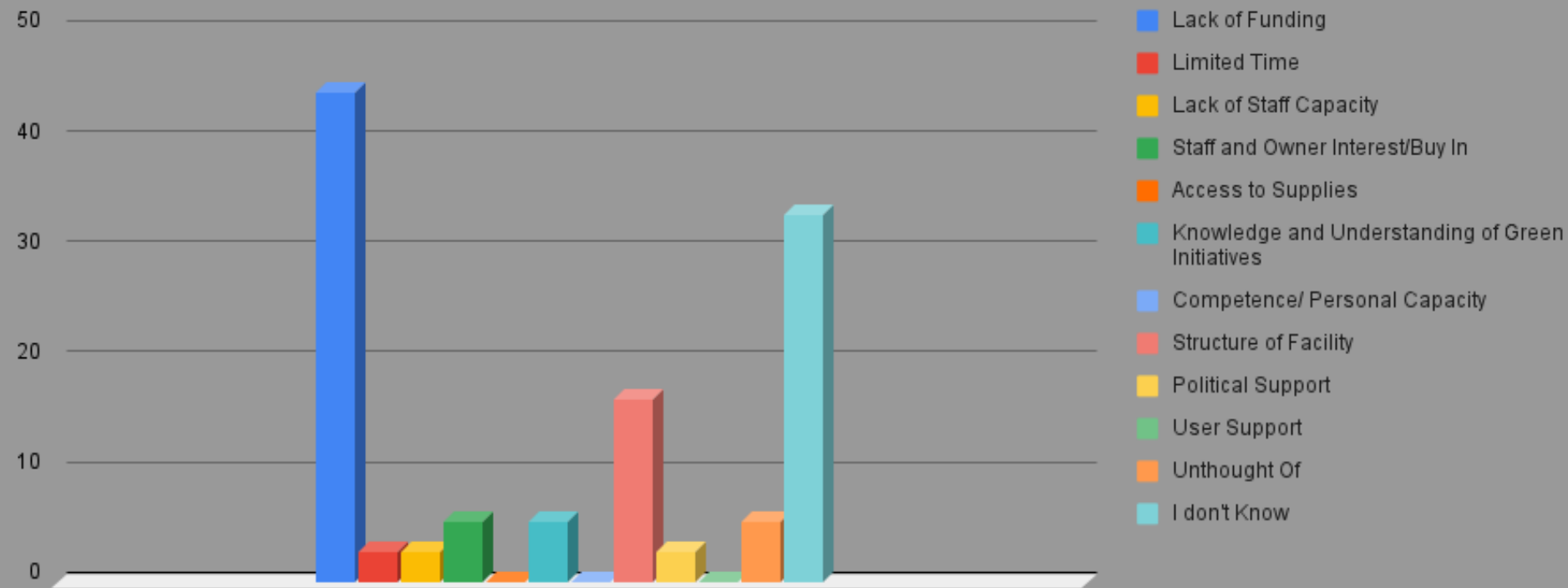
Do your facilities use Natural Refrigeration Systems?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	70	83	80	88	83
No	30	14	20	6	14
Some Do, But Most Do Not	0	0	0	0	0
Most Do, But Some Do Not	0	3	0	6	2

# Do your facilities use reverse osmosis water purification systems?



Do your facilities use reverse osmosis water purification systems?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	20	11	8	25	14
No	<u>70</u>	<u>80</u>	<u>88</u>	<u>56</u>	<u>76</u>
Some Do, But Most Do Not	0	9	0	19	7
Most Do, But Some Do Not	10	0	4	0	2

Why don't your facilities use Reverse Osmosis Water Purification Systems?



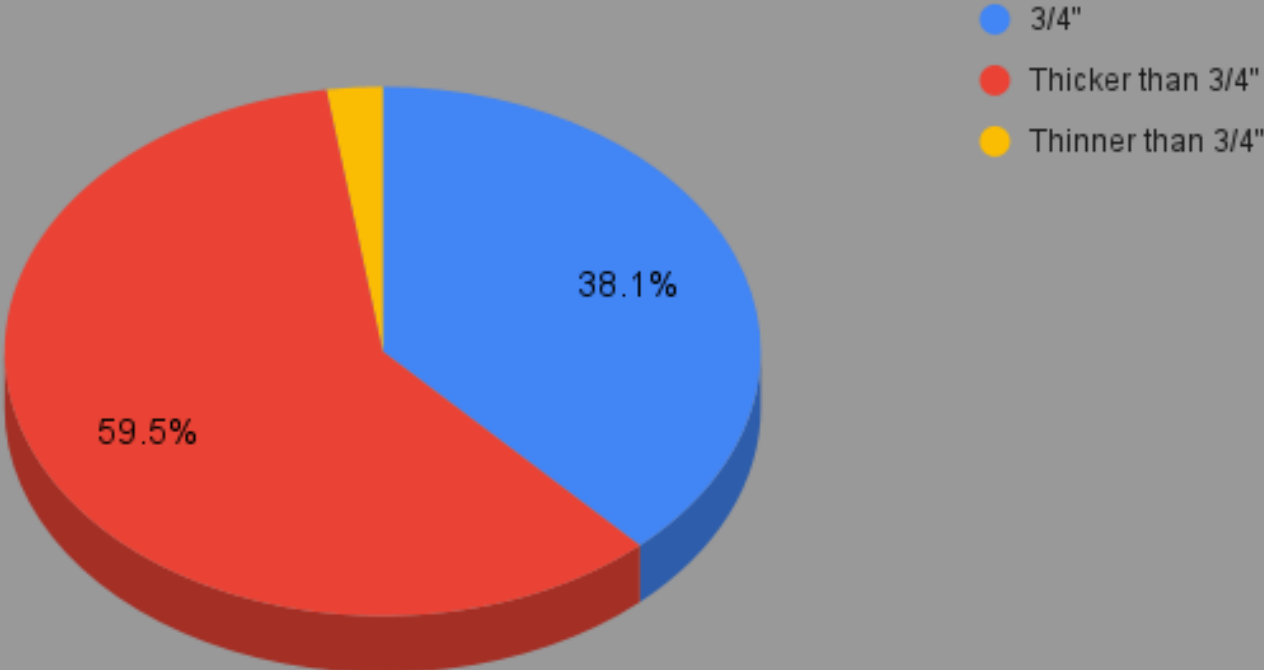
Why don't your facilities use Reverse Osmosis Water Purification?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	38	48	57	25	44
Limited Time	0	3	4	0	3
Lack of Staff Capacity	0	3	4	0	3
Staff and Owner Interest/Buy In	0	6	4	8	6
Access to Supplies	0	0	0	0	0

Knowledge/Understanding of Green Initiatives	0	6	9	0	<b>6</b>
Competence/Personal Capacity	0	0	0	0	<b>0</b>
Structure of Facility	<u>38</u>	16	17	17	<b>17</b>
Political Support	13	3	0	8	<b>3</b>
User Support	0	0	0	0	<b>0</b>
Unthought Of	0	6	0	17	<b>6</b>
I Don't Know	<u>38</u>	32	30	<u>42</u>	<b>33</b>

**Other Responses Include:**

- "Not needed"
- "Everything is expected to be replaced at lifecycle. With 10 arenas, this has to be done over time and when things need to be replaced"
- "We only need it in select facilities"
- "Municipality water supply"
- "Has not been a priority investment"
- "Concerns over efficiency of water use"
- And "Just received approval to install through the MCCAC grant next year"

How thick do your facilities build their ice rinks?

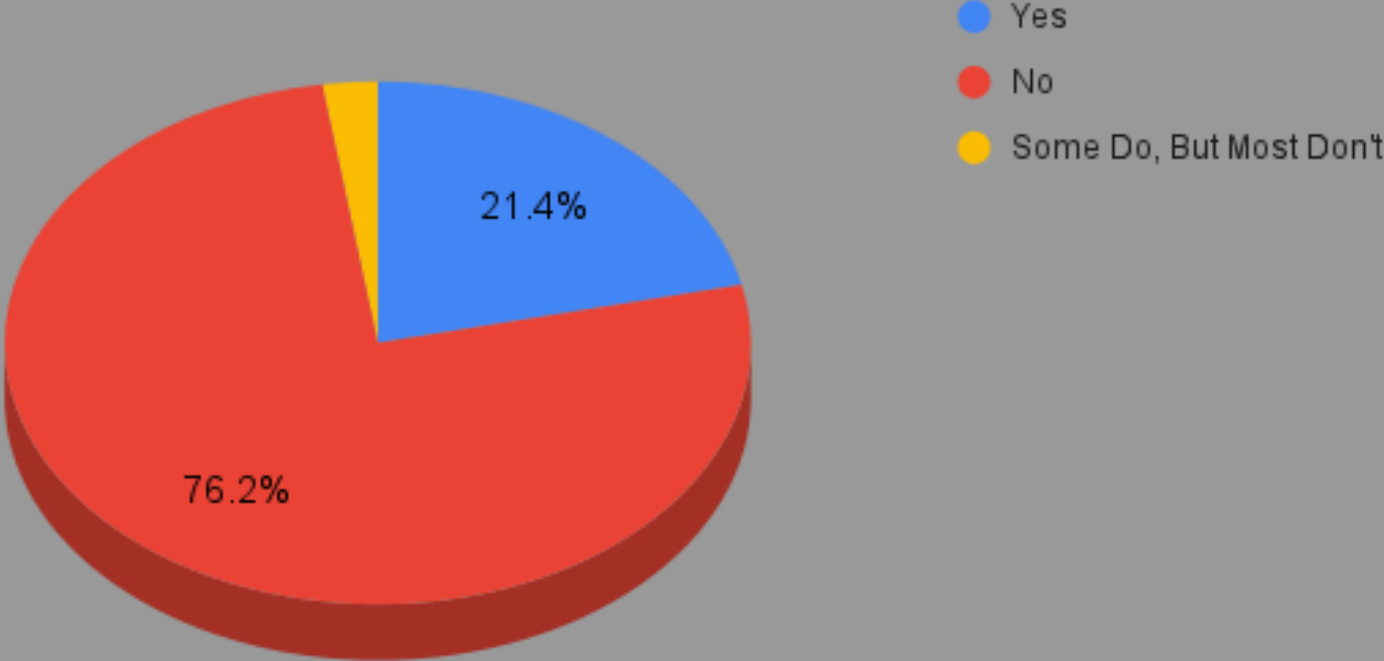


How thick do your facilities build their ice rinks?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	All
3 / 4"	20	40	40	38	38
Thicker than 3 / 4"	80	57	56	63	60
Thinner than 3 / 4"	0	3	4	0	2

## Why do your facilities build their ice thicker than $\frac{3}{4}$ "?

- "Not sure"
- "Close to"
- "Always have"
- "Lack of staff resources to maintain a lower thickness"
- "Industry standards no longer suggests  $\frac{3}{4}$ "
- "We paint our line on and they need to be protected"
- "Amount of use and past experience"
- "Due to demand and time for repair/building when needed"
- "We use a combination of outside temperature and reefers to cool the surface. Thus the thickness varies."
- "Uneven pad surface"
- "Status quo"
- "We utilize the laser technology which means that some of the ice will be thicker than  $\frac{3}{4}$ " because it goes from highest spot then 1"-1  $\frac{1}{4}$ " based on best industry standards to ensure adequate ice thickness for the safety of everyone on the ice."
- "Liability"
- "Uneven floors require a thicker build to ensure we have enough ice in the high spots."
- "1  $\frac{1}{4}$ " to 1  $\frac{1}{2}$ " when find that is the best quality"
- "Age of facility"
- "Safety"
- "I was told by my boss that it is an insurance requirement"
- "The minimum thickness on our ice is  $\frac{3}{4}$ " but due to the unevenness of our ice, many areas are maintained thicker; we also have a lot of usage between ice maintenance days so we tend to stay thicker than the minimum  $\frac{3}{4}$ " for liability reasons"
- "Risk of damaging logos and paint layers with thinner ice"
- "Age of refrigeration system needs to be thicker to keep frozen."
- "Natural ice"

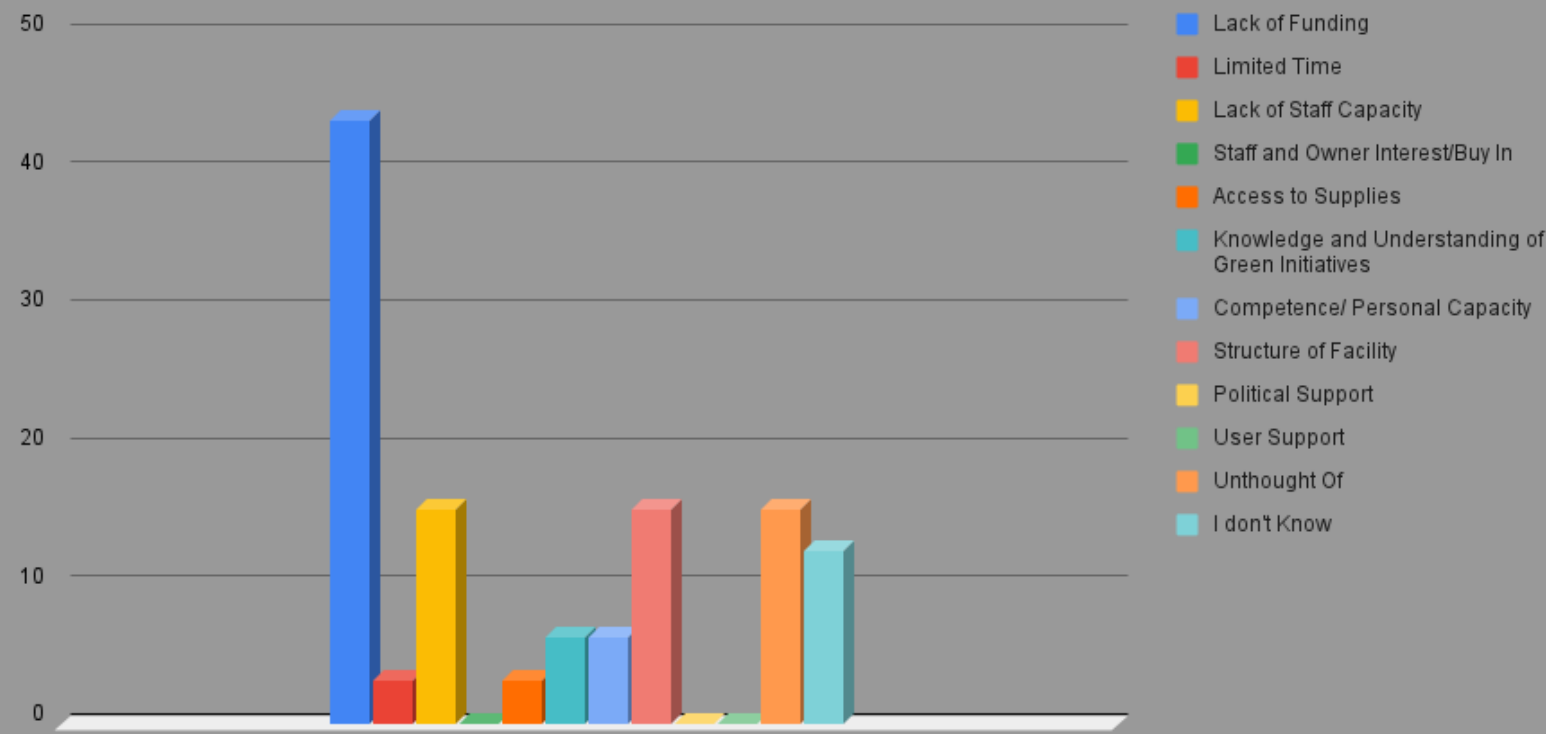
# Do your facilities use Laser Leveling Technology to monitor ice thickness?



Do your facilities use Laser Leveling Technology to monitor ice thickness?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	<u>50</u>	11	16	25	<b>21</b>
No	<u>50</u>	<u>86</u>	<u>84</u>	<u>69</u>	<u><b>76</b></u>
Some Do, But Most Do Not	0	3	0	6	<b>2</b>
Most Do, But Some Do Not	0	0	0	0	<b>0</b>



Why don't your facilities use Laser Leveling Technology?



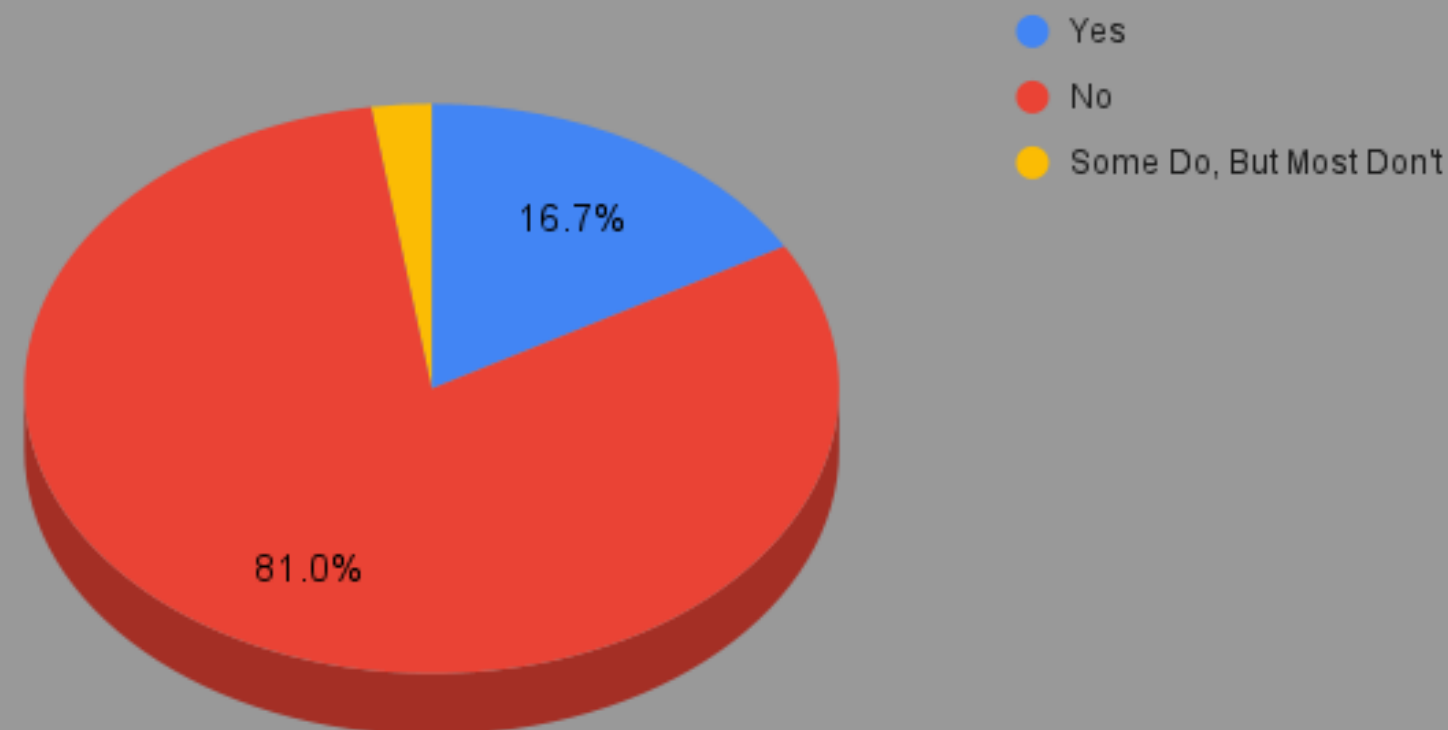
Why don't your facilities use Laser Leveling Technology?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	40	43	50	33	44
Limited Time	0	3	0	8	3
Lack of Staff Capacity	20	13	15	17	16
Staff and Owner Interest/Buy In	0	0	0	0	0

Access to Supplies	20	0	5	0	<b>3</b>
Knowledge/Understanding of Green Initiatives	0	7	5	8	<b>6</b>
Competence/Personal Capacity	0	7	5	8	<b>6</b>
Structure of Facility	0	17	20	8	<b>16</b>
Political Support	0	0	0	0	<b>0</b>
User Support	0	0	0	0	<b>0</b>
Unthought Of	0	17	10	25	<b>16</b>
I Don't Know	0	13	10	17	<b>12</b>

**Other Responses Include:**

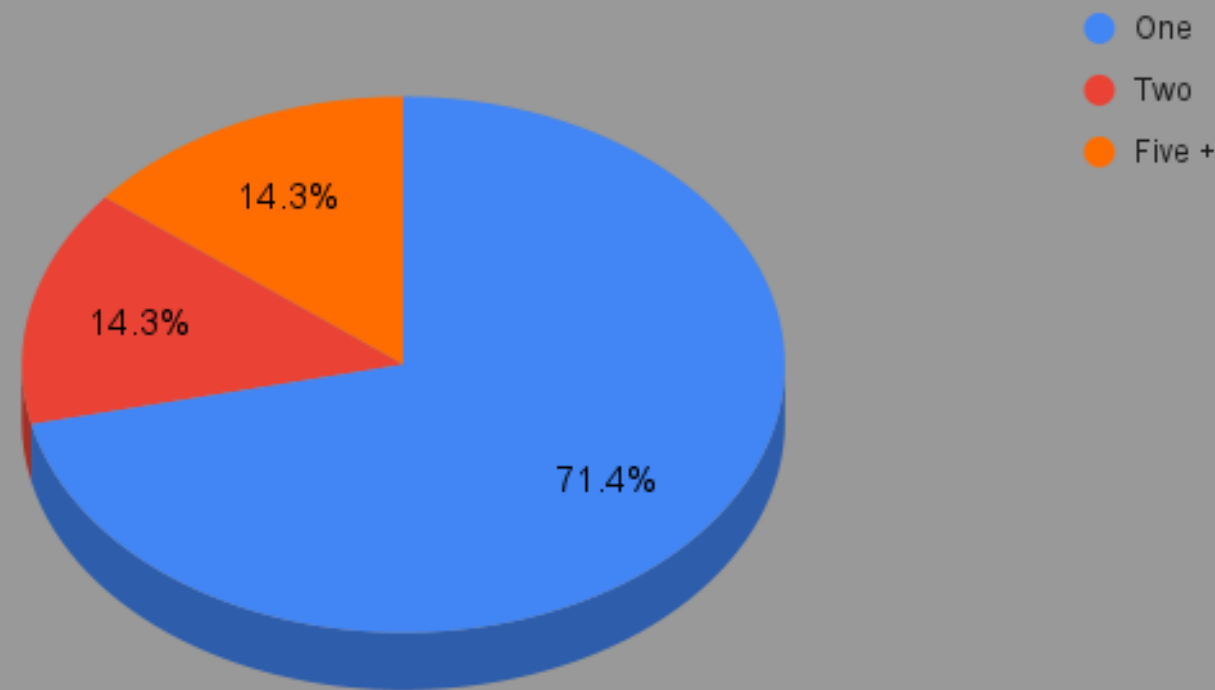
- “New ice resurface machine coming in 2023 may purchase with the new machine.”
- “With multiple facilities machines are used on the refrigerated outdoor - ground shifts to much for laser leveling.”
- “We have a twin facility that shares ice resurfacer and technology isn't there to set leveler between the two facilities.”
- “We hand measure the ice.”
- “Was considered when replacing ice resurfacer but was not convinced that the added cost was worth the investment and concerns about reliability.”
- “No need”

# Does your facility use electric ice resurfacers?



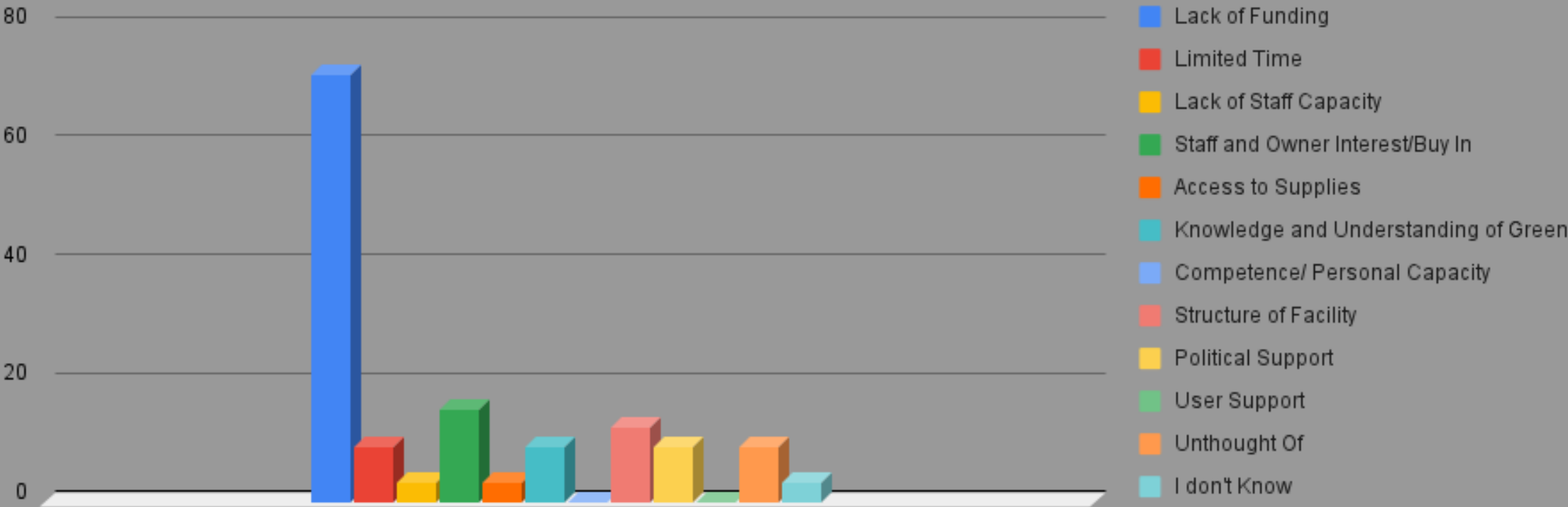
Does your facility use electric ice resurfacers?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	20	17	12	25	17
No	80	80	88	69	81
Some Do, But Most Do Not	0	3	0	6	2
Most Do, But Some Do Not	0	0	0	0	0

How many electric resurfacers does your facility use?



How many electric ice resurfacers does your facility use?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
One	50	67	100	50	71
Two	50	17	0	25	14
Three	0	0	0	0	0
Four	0	0	0	0	0
Five+	0	17	0	25	14

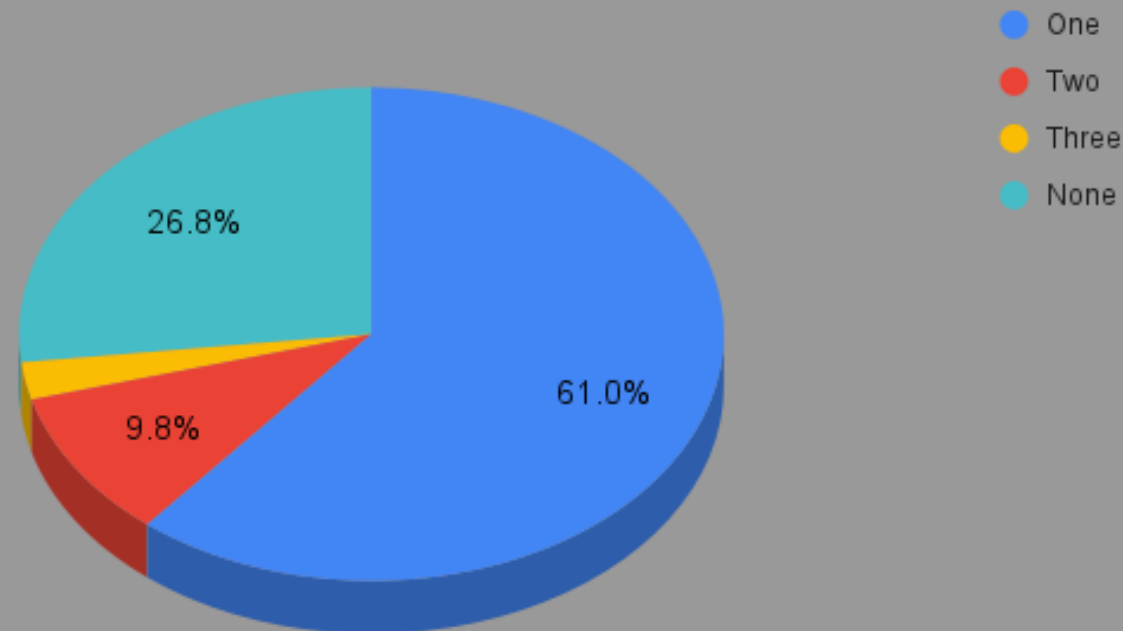
# Why don't your facilities use Electric Ice Resurfacers?



Why don't your facilities use Electric Ice Resurfacers?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	57	74	67	80	72
Limited Time	0	11	0	30	9
Lack of Staff Capacity	0	4	0	10	3
Staff and Owner Interest/Buy In	29	11	19	10	16

Access to Supplies	0	4	5	0	3
Knowledge/Understanding of Green Initiatives	0	11	10	10	9
Competence/Personal Capacity	0	0	0	0	0
Structure of Facility	29	11	5	20	13
Political Support	14	7	10	10	9
User Support	0	0	0	0	0
Unthought Of	14	7	10	10	9
I Don't Know	0	4	5	0	3

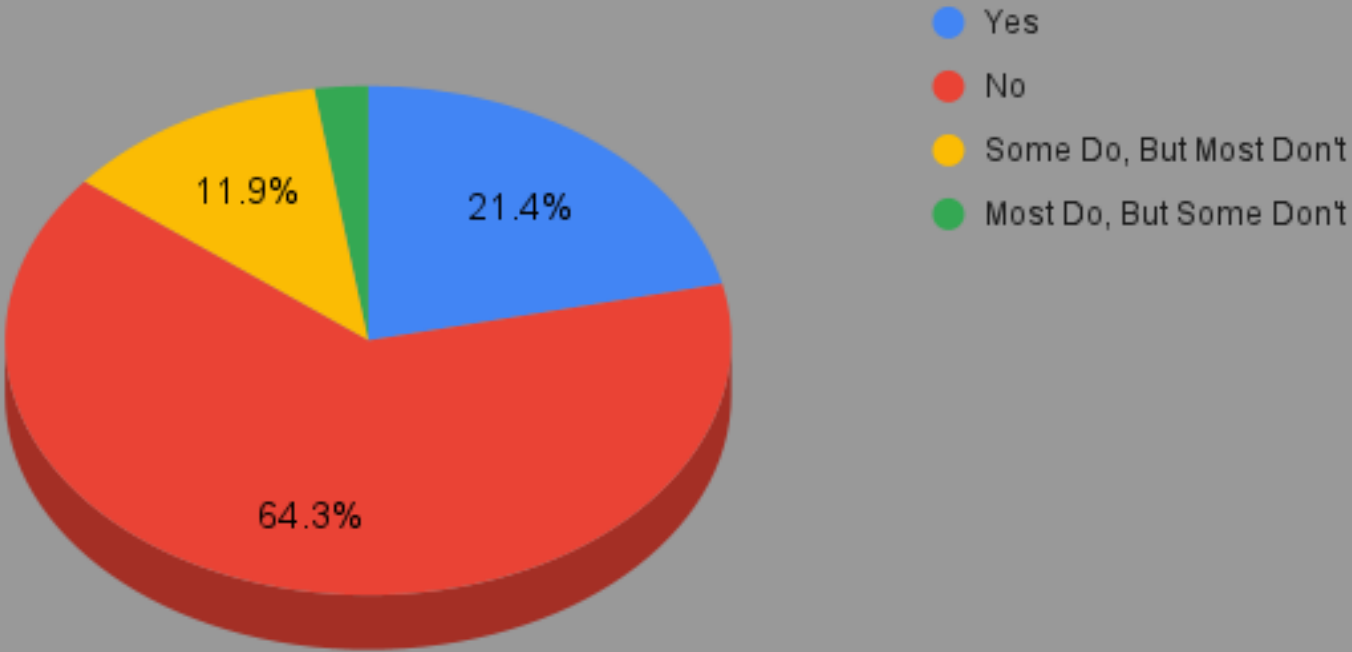
# How many gas/diesel ice resurfacers does your facility use?



How many electric ice resurfacers does your facility use?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	All
One	<u>61</u>	<u>50</u>	<u>59</u>	<u>79</u>	<u>61</u>
Two	10	20	9	8	10
Three	2	0	3	0	2
Four	0	0	0	0	0
Five+	0	0	0	0	0
None	27	30	29	13	27

Section 3: Current Off-Ice Green Initiatives

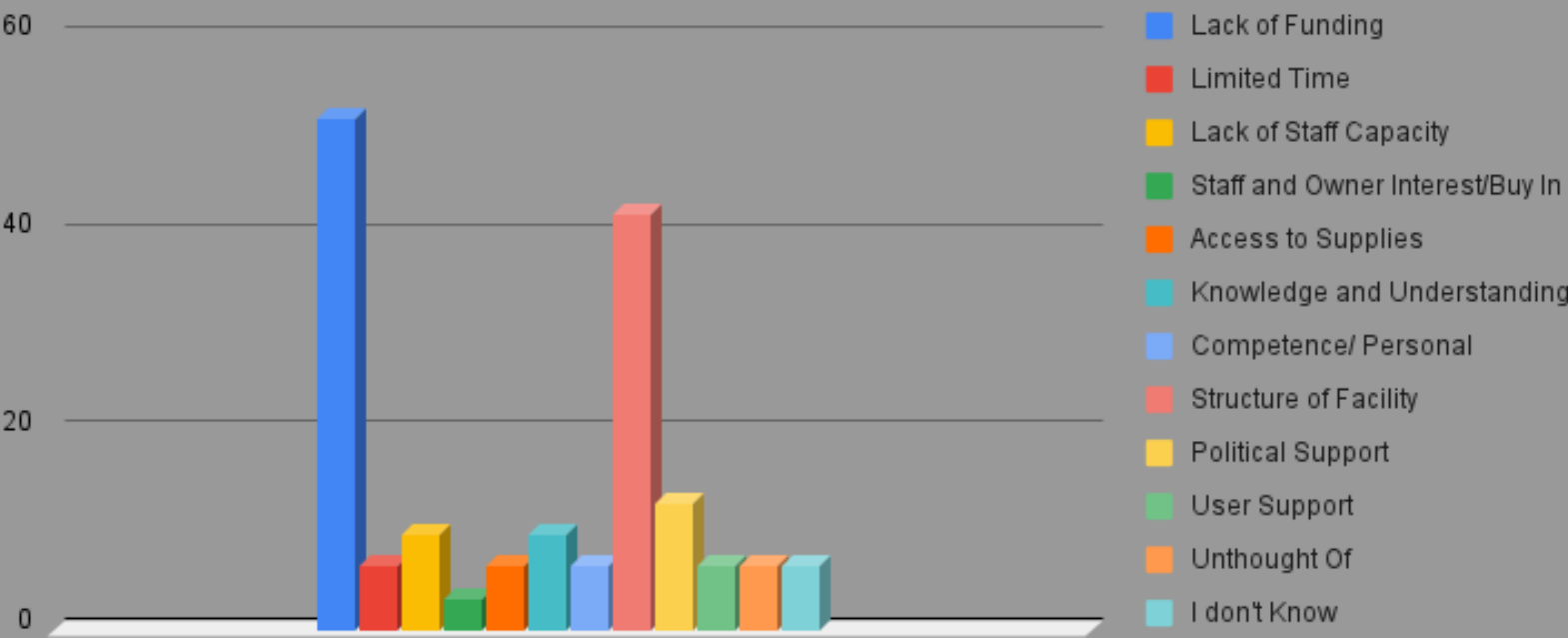
Do your facilities use heat recovery methods such as energy recycling?



Does your heat recovery methods?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	30	20	24	19	21
No	40	69	68	56	64
Some Do, But Most Do Not	30	9	8	19	12
Most Do, But Some Do Not	0	3	0	6	2



# Why don't your facilities use Heat Recovery Methods?



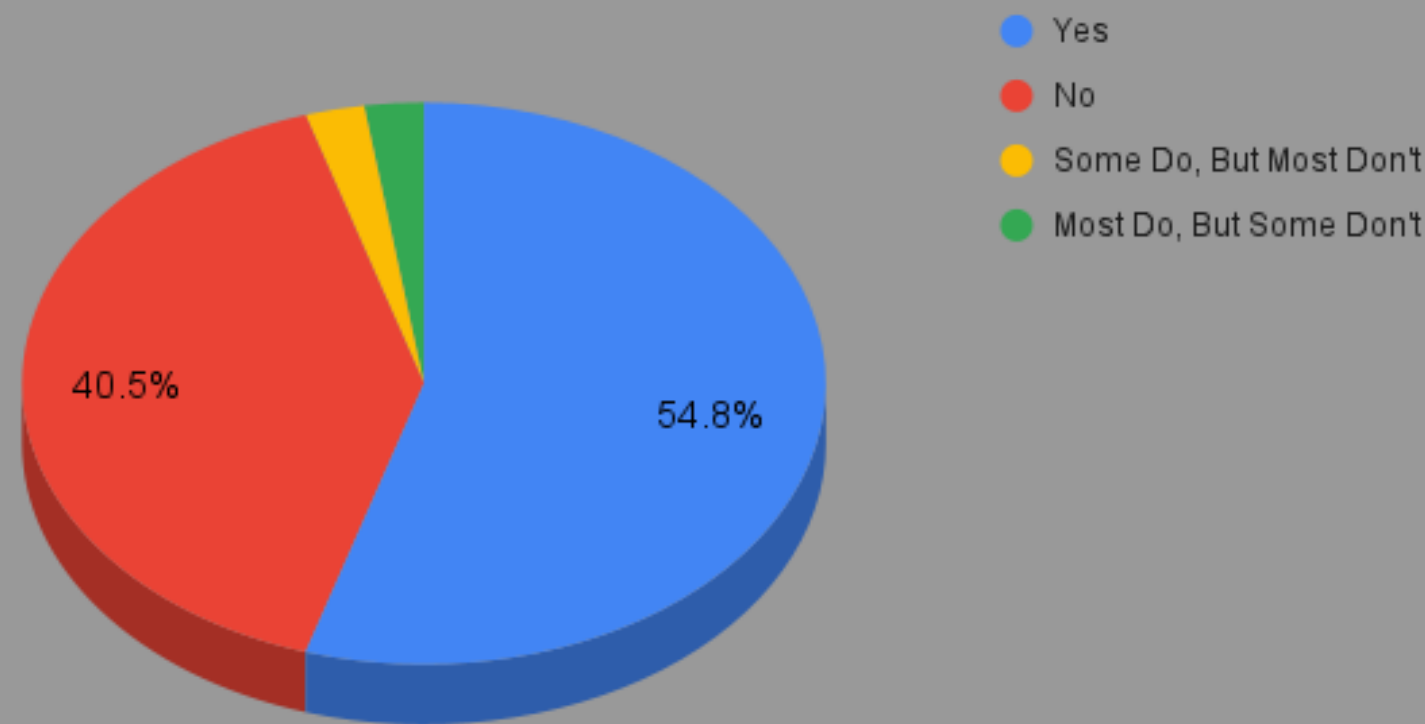
Why don't your facilities use Heat recovery Methods?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	50	52	56	42	52
Limited Time	0	7	0	17	6
Lack of Staff Capacity	0	11	11	8	10
Staff and Owner Interest/Buy In	17	0	6	0	3
Access to Supplies	17	4	6	8	6
Knowledge/Understanding of Green Initiatives	17	7	17	0	10

Competence/Personal Capacity	0	7	6	8	6
Structure of Facility	<u>50</u>	41	33	<u>50</u>	42
Political Support	17	11	6	17	13
User Support	17	4	6	8	6
Unthought Of	17	4	11	0	6
I Don't Know	0	7	6	8	6

**Other Responses Include:**

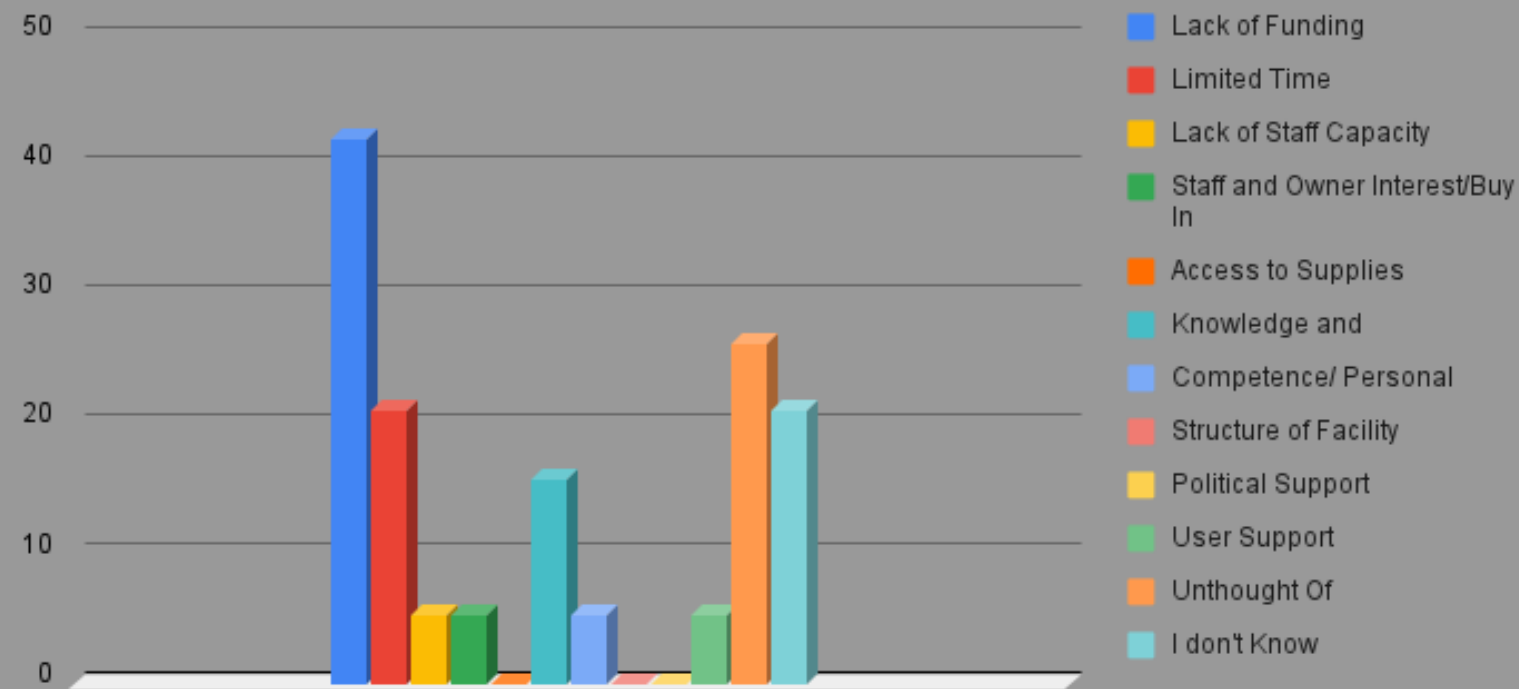
- "Facilities are very old and they were not implemented when they were built. When we can, we implement them when we are doing upgrades to the facilities."
- "Refrigeration system runs at low temperature so not cost effective at this time - is planned for new system"
- "Not available when we last did our upgrades in 2006"
- "Planned capital improvements including energy recovery for 2022"
- "Age of facility has made retrofitting not practical or cost effective"
- "Natural ice"

Do your facilities use low-flow water in the shower?



Do your facilities use low-flow water in the shower?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	<u>70</u>	<u>54</u>	40	<u>75</u>	<u>55</u>
No	10	46	<u>56</u>	19	40
Some Do, But Most Do Not	10	0	4	0	2
Most Do, But Some Do Not	10	0	0	6	2

# Why don't your facilities use Low-Flow Water?



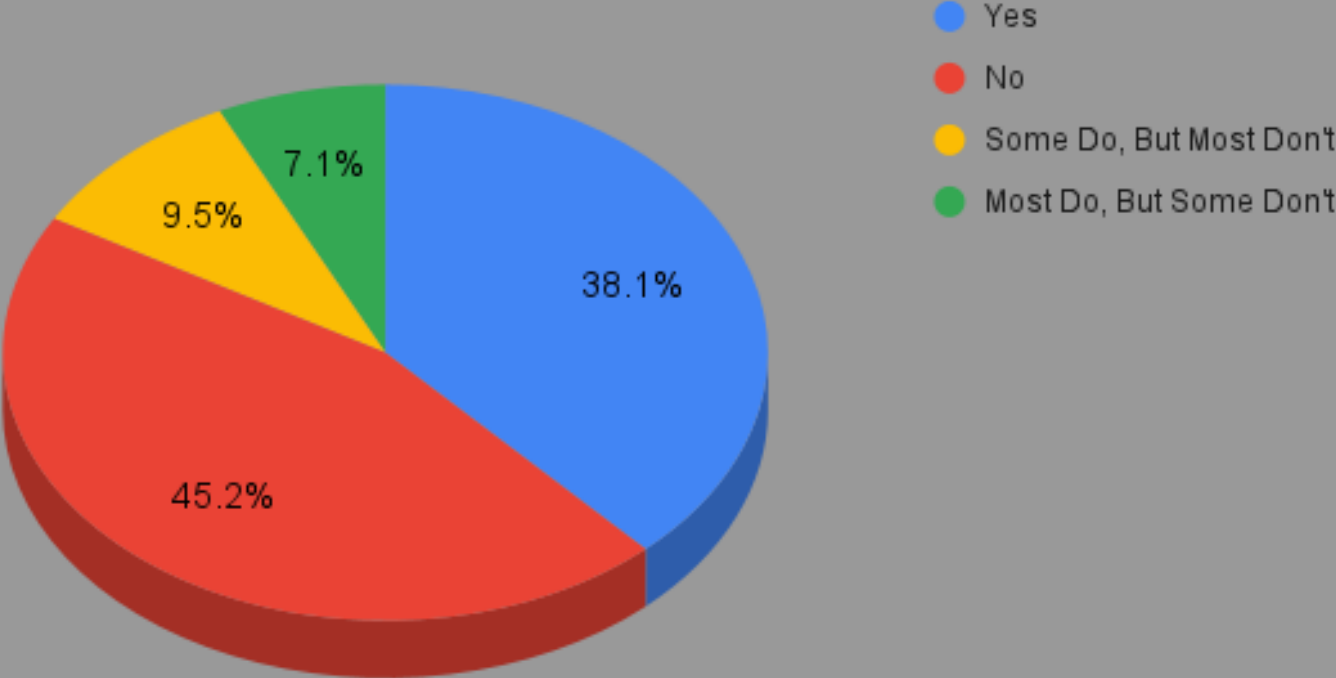
Why don't your facilities use Low- Flow Water?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	All
Lack of Funding	33	44	40	50	42
Limited Time	33	19	13	50	21
Lack of Staff Capacity	0	6	0	25	5
Staff and Owner Interest/Buy In	0	6	7	0	5
Access to Supplies	0	0	0	0	0

Knowledge/Understanding of Green Initiatives	<u>33</u>	13	20	0	<b>16</b>
Competence/Personal Capacity	0	6	7	0	<b>5</b>
Structure of Facility	0	0	0	0	<b>0</b>
Political Support	0	0	0	0	<b>0</b>
User Support	0	6	7	0	<b>5</b>
Unthought Of	<u>33</u>	25	27	25	<b>26</b>
I Don't Know	<u>33</u>	19	20	25	<b>21</b>

**Other Responses Include:**

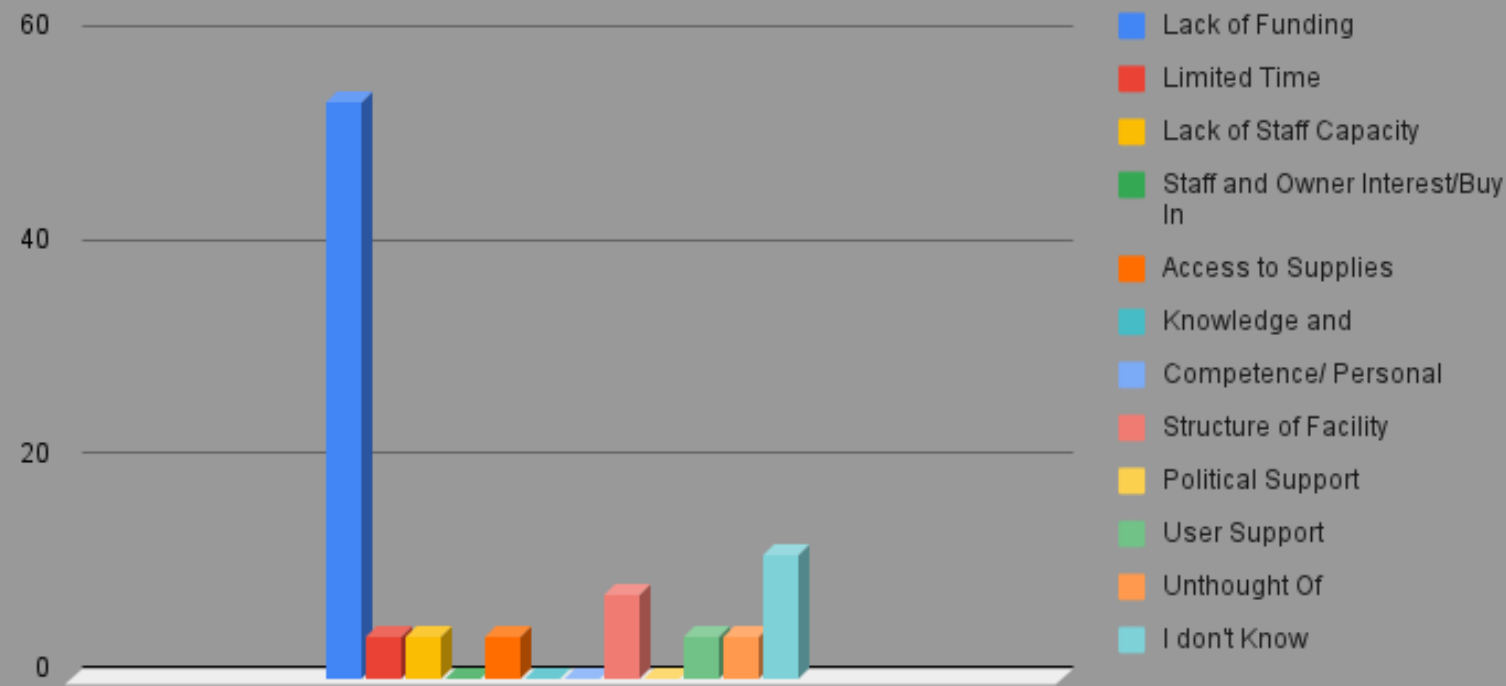
- “Old Building”
- “Not Needed”

Do your facilities use automatic timed hand washing sensors?



Do your facilities use automatic time hand washing sensors?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	<u>50</u>	34	28	<u>50</u>	<b>38</b>
No	<u>50</u>	<u>46</u>	<u>60</u>	25	<u>45</u>
Some Do, But Most Do Not	0	11	8	13	<b>10</b>
Most Do, But Some Do Not	0	9	4	13	<b>7</b>

Why don't your facilities use Automatic Timed Hand Washing Sensors?



Why don't your facilities use Automatic Times Hand Washing Sensors?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	80	48	56	50	54
Limited Time	0	4	0	13	4
Lack of Staff Capacity	0	4	0	13	4
Staff and Owner Interest/Buy In	0	0	0	0	0
Access to Supplies	0	4	0	13	4

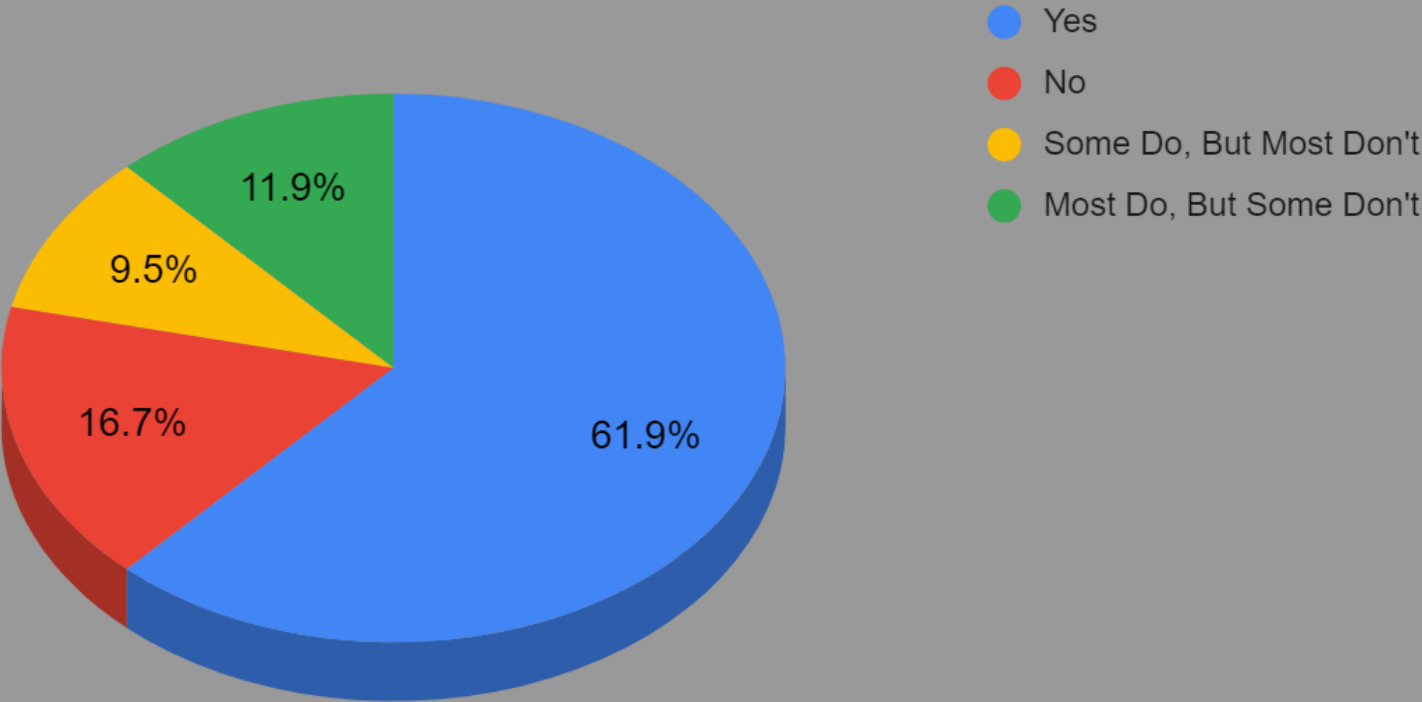
Knowledge/Understanding of Green Initiatives	0	0	0	0	0
Competence/Personal Capacity	0	0	0	0	0
Structure of Facility	0	9	11	0	8
Political Support	0	0	0	0	0
User Support	0	4	6	0	4
Unthought Of	0	4	0	13	4
I Don't Know	0	13	17	0	12

**Other Responses Include:**

- "With 10 facilities we have to manage our upgrades as priority and when we are doing upgrades then we implement all of these strategies"
- "Use motion sensor taps and showers in the facility"
- "Old building"
- "Have had reliability issues with some of the ones we have installed; not ready to pull the pin on transitioning all over"
- "Not needed"

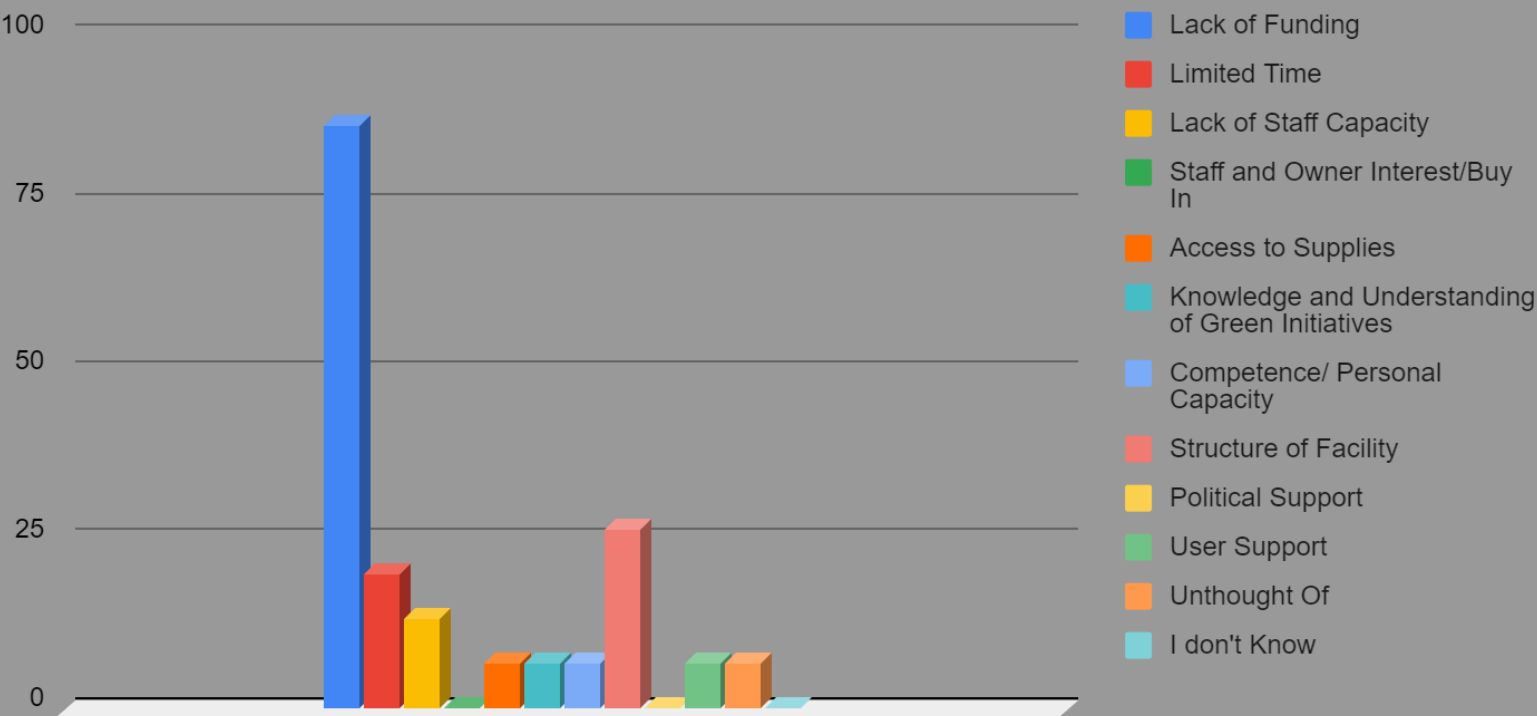


Do your facilities use Light Emitting Diodes (LEDs) in off-ice areas?



Do your facilities use LEDs in off-ice areas?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	All
Yes	80	60	64	63	62
No	0	20	24	6	17
Some Do, But Most Do Not	0	11	8	13	10
Most Do, But Some Do Not	20	9	4	19	12

Why don't your facilities use Light Emitting Diodes (LED) lighting?



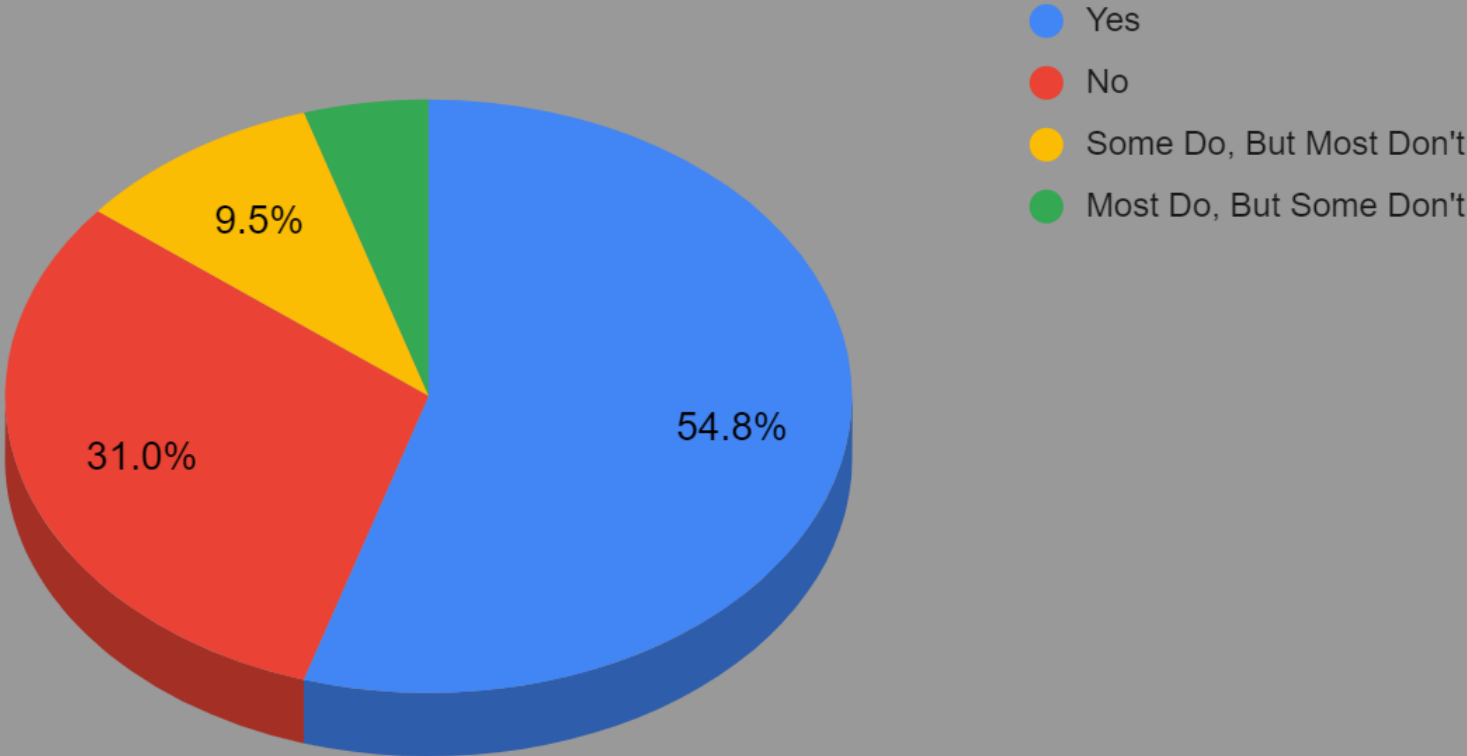
Why don't your facilities have LED lighting off the ice?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	100	86	86	80	87
Limited Time	0	21	11	40	20
Lack of Staff Capacity	0	14	0	40	13
Staff and Owner Interest/Buy In	0	0	0	0	0
Access to Supplies	0	7	0	20	7

Knowledge/Understanding of Green Initiatives	0	7	11	0	7
Competence/Personal Capacity	0	7	11	0	7
Structure of Facility	0	29	11	40	27
Political Support	0	0	0	0	0
User Support	0	7	11	0	7
Unthought Of	0	7	11	0	7
I Don't Know	0	0	0	0	0

**Other Responses Include:**

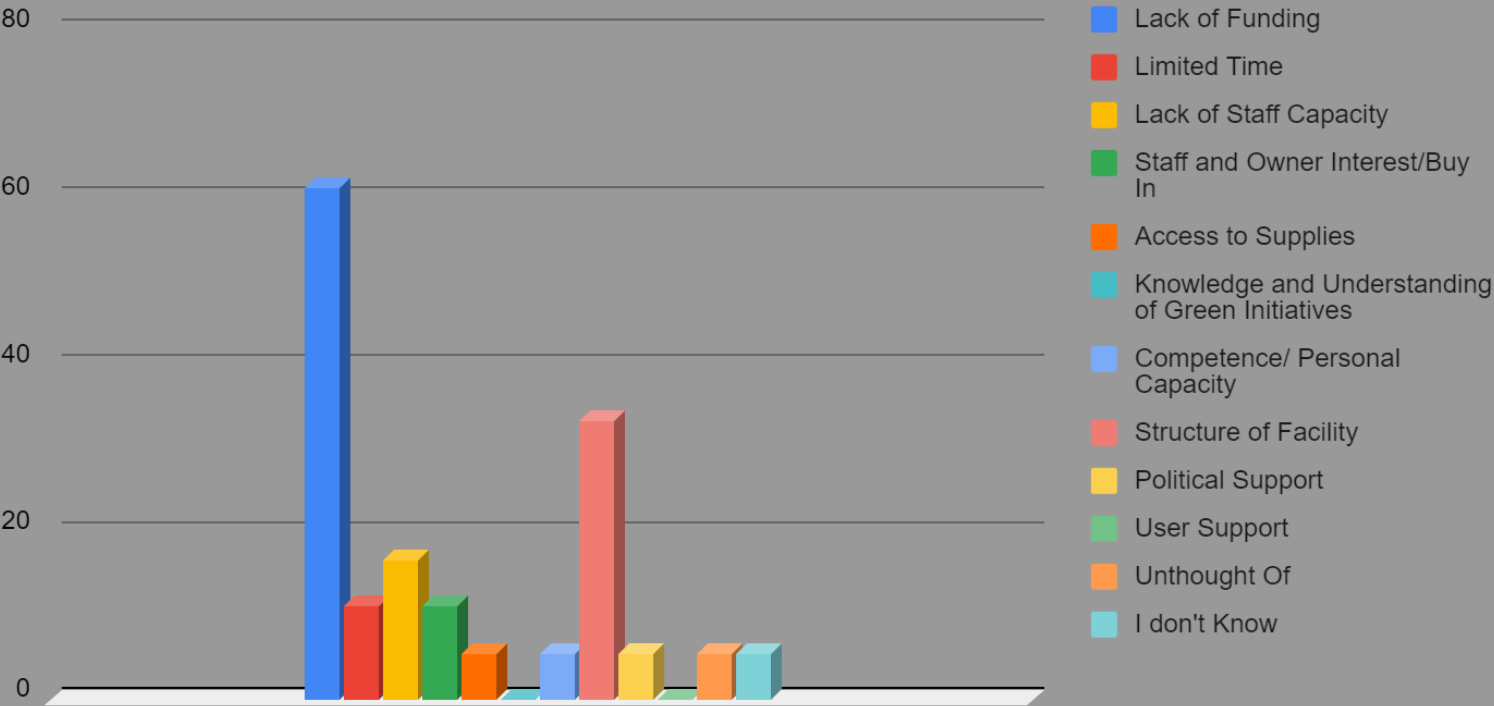
- "Implementing change to LED as funding permits"
- "Being proposed"
- "Old building"
- "Funding approval to transition all in 2022 to LED"
- "In the process of upgrading to LED"

Do your facilities use light dimmers/automatic lights?



Do your facilities use light dimmers/automatic lights?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	50	54	48	63	55
No	20	31	40	19	31
Some Do, But Most Do Not	20	11	12	6	10
Most Do, But Some Do Not	10	3	0	13	5

Why don't your facilities use Light Dimmers or Automatic Lights?



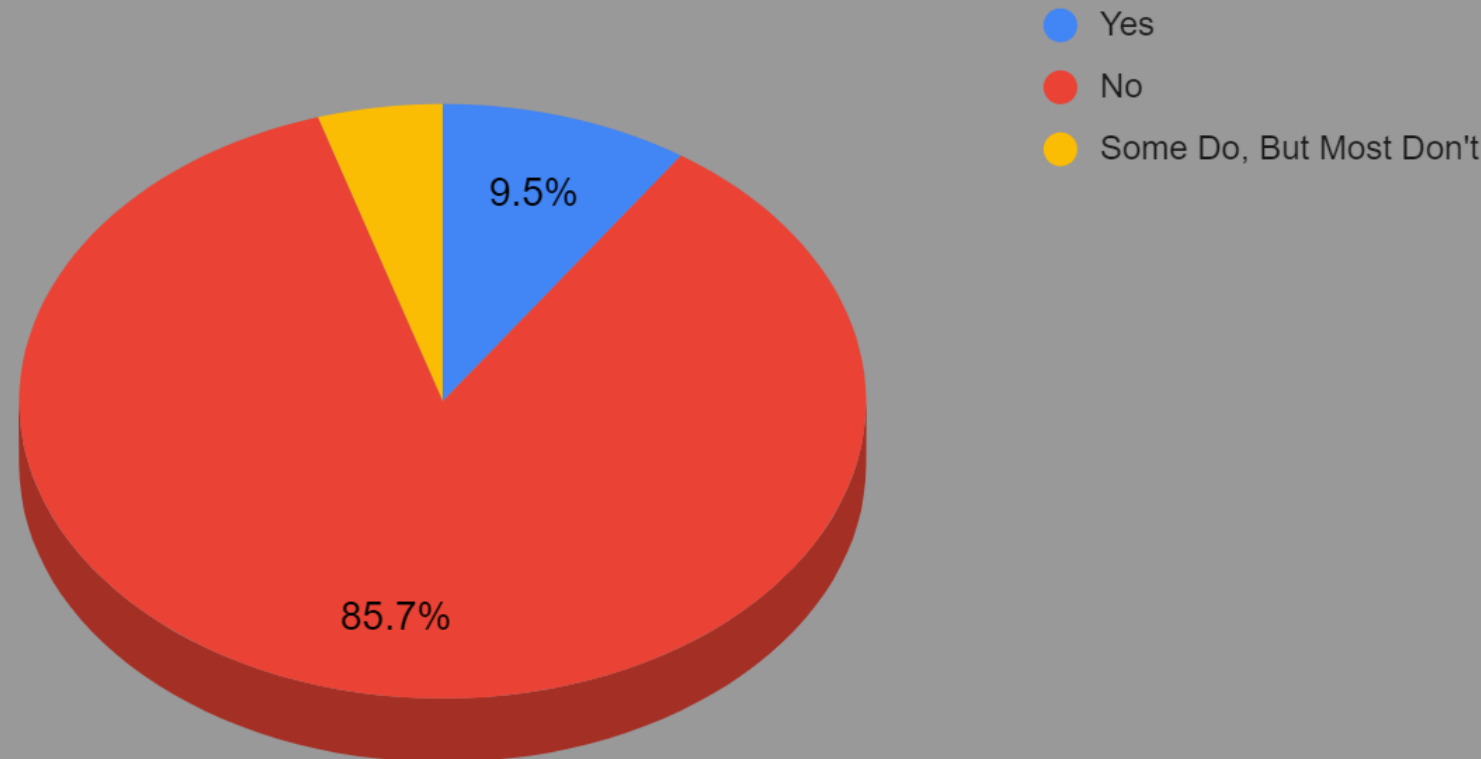
Why don't your facilities have light dimmers/automatic lights?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	75	56	69	40	61
Limited Time	0	13	8	20	11
Lack of Staff Capacity	25	13	15	20	17
Staff and Owner Interest/Buy In	25	6	15	0	11
Access to Supplies	0	6	8	0	6

Knowledge/Understanding of Green Initiatives	0	0	0	0	0
Competence/Personal Capacity	25	0	8	0	6
Structure of Facility	50	31	23	<u>60</u>	33
Political Support	0	6	0	20	6
User Support	0	0	0	0	0
Unthought Of	0	6	0	20	6
I Don't Know	0	6	0	20	6

**Other Responses Include:**

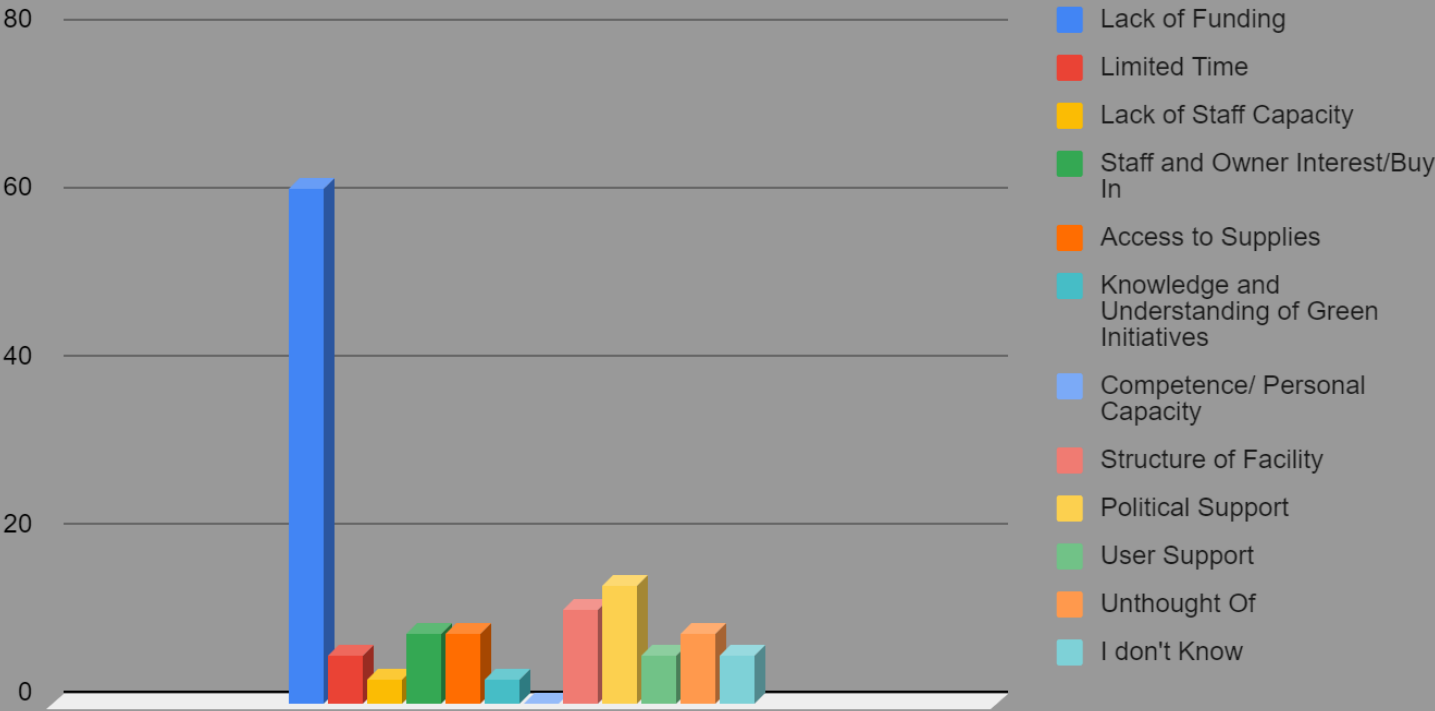
- "Motion sensors in change rooms, special switches controlled by staff and lights controlled by energy management system"
- "Cost to retrofit existing facility seems cost prohibitive; some areas retrofitted in 2012 do have motion activated lighting and all lighting is timed to go off at midnight if left on"
- "Not needed"

# Do your parking lots hold electric car charging stations?



Do your parking lots hold electric car charging stations?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	10	9	12	6	10
No	<u>90</u>	<u>86</u>	<u>88</u>	<u>81</u>	<u>86</u>
Some Do, But Most Do Not	0	6	0	13	5
Most Do, But Some Do Not	0	0	0	0	0

Why don't your facilities have Electric Car Charging Stations?



Why don't your facilities have Electric Car Charging Stations?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	50	65	62	57	61
Limited Time	0	6	0	14	6
Lack of Staff Capacity	0	3	0	7	3
Staff and Owner Interest/Buy In	0	10	10	0	8
Access to Supplies	0	10	10	7	8

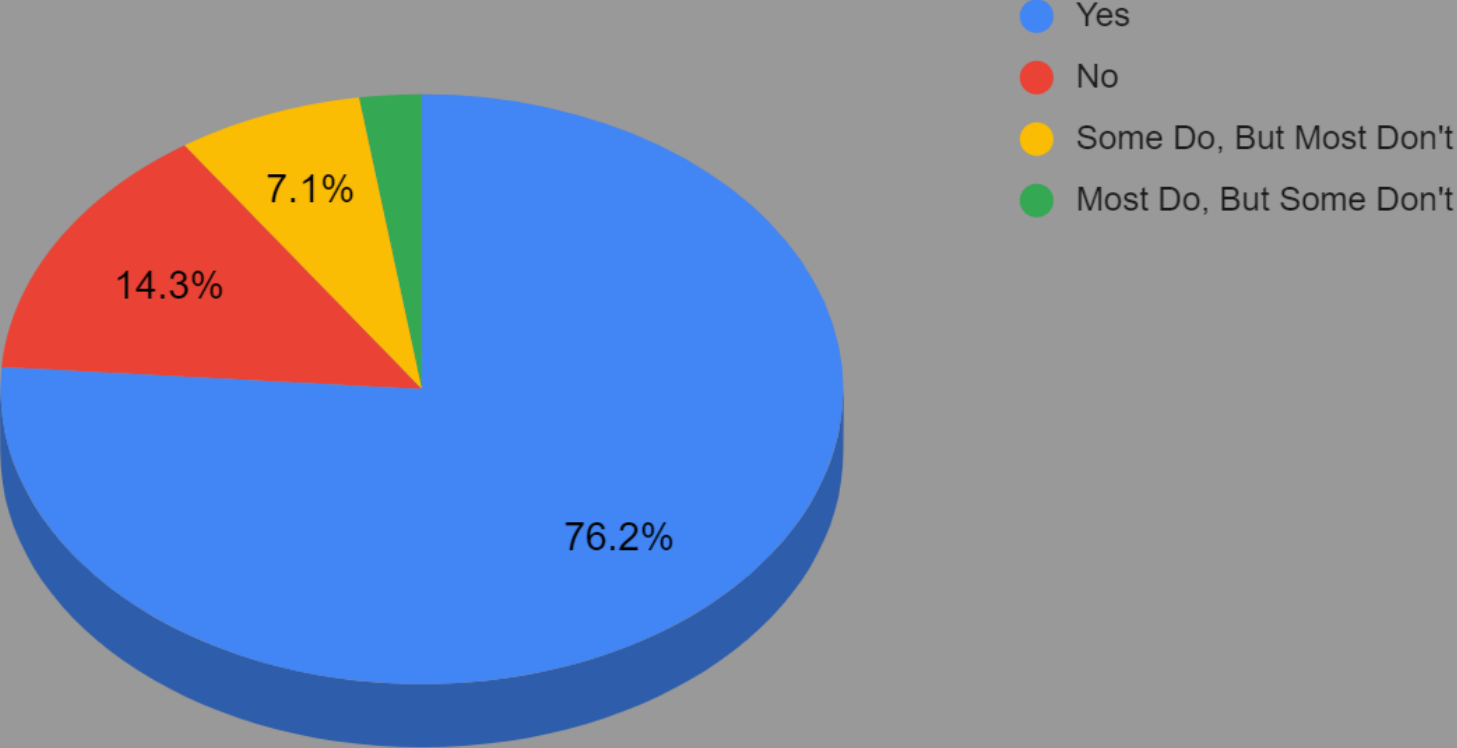


Knowledge/Understanding of Green Initiatives	13	3	5	0	3
Competence/Personal Capacity	0	0	0	0	0
Structure of Facility	13	10	10	7	11
Political Support	25	16	10	14	14
User Support	0	6	5	0	6
Unthought Of	38	3	10	7	8
I Don't Know	13	3	10	0	6

**Other Responses Include:**

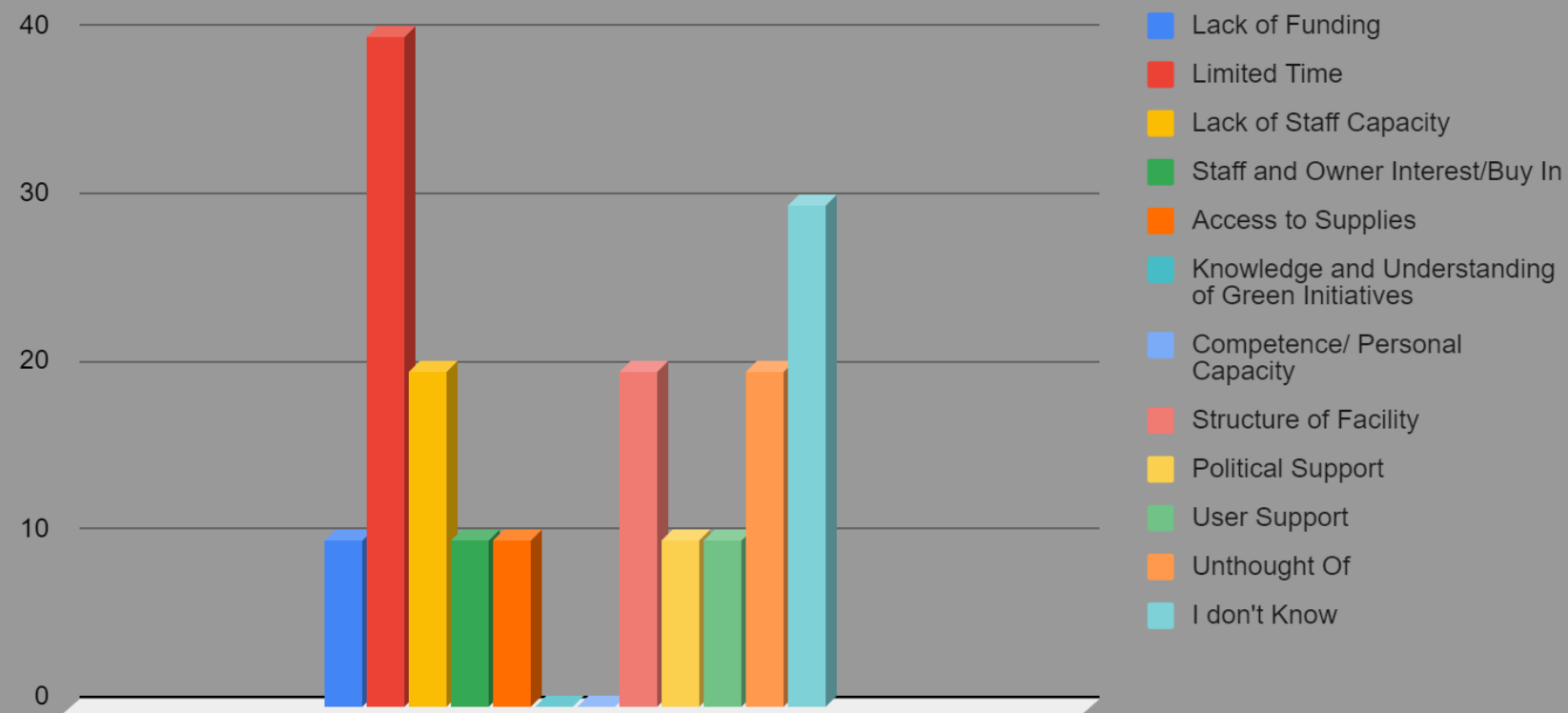
- "One Electric charging station will be installed in 2022"
- "No electric vehicles in our part of the country"
- "Remote community"
- "It has not been a community request"
- "Needs assessment"
- "Budgeted for 2022"
- "Infrastructure has not been installed. This would be an engineering and or public works initiative as we manage the facilities"
- "Not designed for it"
- "Nearby chargers"

# Does your facility recycle waste?



Does your facility recycle waste?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	All
Yes	<u>70</u>	<u>74</u>	<u>72</u>	<u>81</u>	<u>76</u>
No	10	14	20	6	14
Some Do, But Most Do Not	20	9	4	13	7
Most Do, But Some Do Not	0	3	4	0	2

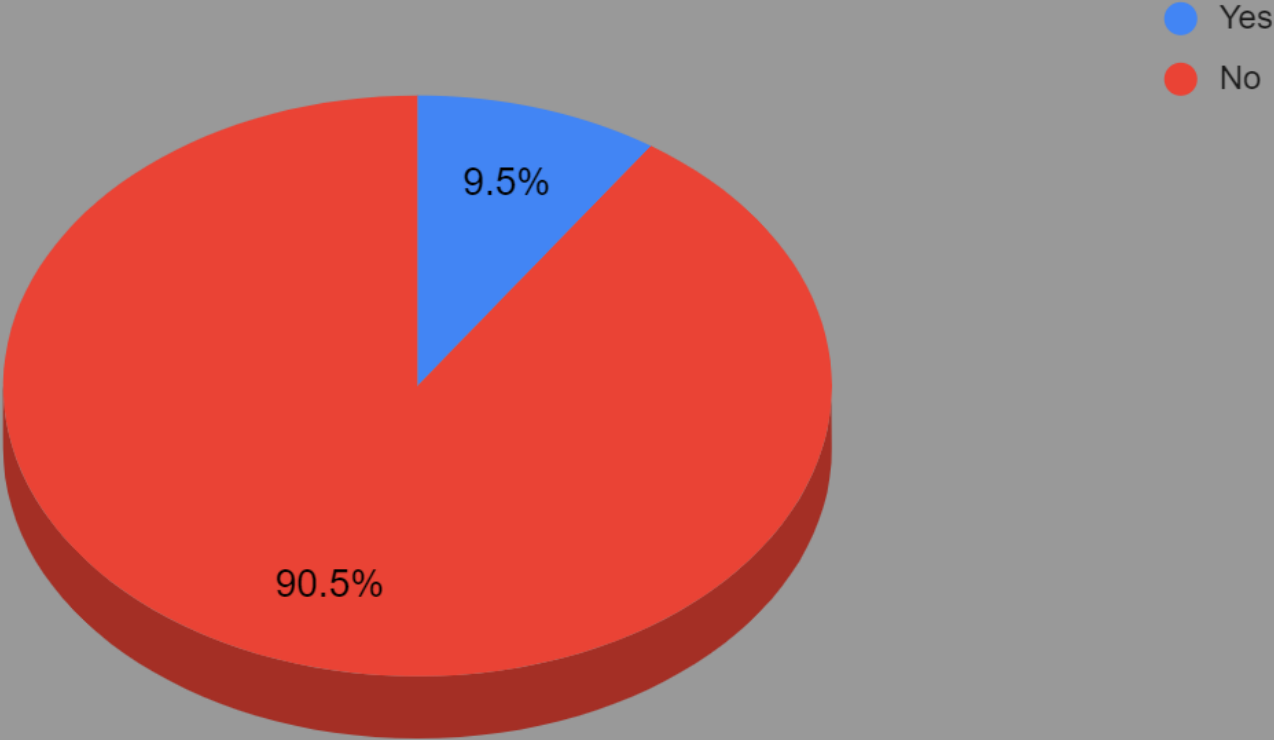
Why don't your facilities recycle waste?



Why don't your facilities recycle waste?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	All
Lack of Funding	0	11	0	<u>33</u>	10
Limited Time	<u>33</u>	<u>44</u>	<u>43</u>	<u>33</u>	<u>40</u>
Lack of Staff Capacity	0	22	14	<u>33</u>	20
Staff and Owner Interest/Buy In	0	11	0	<u>33</u>	10
Access to Supplies	0	11	14	0	10

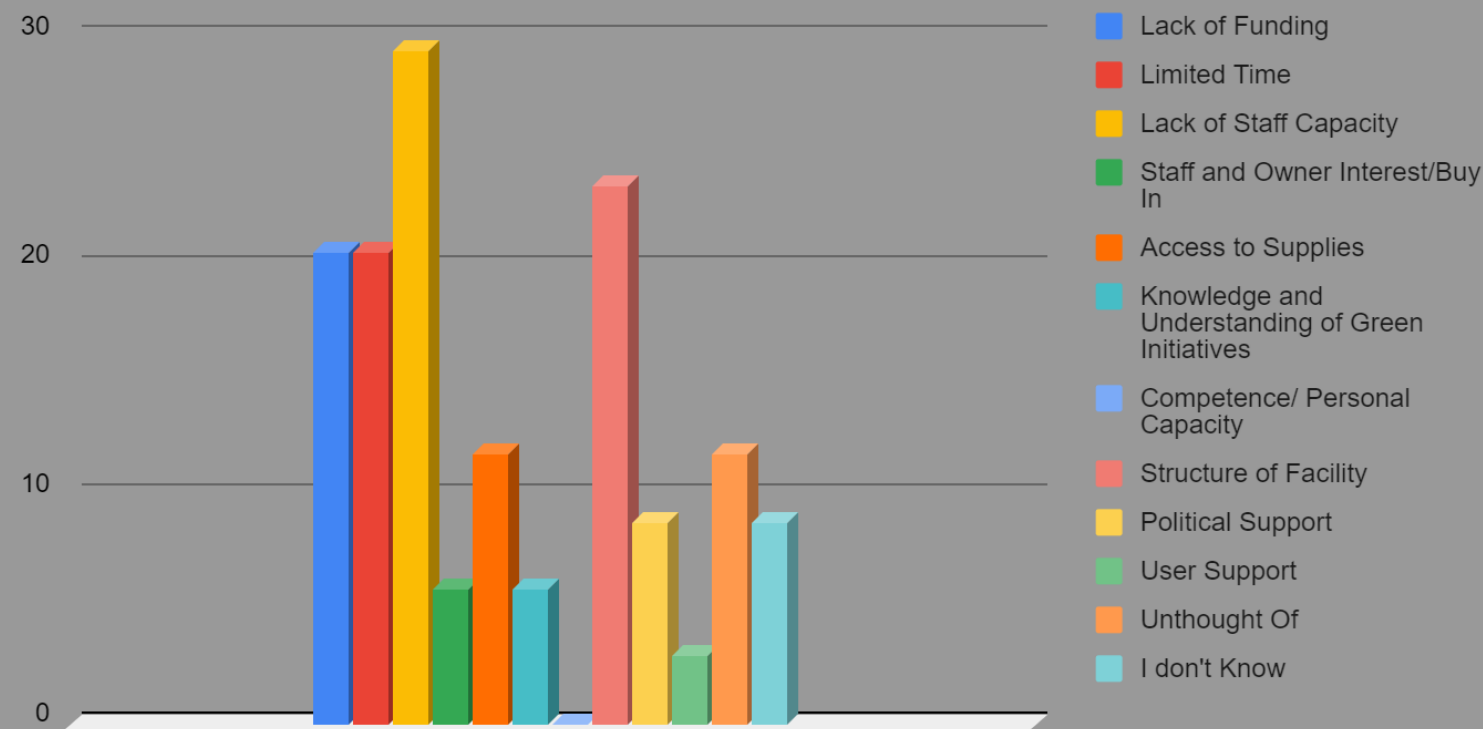
Knowledge/Understanding of Green Initiatives	0	0	0	0	0
Competence/Personal Capacity	0	0	0	0	0
Structure of Facility	0	22	14	<u>33</u>	20
Political Support	0	11	0	<u>33</u>	10
User Support	0	11	0	<u>33</u>	10
Unthought Of	<u>33</u>	11	14	<u>33</u>	20
I Don't Know	<u>33</u>	22	<u>43</u>	0	30

# Does your facility composte waste?



Does your facility compost waste?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	All
Yes	30	3	8	13	10
No	70	97	92	88	90
Some Do, But Most Do Not	0	0	0	0	0
Most Do, But Some Do Not	0	0	0	0	0

Why don't your facilities compost waste?



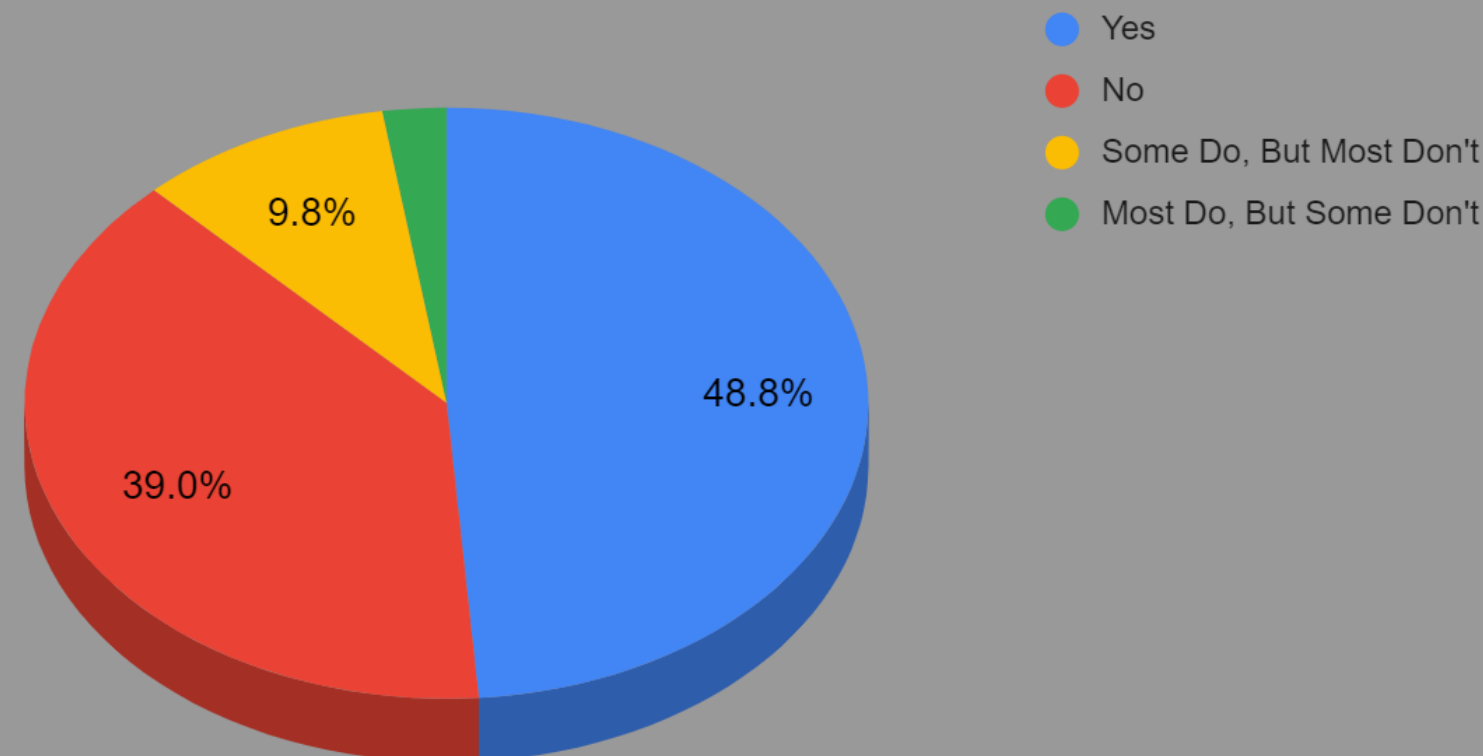
Why don't your facilities compost waste?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	0	23	<u>29</u>	8	21
Limited Time	0	23	19	17	21
Lack of Staff Capacity	<u>50</u>	<u>29</u>	24	<u>33</u>	<u>29</u>
Staff and Owner Interest/Buy In	0	6	10	0	6
Access to Supplies	0	13	14	0	12

Knowledge/Understanding of Green Initiatives	17	6	5	8	6
Competence/Personal Capacity	0	0	0	0	0
Structure of Facility	0	26	19	25	24
Political Support	17	10	10	8	9
User Support	0	3	0	0	3
Unthought Of	17	10	5	25	12
I Don't Know	17	6	14	0	9

**Other Responses Include:**

- "Limited staff and space"
- "Nothing compostable"
- "No compost program in town"
- "Remote location"
- "Old building"
- "Septic system"

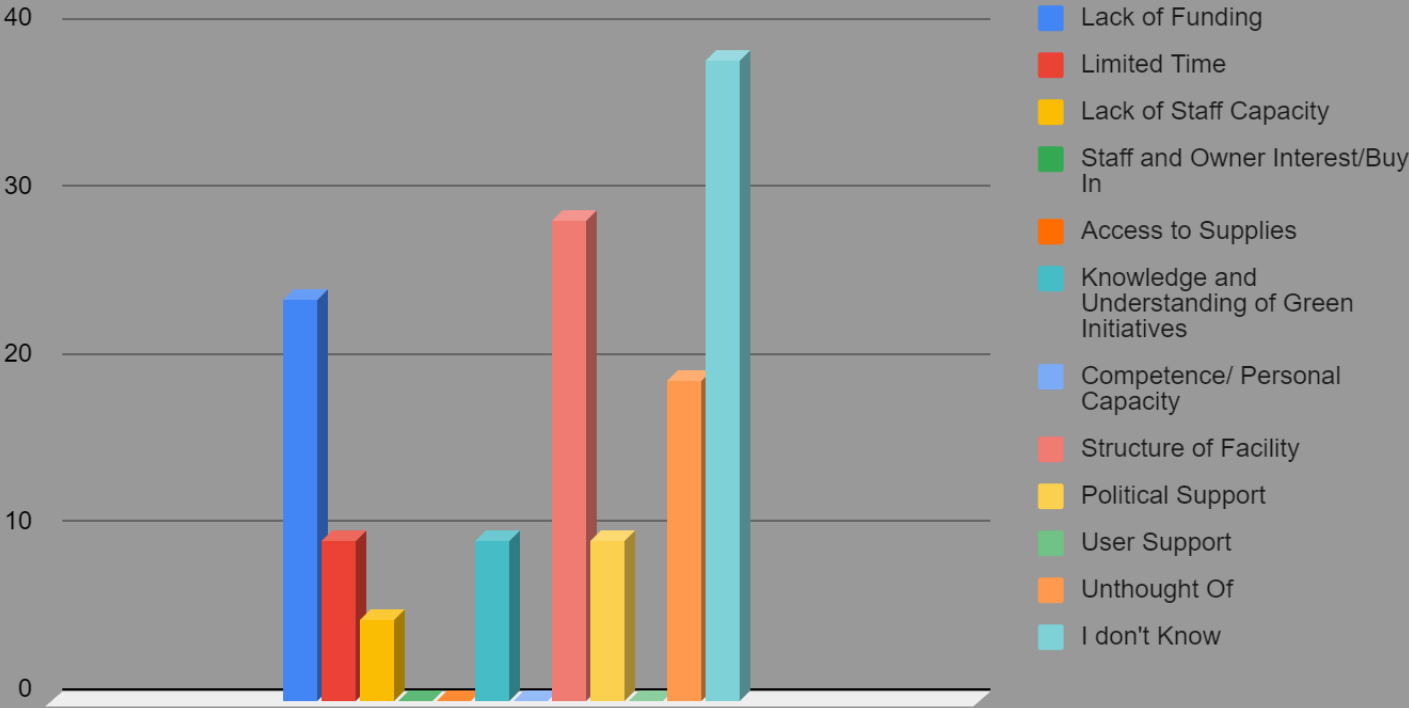
# Does your facility use low-emissivity (Low-e) ceiling coverings?



Does your facility use Low-e ceiling coverings?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	40	<u>56</u>	<u>46</u>	<u>50</u>	<u>49</u>
No	<u>50</u>	32	<u>46</u>	31	<b>39</b>
Some Do, But Most Do Not	0	12	8	13	<b>10</b>
Most Do, But Some Do Not	10	0	0	6	<b>2</b>



Why don't your facilities use Low Emissivity (Low-e) Ceiling Covers?



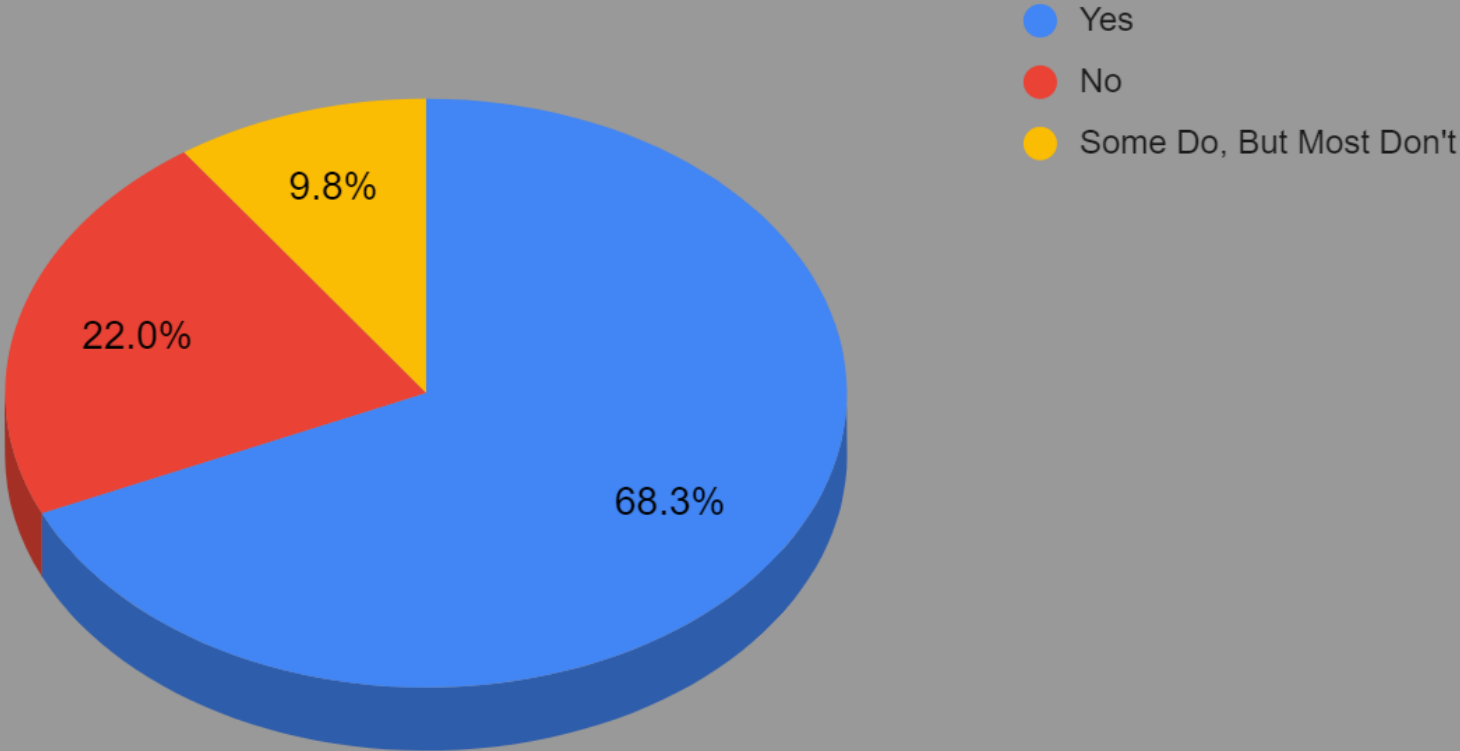
Why don't your facilities use Low-e Ceiling Covers?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	17	27	23	<u>25</u>	24
Limited Time	17	7	8	13	10
Lack of Staff Capacity	0	7	0	13	5
Staff and Owner Interest/Buy In	0	0	0	0	0
Access to Supplies	0	0	0	0	0

Knowledge/Understanding of Green Initiatives	17	7	8	13	10
Competence/Personal Capacity	0	0	0	0	0
Structure of Facility	<u>67</u>	13	31	<u>25</u>	29
Political Support	17	7	8	13	10
User Support	0	0	0	0	0
Unthought Of	17	20	15	<u>25</u>	19
I Don't Know	50	<u>33</u>	<u>46</u>	<u>25</u>	<u>38</u>

Other Responses Include:

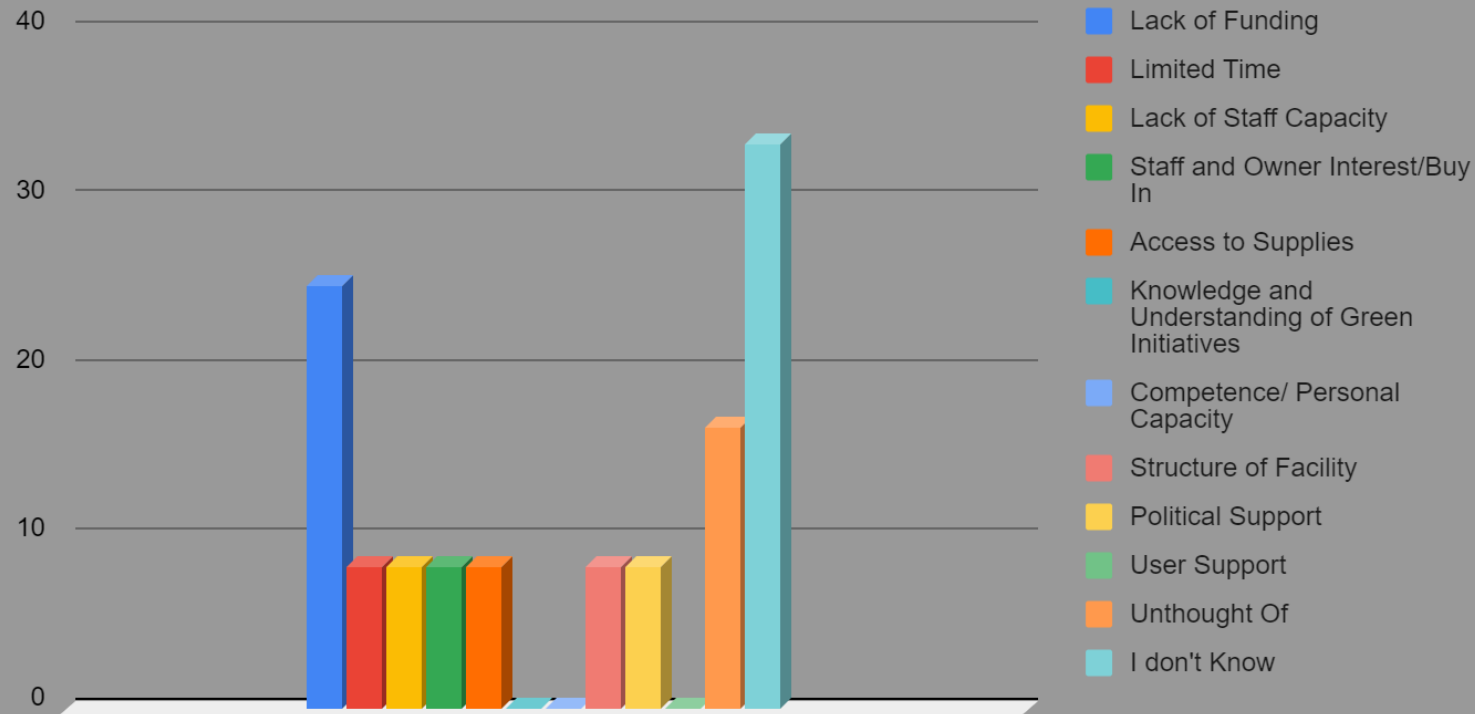
- "Not needed"
- "Engineered design"

# Do your facilities use reclaimed rubber flooring?



Do your facilities use reclaimed rubber flooring?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	80	68	71	63	68
No	10	24	29	13	22
Some Do, But Most Do Not	10	9	0	25	10
Most Do, But Some Do Not	0	0	0	0	0

## Why don't your facilities use Reclaimed Rubber Flooring?



Why don't your facilities use Reclaimed Rubber Flooring?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	50	20	33	17	25
Limited Time	0	10	0	17	8
Lack of Staff Capacity	0	10	0	17	8
Staff and Owner Interest/Buy In	0	10	0	17	8
Access to Supplies	0	10	17	0	8

Knowledge/Understanding of Green Initiatives	0	0	0	0	0
Competence/Personal Capacity	0	0	0	0	0
Structure of Facility	0	10	0	<u>17</u>	8
Political Support	0	10	0	<u>17</u>	8
User Support	0	0	0	0	0
Unthought Of	<u>50</u>	10	17	<u>17</u>	17
I Don't Know	<u>50</u>	<u>30</u>	<u>50</u>	<u>17</u>	<u>33</u>

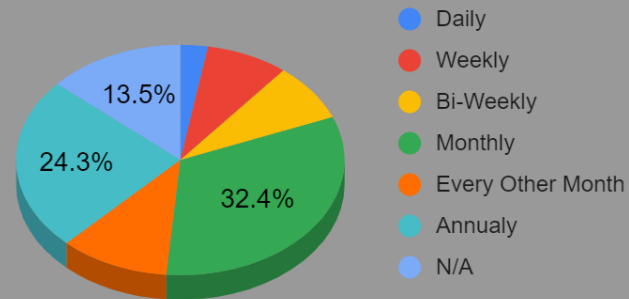
**Other Responses Include:**

- "We utilize it in areas of the facilities that could but we have a lot of different flooring needs that reclaimed rubber cannot support"
- "Reclaimed flooring is hard on skates"
- "Old building"
- "I'm actually not sure if we do or not; we have replaced rubber flooring in the past but I am not aware if it is recycled or not"
- "Durability and quality concerns"

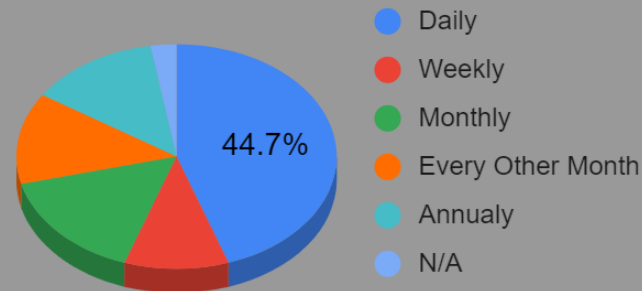
## Section 4: Maintenance

How often does your facility complete maintenance procedures on the following equipment?

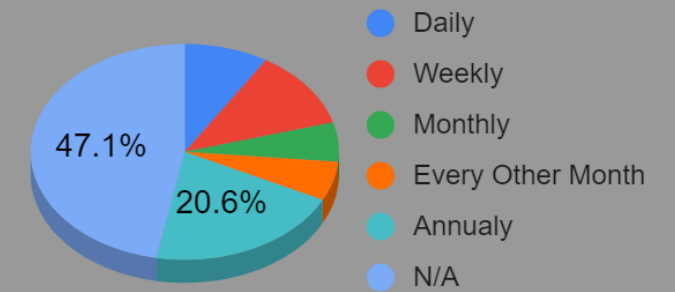
HVAC



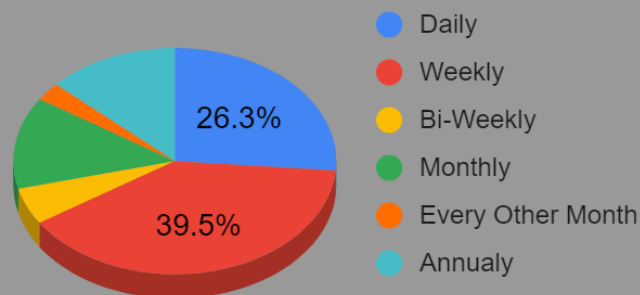
Refrigeration System



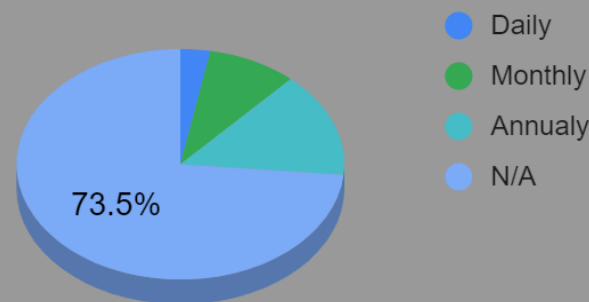
Water Purification System



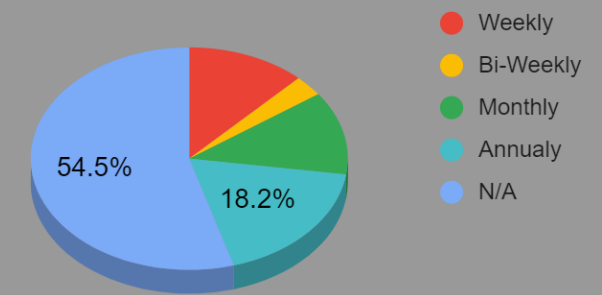
Ice Resurfacers



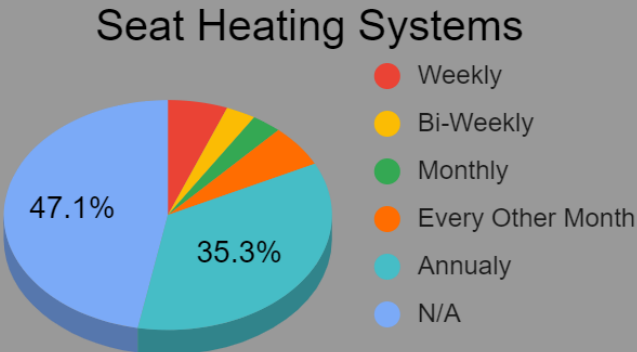
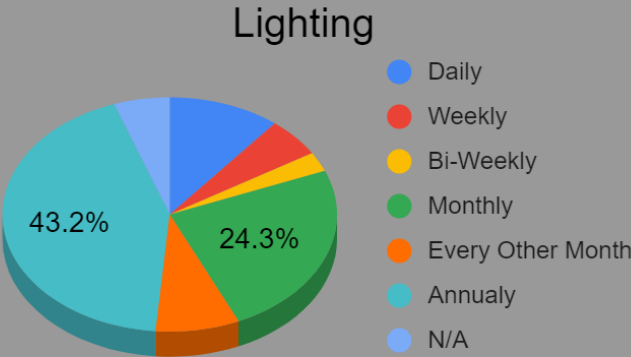
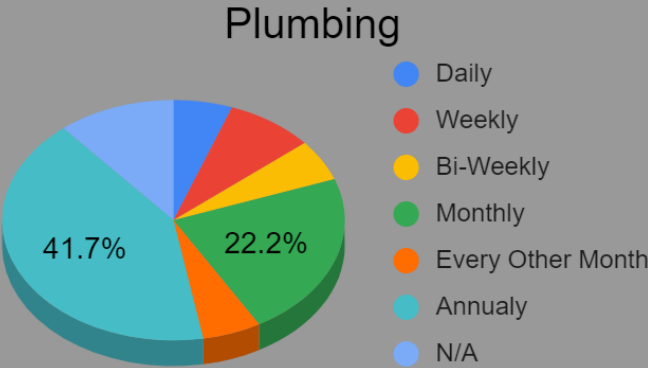
Conversion Floors



Heat Recovery Systems



How often does your facility complete maintenance procedures on the following equipment? (Continued)



How often does your facility complete maintenance on the following equipment?		Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
		Less Than 20 Years Old	20+ Years Old	One	More Than One	All
<b>HVAC</b>	Daily	0	3	0	7	<b>3</b>
	Weekly	11	7	5	14	<b>8</b>
	Bi-Weekly	<u>22</u>	7	9	7	<b>8</b>
	<u>Monthly</u>	<u>22</u>	<u>37</u>	23	<u>43</u>	<u><b>32</b></u>
	Every Other Month	11	10	18	0	<b>11</b>
	Annually	<u>22</u>	23	<u>27</u>	21	<b>24</b>
	N/A	11	13	18	7	<b>14</b>
<b>Refrigeration Systems</b>	<u>Daily</u>	<u>67</u>	<u>42</u>	<u>39</u>	<u>50</u>	<u><b>45</b></u>
	Weekly	22	6	9	14	<b>11</b>
	Bi-Weekly	0	0	0	0	<b>0</b>
	Monthly	0	19	17	14	<b>16</b>
	Every Other Month	0	16	13	14	<b>13</b>
	Annually	11	13	17	7	<b>13</b>
	N/A	0	3	4	0	<b>3</b>
<b>Water Purification System</b>	Daily	13	11	5	14	<b>9</b>
	Weekly	<u>38</u>	4	21	0	<b>12</b>
	Bi-Weekly	0	0	0	0	<b>0</b>
	Monthly	0	7	0	14	<b>6</b>
	Every Other Month	0	7	11	0	<b>6</b>
	Annually	13	21	16	29	<b>21</b>
	<u>N/A</u>	<u>38</u>	<u>50</u>	<u>47</u>	<u>43</u>	<u><b>47</b></u>



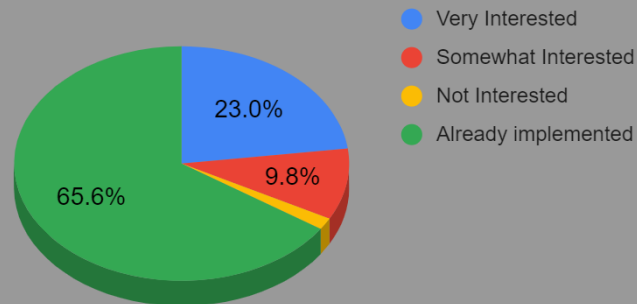
<b>Ice Resurfacers</b>	Daily	33	26	<u>35</u>	7	<b>26</b>
	<u>Weekly</u>	<u>44</u>	<u>39</u>	26	<u>64</u>	<u>39</u>
	Bi-Weekly	11	3	0	14	<b>5</b>
	Monthly	0	16	13	14	<b>13</b>
	Every Other Month	0	3	4	0	<b>3</b>
	Annually	11	13	22	0	<b>13</b>
	N/A	0	0	0	0	<b>0</b>
<b>Conversion Floors</b>	Daily	0	4	5	0	<b>3</b>
	Weekly	0	0	0	0	<b>0</b>
	Bi-Weekly	0	0	0	0	<b>0</b>
	Monthly	25	4	5	17	<b>9</b>
	Every Other Month	0	0	0	0	<b>0</b>
	Annually	0	18	10	25	<b>15</b>
	<u>N/A</u>	<u>75</u>	<u>75</u>	<u>81</u>	<u>58</u>	<u>74</u>
<b>Heat Recovery Systems</b>	Daily	0	0	0	0	<b>0</b>
	Weekly	<u>38</u>	4	11	15	<b>12</b>
	Bi-Weekly	13	4	5	0	<b>3</b>
	Monthly	13	11	0	31	<b>12</b>
	Every Other Month	0	0	0	0	<b>0</b>
	Annually	0	22	26	8	<b>18</b>
	<u>N/A</u>	<u>38</u>	<u>59</u>	<u>58</u>	<u>46</u>	<u>55</u>
<b>Plumbing</b>	Daily	0	7	5	8	<b>6</b>
	Weekly	22	7	5	15	<b>8</b>
	Bi-Weekly	22	0	9	0	<b>6</b>
	Monthly	22	21	18	<u>23</u>	<b>22</b>
	Every Other Month	0	7	5	8	<b>6</b>
	<u>Annually</u>	<u>33</u>	<u>45</u>	<u>55</u>	<u>23</u>	<u>42</u>
	N/A	0	14	5	<u>23</u>	<b>11</b>

<b>Lighting</b>	Daily	0	13	9	14	<b>11</b>
	Weekly	22	3	5	7	<b>5</b>
	Bi-Weekly	11	0	5	0	<b>3</b>
	Monthly	<u>33</u>	20	18	<u>36</u>	<b>24</b>
	Every Other Month	11	7	0	21	<b>8</b>
	<u>Annually</u>	22	<u>50</u>	<u>55</u>	21	<b><u>43</u></b>
	N/A	0	7	9	0	<b>5</b>
<b>Seat Heating Systems</b>	Daily	0	0	0	0	<b>0</b>
	Weekly	25	0	10	0	<b>6</b>
	Bi-Weekly	0	4	0	8	<b>3</b>
	Monthly	0	4	0	8	<b>3</b>
	Every Other Month	0	7	0	8	<b>6</b>
	Annually	<u>38</u>	32	43	25	<b>35</b>
	<u>N/A</u>	<u>38</u>	<u>54</u>	<u>48</u>	<u>50</u>	<b><u>47</u></b>

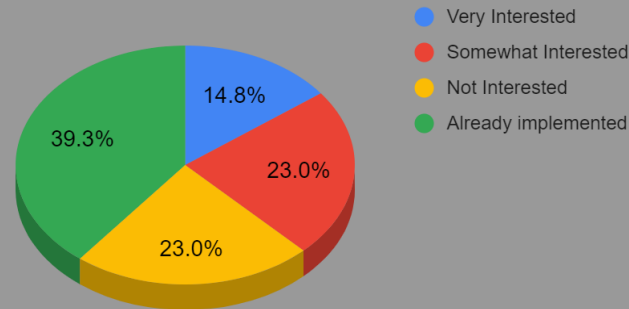
## Section 5: Intent to Become Greener

How interested is your facility in implementing the following green initiatives?

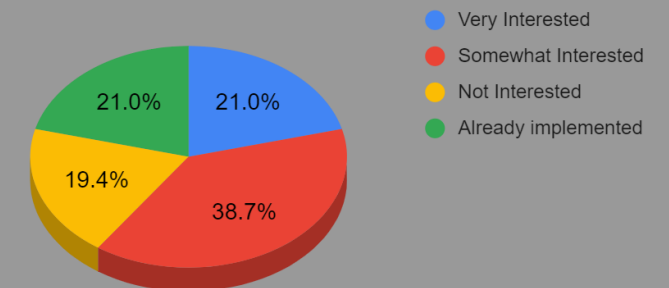
Switching to LED lighting On-Ice



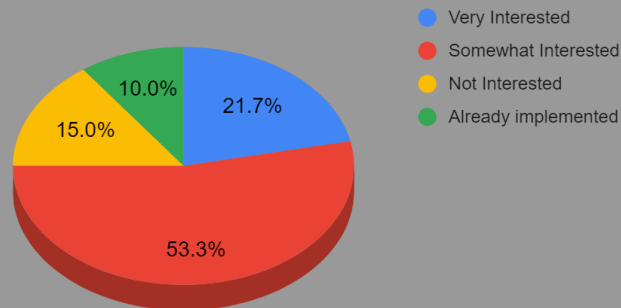
Switching to a Natural Refrigeration System



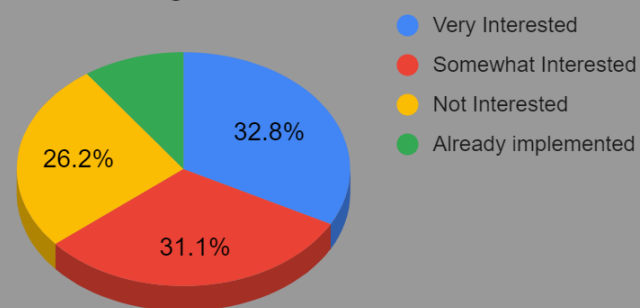
Using laser leveling technology to monitor ice thickness



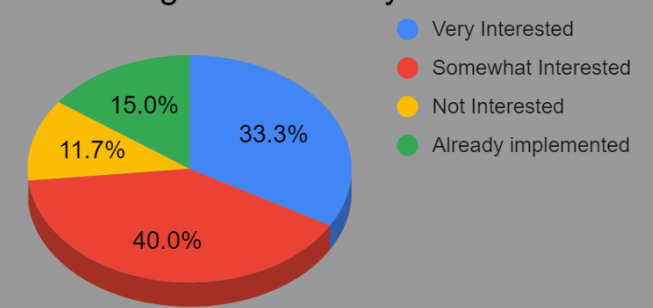
Switching to a greener water purification system



Switching to electric ice resurfacers

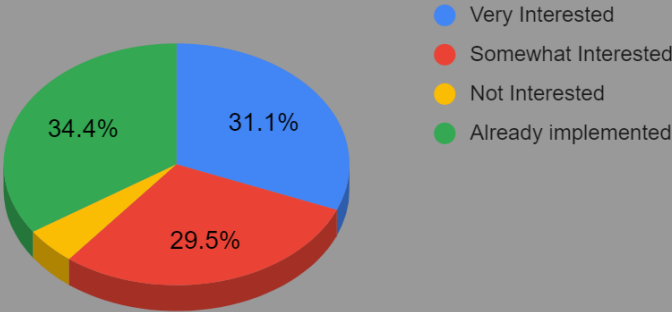


Using heat recovery methods

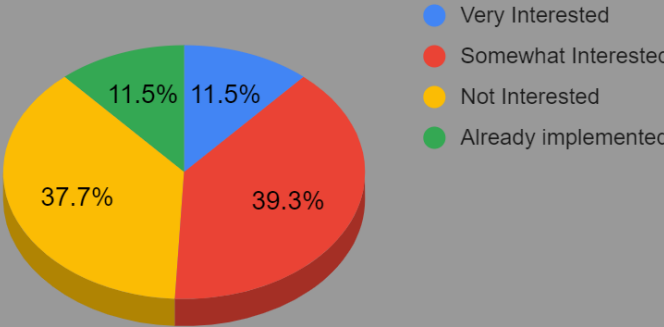


How interested is your facility in implementing the following green initiatives? (Continued)

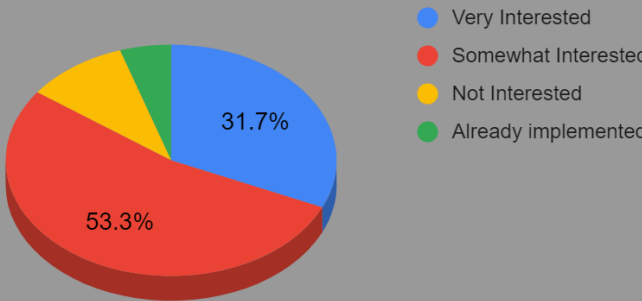
Completing frequent maintenance of facility equipment



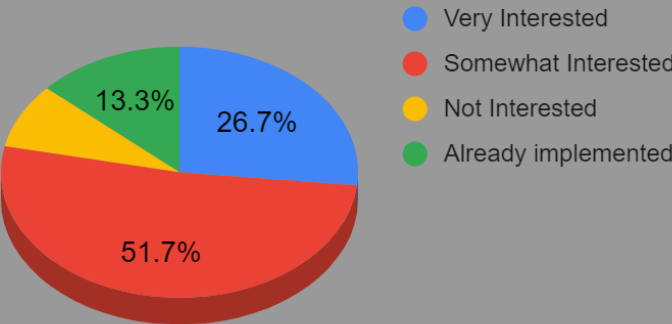
Employing a Sustainability Representative



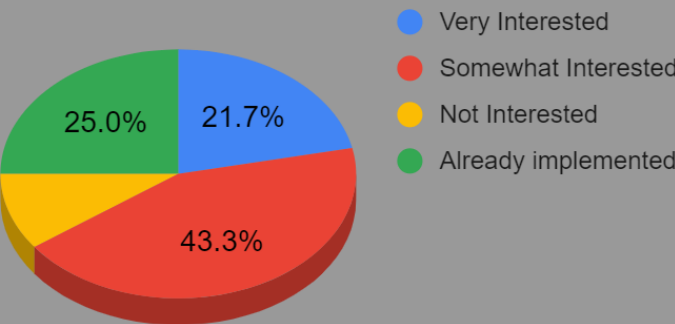
Attending Professional Development Related to Green Initiatives



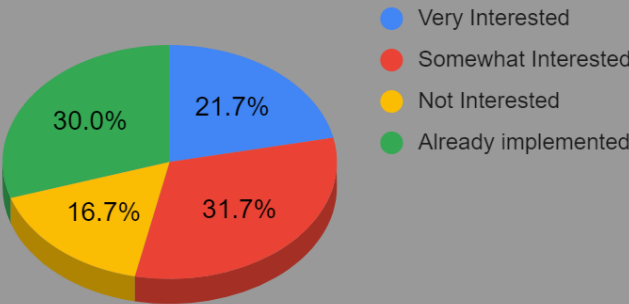
Participating in energy recycling



Installing low-flow water systems

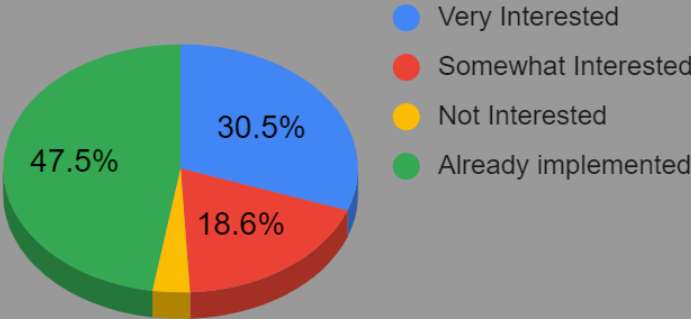


Installing automatic hand-washing

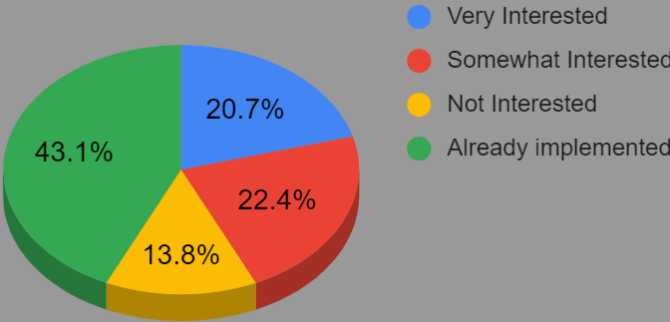


How interested is your facility in implementing the following green initiatives? (Continued)

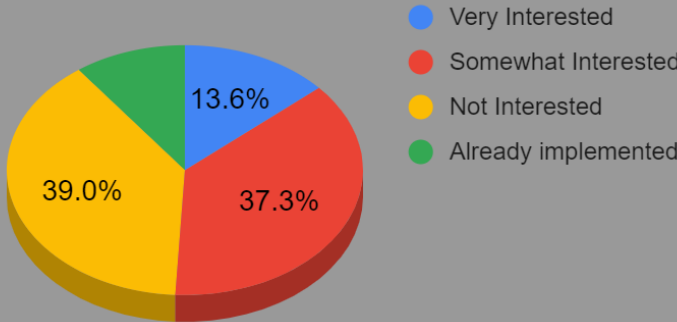
Switching to LEDs Off-Ice



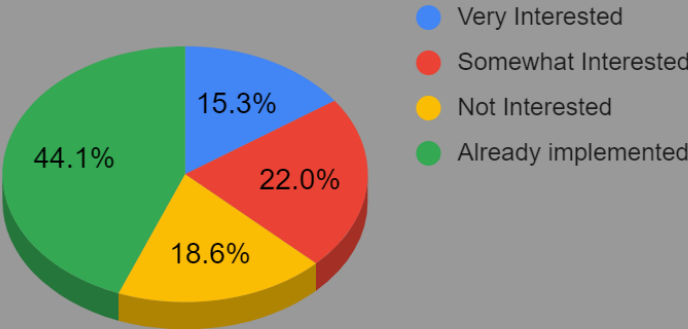
Installing dimmers/automatic lights



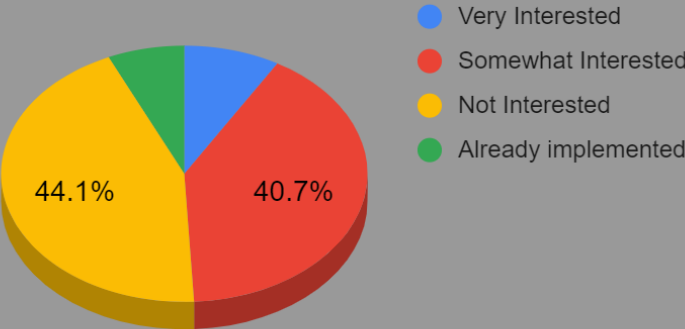
Installing electric car charging stations



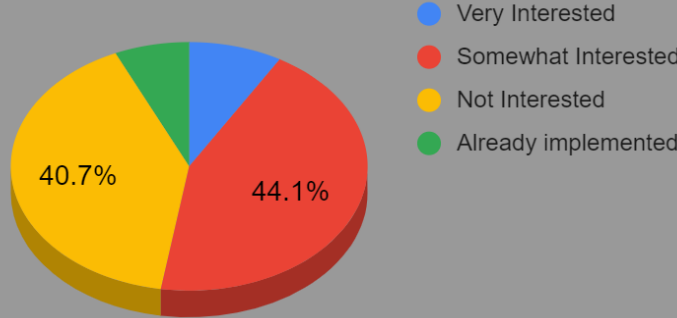
Recycling Waste



Composting Waste

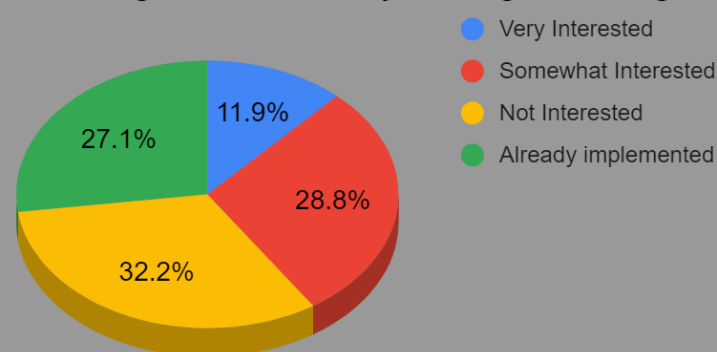


Installing greener conversion floors

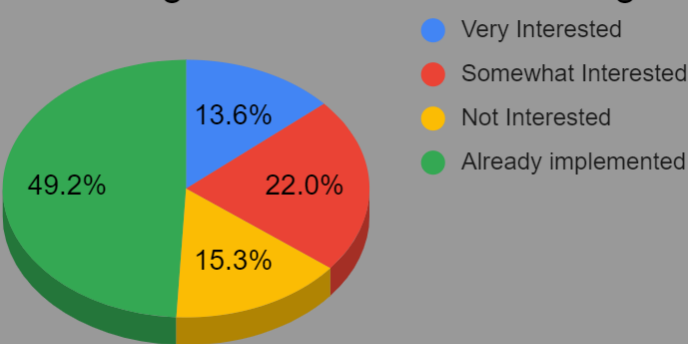


How interested is your facility in implementing the following green initiatives? (Continued)

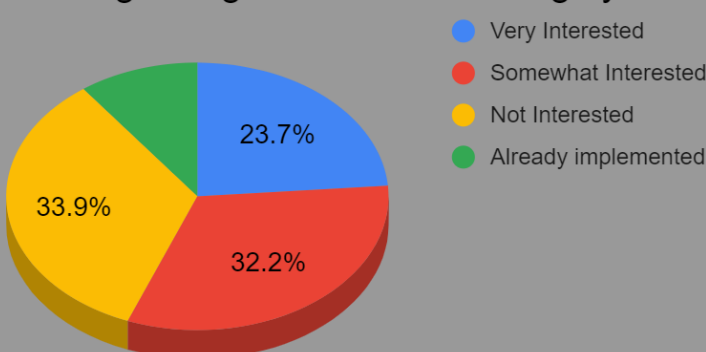
Installing low-emissivity ceiling coverings



Installing reclaimed rubber flooring



Switching to a greener seat heating system



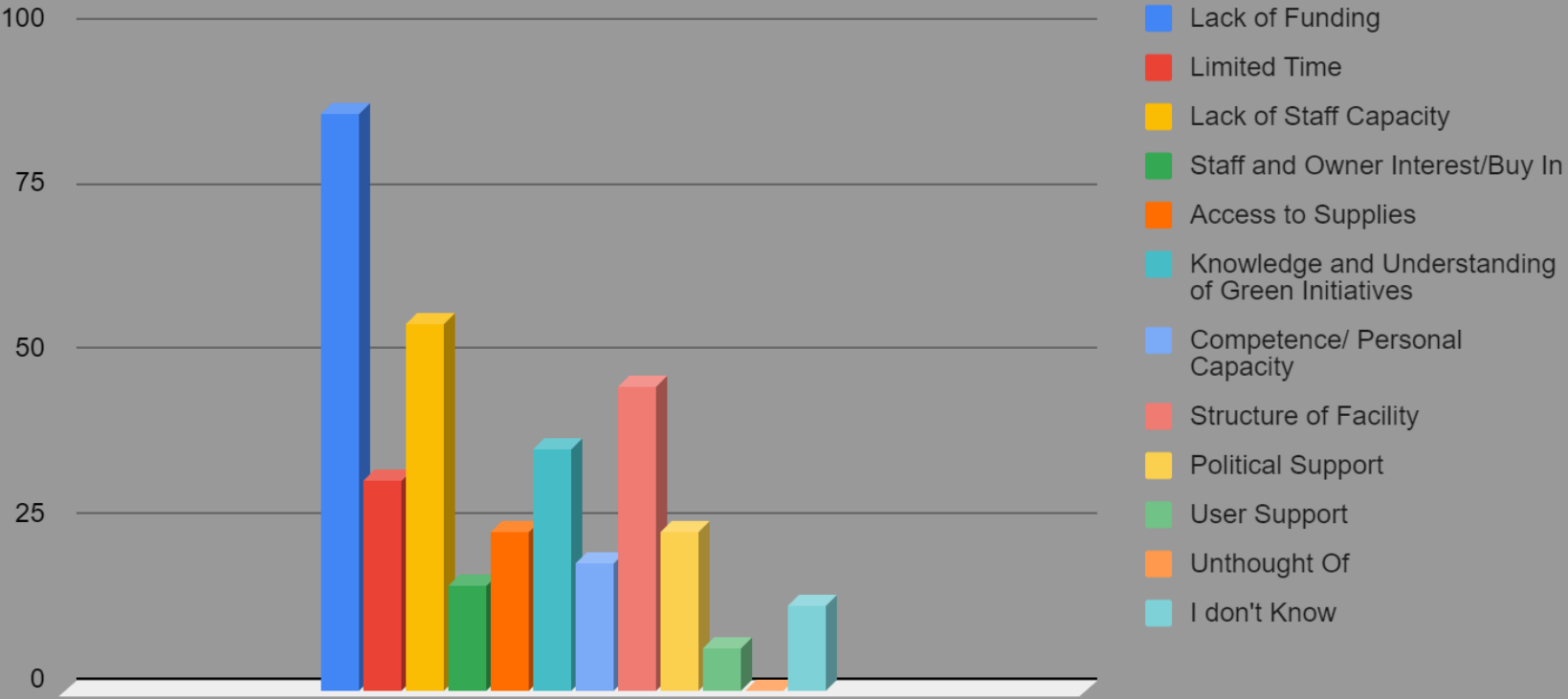
How interested is your facility in implementing the following green initiatives?		Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
		Less Than 20 Years Old	20+ Years Old	One	More Than One	All
<b>Switching to LED lighting On-Ice</b>	Very Interested	21	22	24	22	<b>23</b>
	Somewhat Interested	5	11	12	6	<b>10</b>
	Not Interested	0	2	2	0	<b>2</b>
	<u>Already Implemented</u>	<u>74</u>	<u>64</u>	<u>62</u>	<u>72</u>	<b><u>66</u></b>
<b>Switching to a Natural Refrigeration System</b>	Very Interested	22	13	14	17	<b>15</b>
	Somewhat Interested	6	28	29	11	<b>23</b>
	Not Interested	6	28	29	11	<b>23</b>
	<u>Already Implemented</u>	<u>44</u>	<u>39</u>	<u>31</u>	<u>56</u>	<b><u>39</u></b>
<b>Using laser leveling technology to monitor ice thickness</b>	Very Interested	16	22	19	28	<b>21</b>
	<u>Somewhat Interested</u>	<u>37</u>	<u>41</u>	<u>44</u>	28	<b><u>39</u></b>
	Not Interested	11	24	23	11	<b>19</b>
	<u>Already Implemented</u>	<u>37</u>	13	14	<u>33</u>	<b>21</b>
<b>Switching to a greener water purification system</b>	Very Interested	21	23	20	22	<b>22</b>
	<u>Somewhat Interested</u>	<u>63</u>	<u>50</u>	<u>54</u>	<u>56</u>	<b><u>53</u></b>
	Not Interested	11	16	22	0	<b>15</b>
	<u>Already Implemented</u>	5	11	5	22	<b>10</b>
<b>Switching to electric ice resurfacers</b>	<u>Very Interested</u>	26	<u>36</u>	29	<u>44</u>	<b><u>33</u></b>
	Somewhat Interested	<u>42</u>	29	<u>33</u>	28	<b>31</b>
	Not Interested	26	24	31	11	<b>26</b>
	<u>Already Implemented</u>	5	11	7	17	<b>10</b>
<b>Using heat recovery methods</b>	Very Interested	21	39	<u>37</u>	28	<b>33</b>
	<u>Somewhat Interested</u>	<u>37</u>	<u>41</u>	34	<u>50</u>	<b><u>40</u></b>
	Not Interested	11	11	15	6	<b>12</b>
	<u>Already Implemented</u>	32	9	15	17	<b>15</b>
<b>Completing frequent maintenance of facility equipment</b>	Very Interested	16	<u>36</u>	<u>36</u>	22	<b>31</b>
	Somewhat Interested	<u>47</u>	22	31	22	<b>30</b>
	Not Interested	0	7	7	0	<b>5</b>
	<u>Already Implemented</u>	37	<u>36</u>	26	<u>56</u>	<b><u>34</u></b>

<b>Employing a Sustainability Representative</b>	Very Interested <u>Somewhat Interested</u> Not Interested Already Implemented	16 <u>47</u> 37 0	11 33 <u>40</u> 16	10 <u>43</u> 36 12	17 33 <u>39</u> 11	<b>11</b> <b><u>39</u></b> <b>38</b> <b>11</b>
<b>Attending Professional Development Related to Green Initiatives</b>	Very Interested <u>Somewhat Interested</u> Not Interested Already Implemented	26 <u>58</u> 11 5	34 <u>50</u> 9 7	34 <u>56</u> 10 0	28 <u>50</u> 6 17	<b>32</b> <b><u>53</u></b> <b>10</b> <b>5</b>
<b>Participating in energy recycling</b>	Very Interested <u>Somewhat Interested</u> Not Interested Already Implemented	26 <u>42</u> 11 21	27 <u>55</u> 7 11	32 <u>49</u> 10 10	17 <u>56</u> 6 22	<b>27</b> <b><u>52</u></b> <b>8</b> <b>13</b>
<b>Installing low-flow water systems</b>	Very Interested <u>Somewhat Interested</u> Not Interested Already Implemented	11 <u>47</u> 5 37	25 <u>41</u> 11 23	22 <u>49</u> 15 15	22 33 0 <u>44</u>	<b>22</b> <b><u>43</u></b> <b>10</b> <b>25</b>
<b>Installing automatic hand-washing</b>	Very Interested <u>Somewhat Interested</u> Not Interested Already Implemented	11 <u>37</u> 16 <u>37</u>	25 <u>30</u> 18 27	20 <u>39</u> 20 22	28 17 11 <u>44</u>	<b>22</b> <b><u>32</u></b> <b>17</b> <b>30</b>
<b>Switching to LEDs Off-Ice</b>	Very Interested Somewhat Interested Not Interested <u>Already Implemented</u>	32 11 0 <u>58</u>	28 21 5 <u>47</u>	30 23 5 <u>43</u>	33 6 0 <u>61</u>	<b>31</b> <b>19</b> <b>3</b> <b><u>47</u></b>
<b>Installing dimmers/automatic lights</b>	Very Interested Somewhat Interested Not Interested <u>Already Implemented</u>	21 21 11 <u>47</u>	19 21 14 <u>45</u>	23 26 18 <u>33</u>	17 11 6 <u>67</u>	<b>21</b> <b>22</b> <b>14</b> <b><u>43</u></b>
<b>Installing electric car charging stations</b>	Very Interested Somewhat Interested <u>Not Interested</u> Already Implemented	11 <u>42</u> 32 16	19 35 <u>40</u> 7	8 <u>43</u> 38 13	28 28 <u>39</u> 6	<b>14</b> <b>37</b> <b><u>39</u></b> <b>10</b>



<b>Recycling waste</b>	Very Interested Somewhat Interested Not Interested <u>Already Implemented</u>	5 26 21 <u>47</u>	19 21 16 <u>44</u>	15 <u>33</u> 20 <u>33</u>	17 0 11 <u>72</u>	<b>15</b> <b>22</b> <b>19</b> <b>44</b>
<b>Composting waste</b>	Very Interested Somewhat Interested <u>Not Interested</u> Already Implemented	11 <u>42</u> 32 16	9 42 <u>47</u> 2	5 <u>48</u> 43 5	17 28 <u>44</u> 11	<b>8</b> <b>41</b> <b>44</b> <b>7</b>
<b>Installing greener conversion floors</b>	Very Interested <u>Somewhat Interested</u> Not Interested Already Implemented	5 <u>42</u> 37 16	9 <u>47</u> 42 2	8 40 <u>48</u> 5	11 <u>50</u> 28 11	<b>8</b> <b>44</b> <b>41</b> <b>7</b>
<b>Installing low-emissivity ceiling coverings</b>	Very Interested Somewhat Interested <u>Not Interested</u> Already Implemented	5 <u>37</u> 32 26	14 23 30 <u>33</u>	13 30 <u>38</u> 20	11 28 22 <u>39</u>	<b>12</b> <b>29</b> <b>32</b> <b>27</b>
<b>Installing reclaimed rubber flooring</b>	Very Interested Somewhat Interested Not Interested <u>Already Implemented</u>	11 26 5 <u>58</u>	14 19 19 <u>49</u>	15 25 18 <u>43</u>	11 17 11 <u>61</u>	<b>14</b> <b>22</b> <b>15</b> <b>49</b>
<b>Switching to a greener seat heating system</b>	Very Interested Somewhat Interested <u>Not Interested</u> Already Implemented	21 <u>37</u> 26 16	26 30 <u>37</u> 7	20 30 <u>38</u> 13	<u>33</u> <u>33</u> 28 6	<b>24</b> <b>32</b> <b>34</b> <b>10</b>

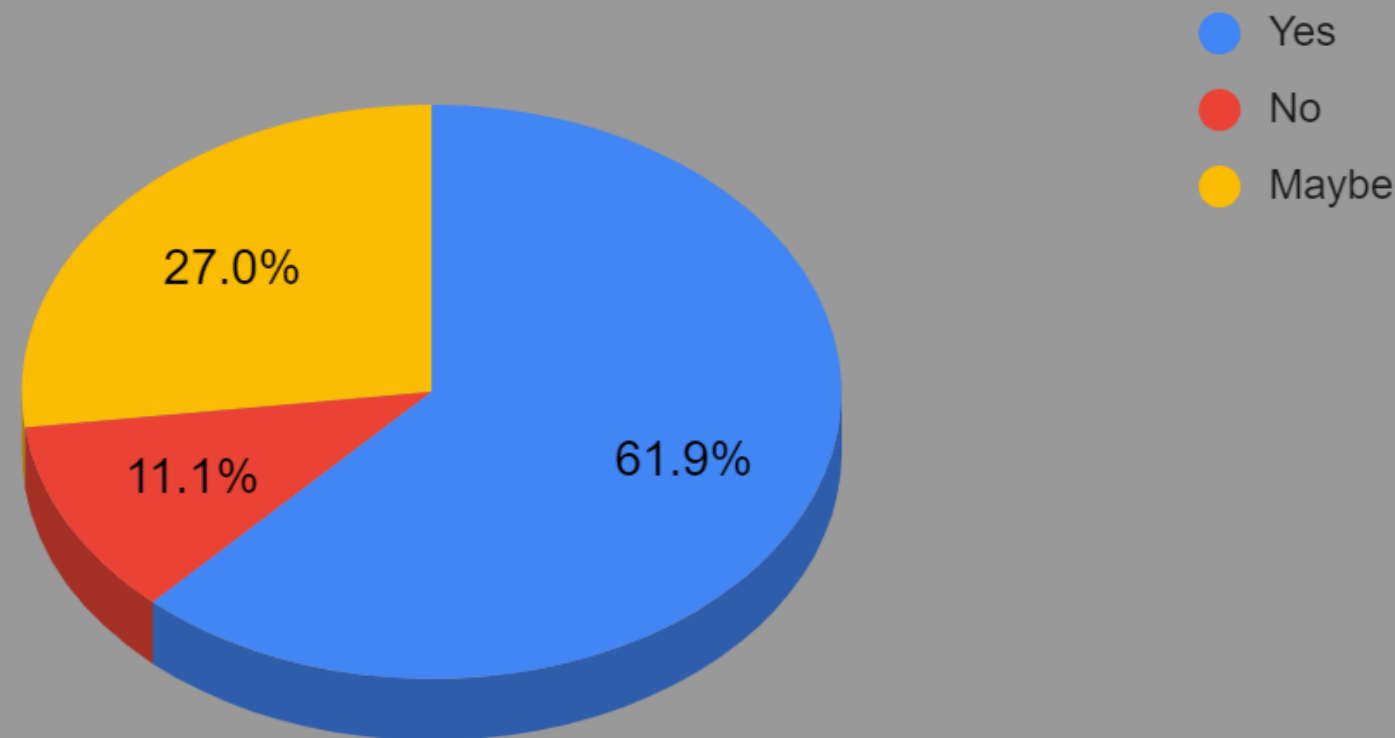
Overall, what are the barriers your arena faces in becoming a greener facility?



Overall, what are the barriers your arena faces in becoming a greener facility?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		All
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Lack of Funding	79	89	86	89	87
Limited Time	32	30	28	42	32
Lack of Staff Capacity	74	49	60	47	56
Staff and Owner Interest/Buy In	32	9	19	11	16
Access to Supplies	32	21	23	21	24

<b>Knowledge/Understanding of Green Initiatives</b>	58	26	44	21	<b>37</b>
<b>Competence/Personal Capacity</b>	16	19	23	11	<b>19</b>
<b>Structure of Facility</b>	26	53	42	53	<b>46</b>
<b>Political Support</b>	21	26	28	16	<b>24</b>
<b>User Support</b>	11	4	9	0	<b>6</b>
<b>Unthought Of</b>	0	0	0	0	<b>0</b>
<b>I Don't Know</b>	21	11	12	16	<b>13</b>

# Would you be interested in more information and guidance on reducing your facilities' carbon footprint?



Do your facilities use reclaimed rubber flooring?	Age of Facility/Facilities		Number of Ice Surfaces in Facility/Facilities		
	Less Than 20 Years Old	20+ Years Old	One	More Than One	
Yes	<u>68</u>	<u>62</u>	<u>60</u>	<u>63</u>	<u>62</u>
No	11	11	12	11	11
Maybe	21	28	28	26	27

## **Are there any other barriers your facilities are facing in becoming greener?**

**"Need the driver to take the lead on a project like this" - Program Coordinator, Alberta**

**"No real barriers building is over 50 years old" - Clerk/Treasurer, New Brunswick**

**"High cost of Diesel generated power" - AngajukKak (Mayor), Newfoundland and Labrador**

**"Funding & delegation of funding initiatives" - Community Services Administrator, Ontario**

**"Location and use" - Parks and Facilities Manager, British Columbia**

**"Small remote location" - Director of Recreation and Community Services, British Columbia**

**"If we had the money, we could implement all of these items. With 10 arenas we have to be strategic when determining what upgrades are done. When upgrades are done then we implement the green initiatives" - Director, Parks, Recreation & Cemeteries, Ontario**

**"Minor - mostly political" - Parks & Recreation Manager, Alberta**

**"Building is at the end of its life" - Board Chair, Nova Scotia**

**"Stakeholder buy in as the future viability of the facility is in doubt" - Town Manager, Newfoundland and Labrador**

**"Lack of staff capacity to monitor green systems" - Recreation Manager, Saskatchewan**

**"Age of facility and needs for current maintenance" - Recreation & Community Development Manager, Saskatchewan**

**"In some cases a lack of trust in green alternatives (reliability and sustainability)" - Director of Community and Leisure Services, Saskatchewan**

**"I am an old building that is not designed from a layout perspective to properly make the transition" - Facility Manager, Nova Scotia**

**"Building new vs. retrofit" - Municipal Energy Project Lead, Alberta**

## References

<https://greennerrinks.nhl.com/desktop/index.html>