

Emerging Issues in State Scrap Tire Management

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Presentation Outline

- What is a circular economy?
- Colorado's Waste Tire Program
- Michigan's Scrap Tire Program
- Enforcement overview
- US Scrap Tire Workgroup overview/emerging issues
- Scrap Tire Program Survey
- Conclusions
- Questions



What is a Circular Economy?

“A circular economy is an economic system aimed at eliminating waste and the continual use of resources. Circular systems employ reuse, sharing, repair, refurbishment, re-manufacturing and recycling to create a closed system, minimizing the use of resource input and the creation of waste, pollution and emissions.”

The goal is to find a way to utilize all scrap tires generated and lessen the impact both on the states who manage them and the environmental impacts that scrap tires present.

Colorado's Waste Tire Program Overview

- Established at the Colorado Department of Public Health and Environment in 2010, but regulations on scrap tires have been around for several years prior to starting at our department.
- Currently 4.5 FTE in the Waste Tire Program
- Current responsibilities include:
 - Regulatory authority over waste tires
 - From generation to disposal/re-use/recycling
 - Manifests, inspections, enforcement
 - Grants
 - Waste Tire Illegal Cleanup Grants
 - Waste Tire Inspection Grants
 - Training & Education
 - Outreach
 - Waste tire fee collection



Colorado's Waste Tire Program Overview

What has been some successes in our program (year 2018)?

- Over 1,100 inspections (local health agency contracts).
- Reached 1,000,000 illegal waste tires cleaned up.
- Over 2,700 waste tire facilities registered with the state (tire retailers, waste tire haulers, waste tire processors, waste tire collection facilities, waste tire monofills, and end users).
- Collected over \$2,700,000 in waste tire fees on the sale of over 5,000,000 new tires.
- 2018 Waste Tire Conference –
 - 150 attendees (biggest so far)
 - 22 speakers
- Waste Tire Collection Events
 - Over 20 events so far



Colorado's Waste Tire Program Overview

What have been some challenges in our program?

- Recycling/salvaging rate dropped to 81% in 2018 (down from 121% in 2017).
- Diversity of end use markets (tire-derived fuel largest usage in the state).
- Staff has to cover half the counties in the state for inspections.
- Still finding illegal waste tire sites.

What will get us to 100% recycling rate?

- Markets, markets, markets!
- Continued strong enforcement of regulations (inspections, waste tire tracking, local health inspection grants).

Next steps-

- End Users Fund to start again in 2020.
- Fee going from \$.55 to \$1.25 starting January 1, 2020.
- Market Development Grant funding re-established.
- Monofills scheduled to close July 2024.



Addressing Illegal Scrap Tire Dumping Through Enforcement: the Rural Perspective



Michigan's Scrap Tire Program Overview

State Regulation of the Industry

- Require financial responsibility (bond sites).
- Landfill ban on disposal of whole tires.
- Identify and register industry members (registration of collection sites and haulers).
- Create regulatory incentive to recycle tires.
- Create financial disincentive to store or dump tires.
- Allow private enterprise to establish costs.
- Assist development of viable markets (MD grants).
- Require acceptable management of scrap tires (storage requirements).
- Limited to 11 FTEs



Michigan's Scrap Tire Program Overview

What have been some successes in our program
(year 2018)?

- Regulation Results
 - Processing Industry Growth
 - Market capacity increase-capacity in excess of generation.
 - Decrease in stockpiles (cleanups)
 - 68 registered scrap tire haulers
 - 26 registered collection sites
 - 10 processors
 - 11 certified end-users
 - 86 Cleanup Grants totaling over \$1.2 million-cleaning up over 600,000 PTEs.
 - 11 Market Development Grants totaling over \$2.1 million-10 road projects and R&D.



Michigan's Scrap Tire Program Overview

Factors Behind the Program's Success

- A continuing appropriately funded cleanup program to address abandoned scrap tires and those collected prior to 1991.
- Simple cleanup program: goal is to clean up.
- Market Development-show new or increased use of scrap tires.
- Consistent Enforcement of the Statute- results in a level playing field for those voluntarily meeting the statutory requirements.
- Periodic review of the Program and statute to address changing needs.
- Working with local Units of Government to raise awareness.
- Continue to find new outlets for the stockpiled tires and newly generated scrap tires.
- STAC (Scrap Tire Advisory Committee)
- Use of new technology-drones.

Michigan's Scrap Tire Program Overview



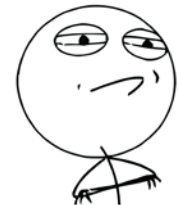
What have been some challenges in our program?

- Continuing to develop and support markets-need for better data.
- Managing ongoing scrap tire generation and TDF stockpiles.
- Clean up of small historical accumulations of tires-high transportation costs; difficult to get to.
- Tires as a resource not a waste-education is key.

What will get us to 100% recycling rate?

- **MARKETS!**
- Regional markets
- Continued program funding for administration, grants and enforcement.

CHALLENGE ACCEPTED



Next steps:

- Law enforcement grants-combat dumping in urban areas.
- Market Study

Addressing Illegal Scrap Tire Dumping Through Enforcement: the Urban Perspective



US Scrap Tire Workgroup

- A collaboration of states, industry, trade associations, academia and other interested parties who work cooperatively to address critical scrap tire issues facing the country.
- A forum to achieve progress in eliminating barriers to scrap tire markets, encourage expansion of those markets and encourage the prevention and abatement of stockpiles.
- A forum to provide technical exchange and to share best practices.
- State agencies (50 states represented) and waste tire industry members.
- Workgroup Committees: Goals, Civil Engineering, Ground Rubber, Rubber Modified Asphalt, Tire Derived Fuel & Export, Enforcement.
- Annual meeting: December 3rd (Greenville, SC).
 - Emerging issues discussed.

Workgroup Issues/Discussions

- Specific Markets/Products-does your state use? How does your state regulate?
 - TDA
 - ADC
 - Specialty tires: solid core, oversize, airplane, golf cart, forklift
 - Tires that go out of state for some reason (no markets, hard to process, no processors).
 - Tarp weights/silage covers
 - Mechanical concrete
 - Use of tire material in roads
 - Crumb rubber
 - Artificial turf
 - Pyrolysis
- How states handle/regulate certain things:
 - RFPs for cleanup, market development, etc.
 - Specific products or specialty tires
 - State program requirements
 - Landfilling of tires
- Upcoming for 2020



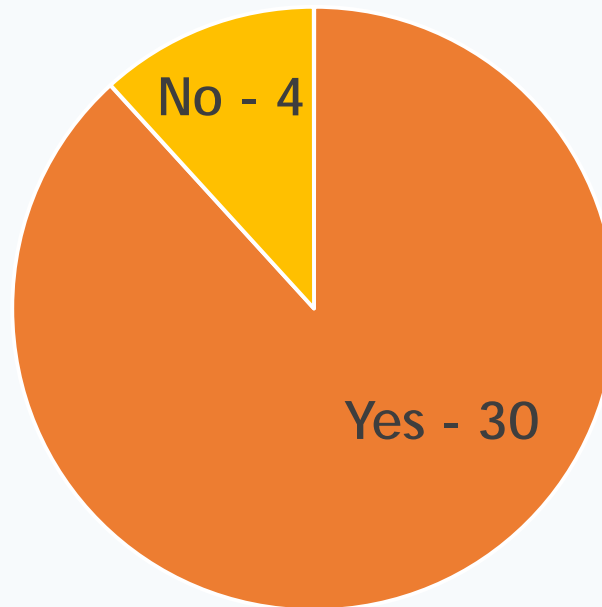
Survey of State Scrap Tire Programs

- A survey was distributed to all 50 state representatives asking them:
 - Do they have a scrap tire program?
 - What are some of the successes / challenges with scrap tires in their states?
 - What do you feel needs to be done to recycle / reuse 100% of the scrap tire generated in your state?
- 34 states responded to the survey.



Survey Results

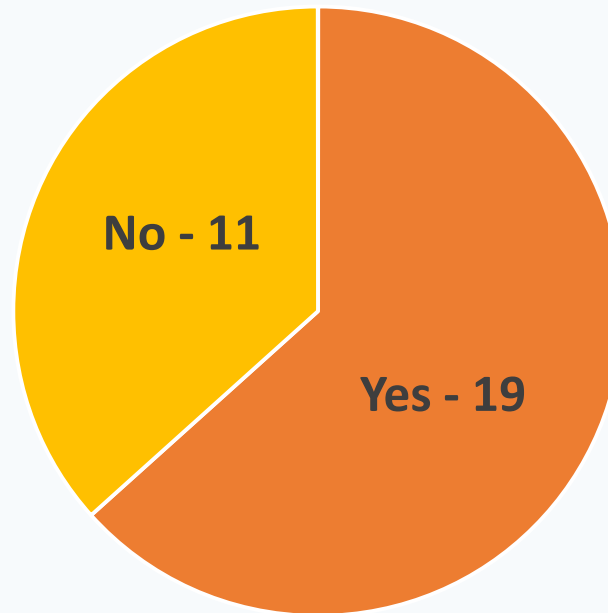
Does your state have specific laws and regulations for scrap tire management?



■ Yes ■ No

Survey Results

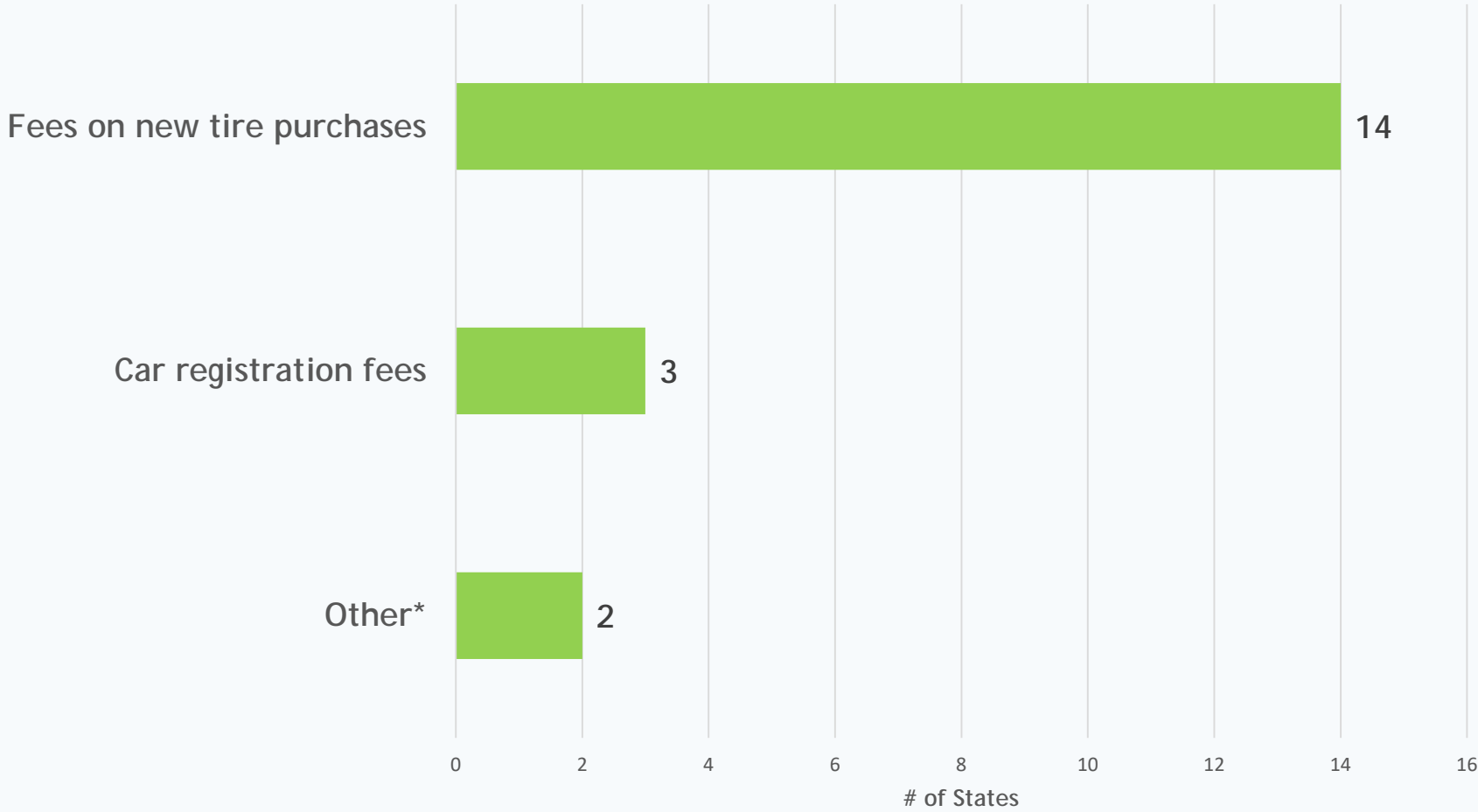
Does your state have specific funding sources to maintain a scrap tire program?



■ Yes ■ No

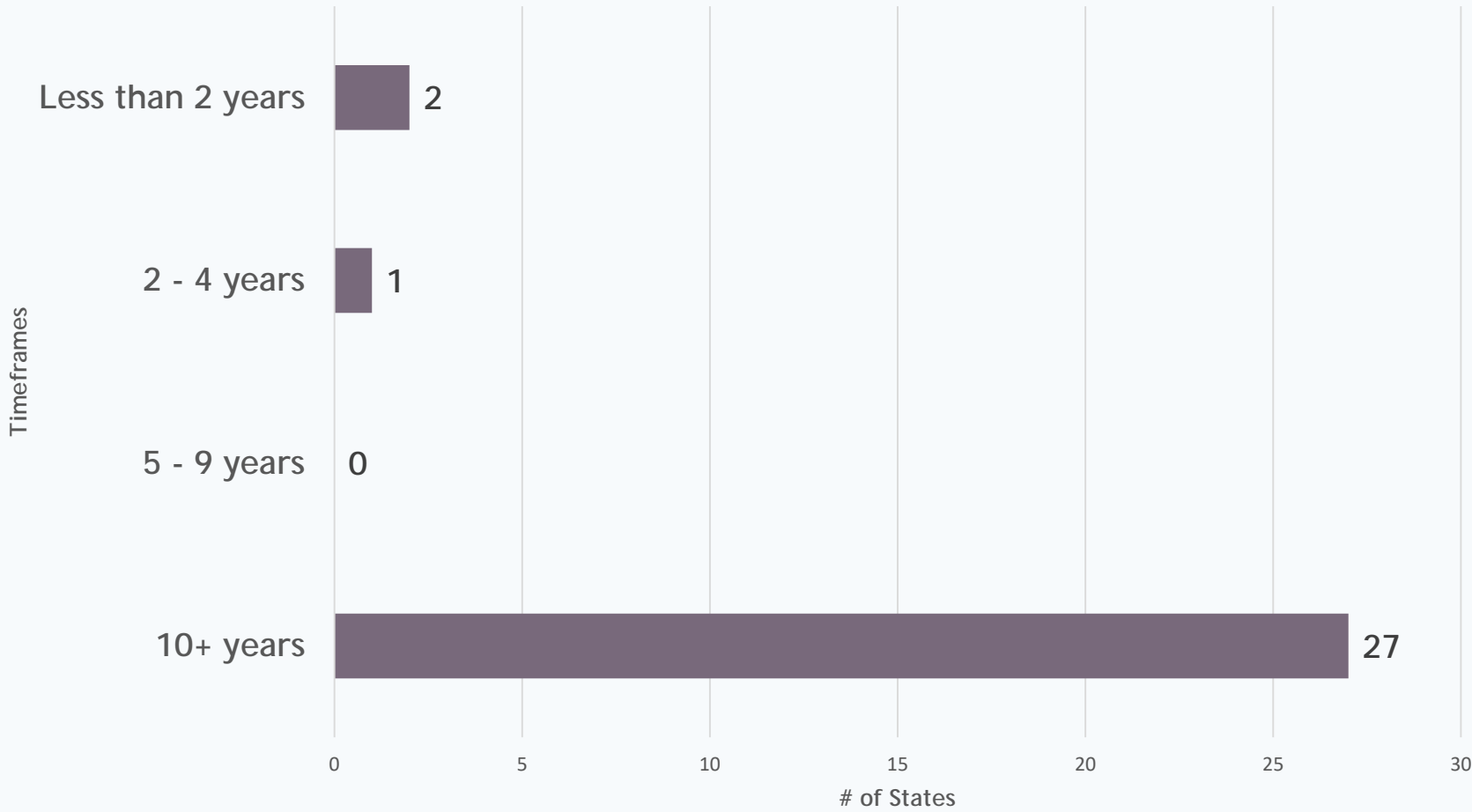
Survey Results

How are funds collected to support your scrap tire program?



Survey Results

How long has your scrap tire program been in place?



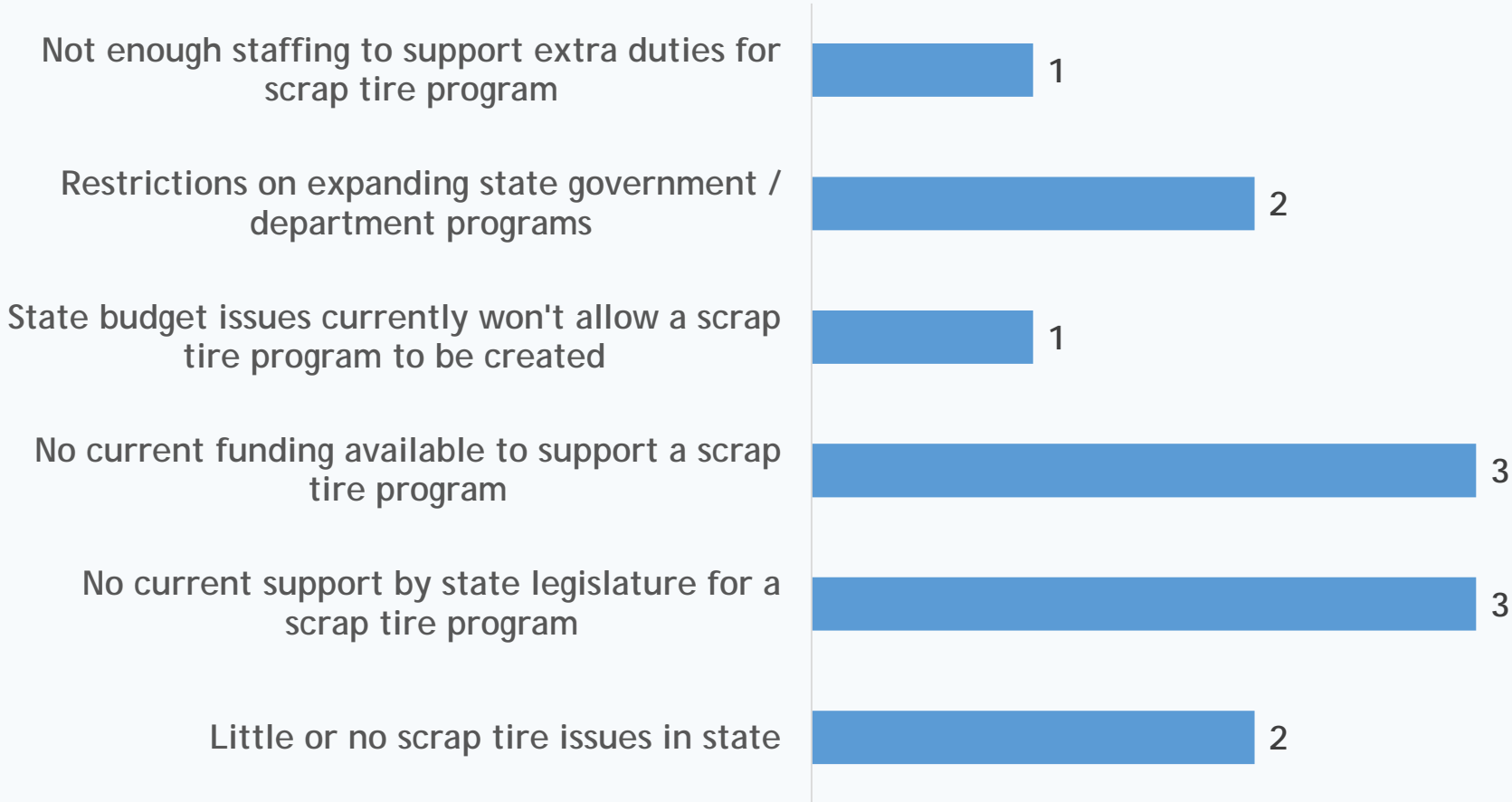
Survey Results

- If no current scrap tire program, are there any plans to put a program in place?
- For the four states who answered the survey, they all said there were no current plans to create a program internally or their state legislature to run legislation to create a scrap tire program.



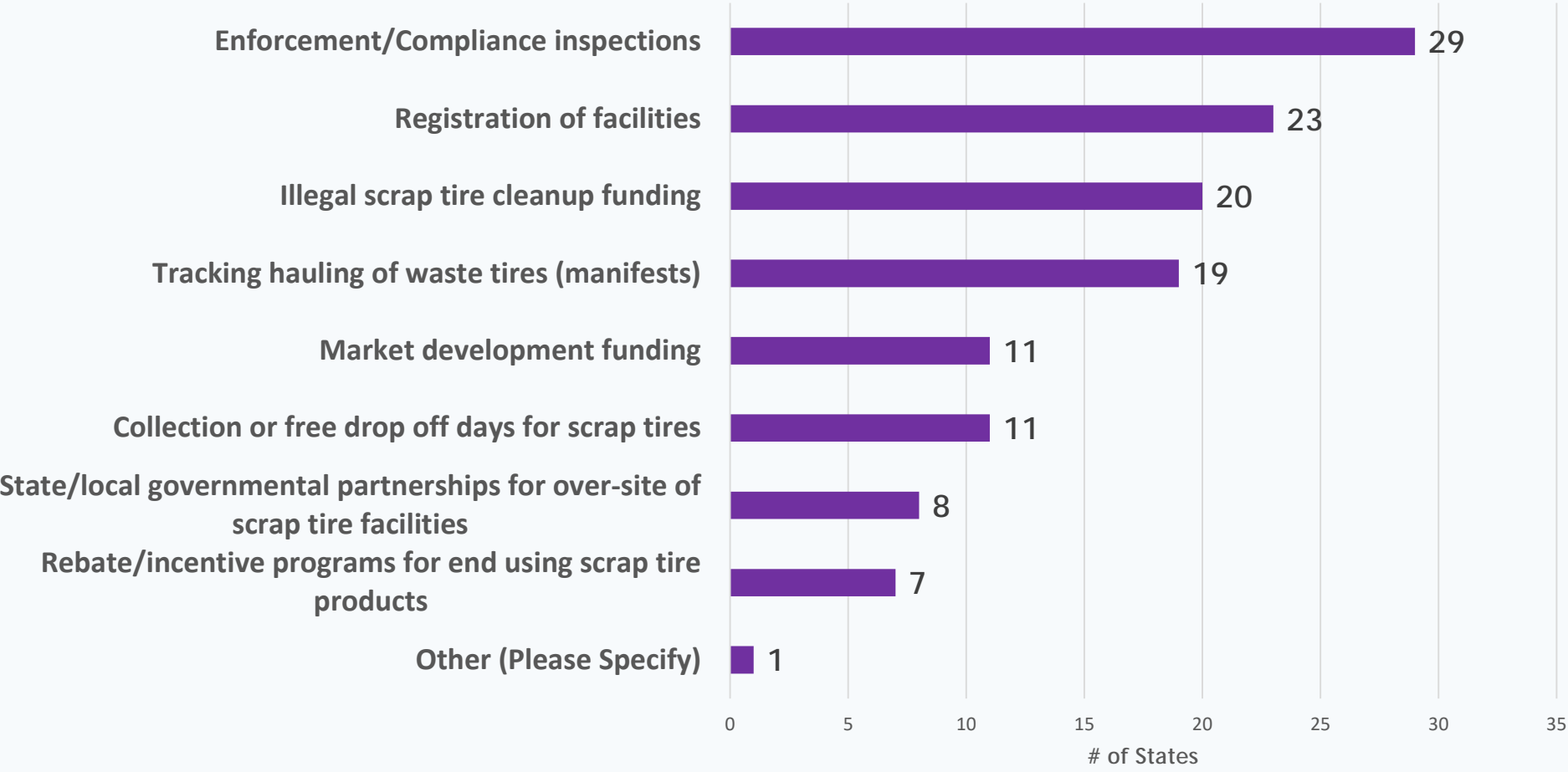
Survey Results

If no plans to put together a scrap tire program, what are the reasons? (click all that apply)



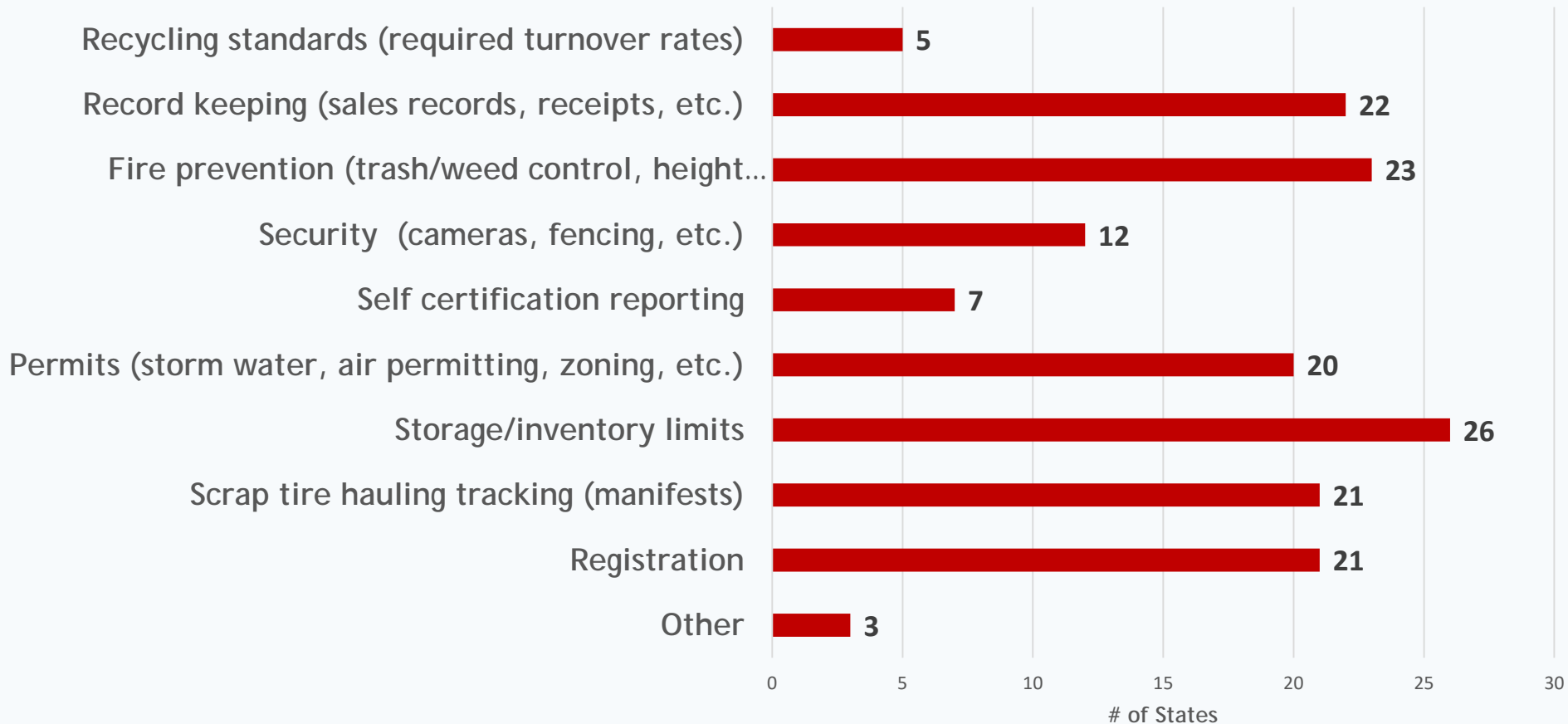
Survey Results

What type of initiatives does your scrap tire program currently manage? (click all that apply)



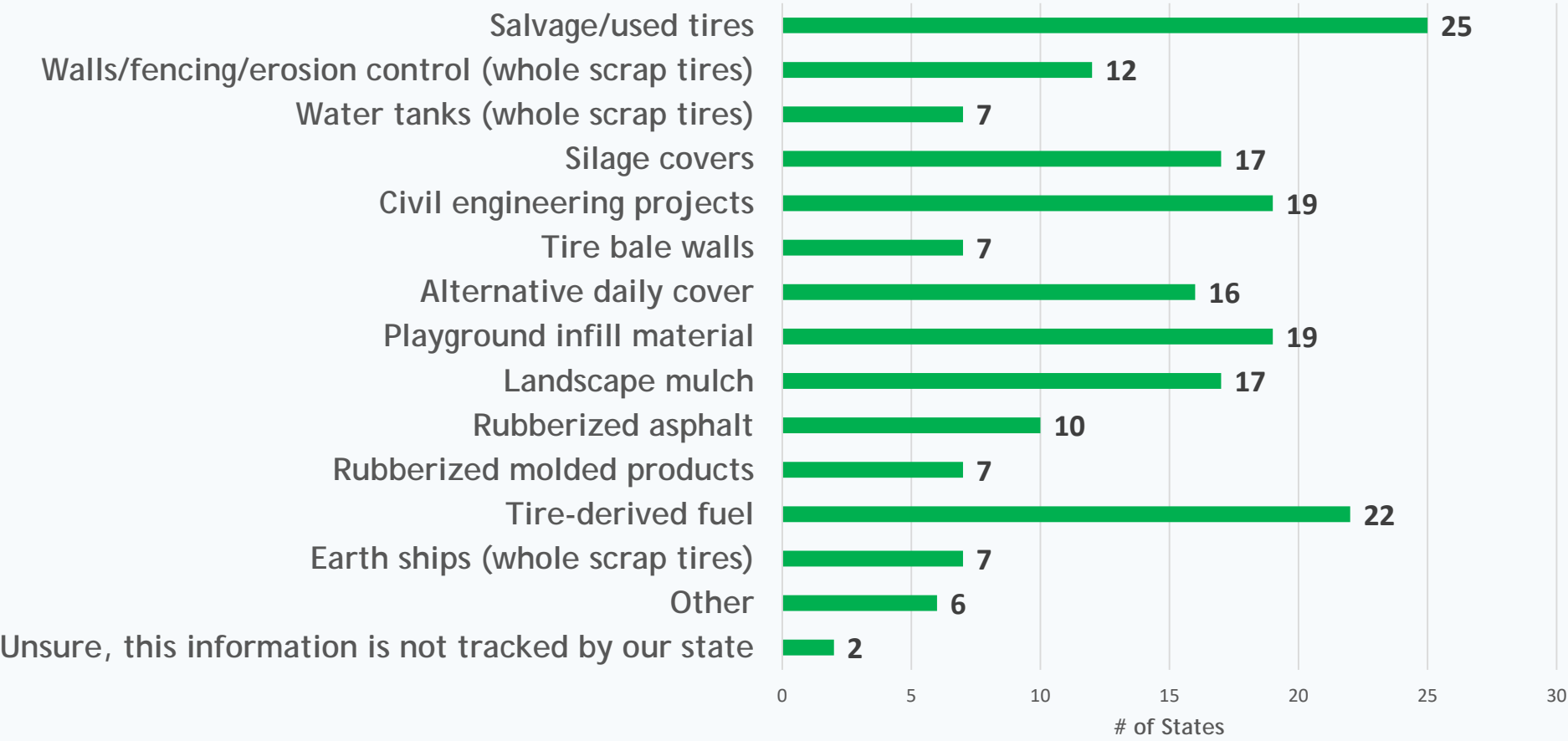
Survey Results

What type of requirements do you have for your scrap tire facilities? (click all that apply)



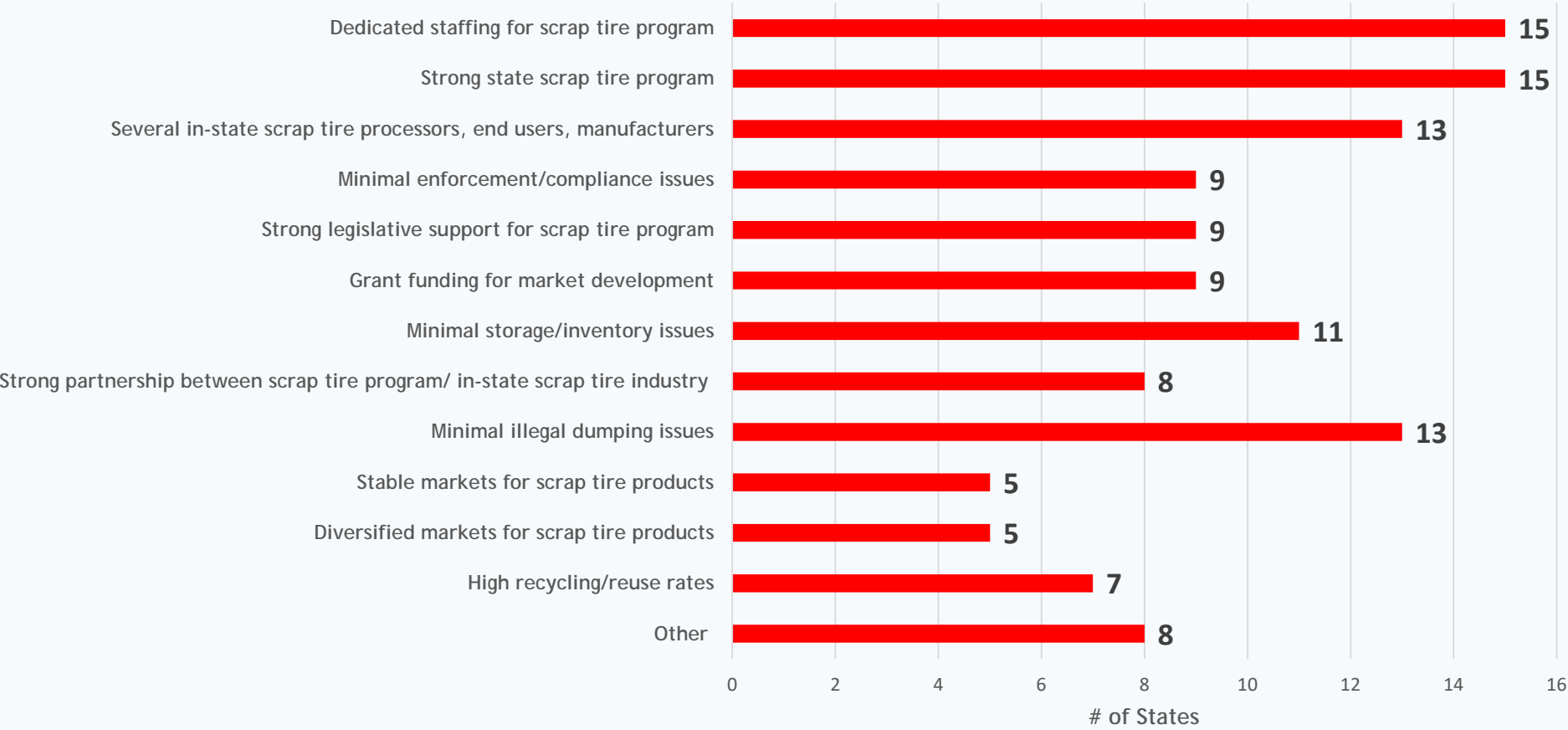
Survey Results

What type of reuses/end uses does your state currently have for scrap tires and scrap tire products? (click all that apply)



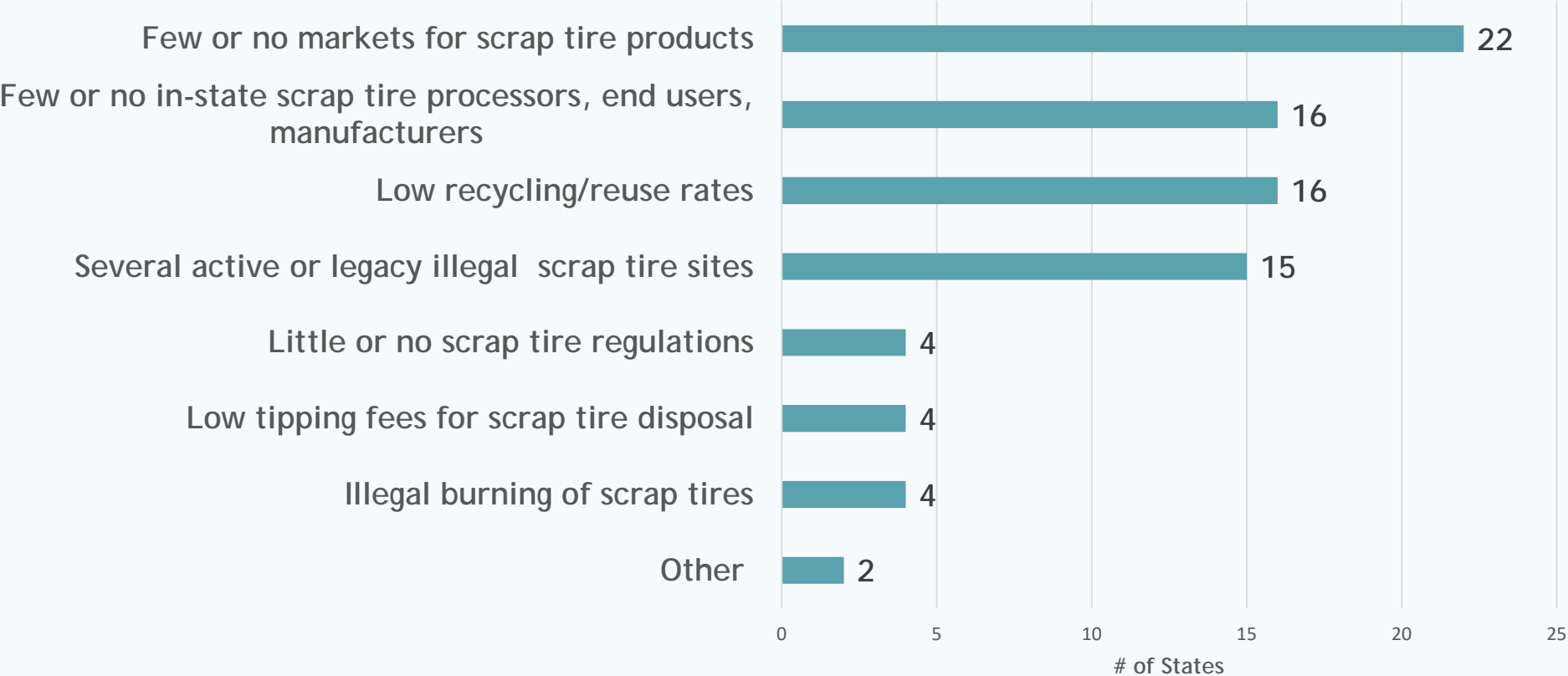
Survey Results

What are current successes in your state regarding scrap tires?
(click all that apply)



Survey Results

What are the current challenges in your state regarding scrap tires? (click all that apply)

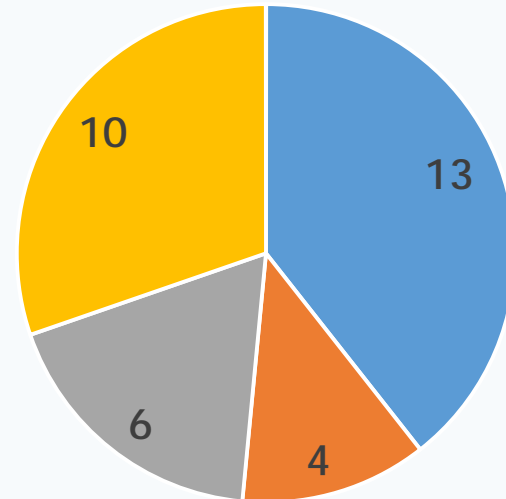


Survey Results

What do you feel is the most important step your state needs to take to move towards recycling of 100% of scrap tires?

Other comments*:

- “None of these that I’m aware of have led to 100% success.”
- “Educating stakeholders on the legitimate recycling and reuse markets for scrap tires, especially civil engineering applications and rubberized asphalt”



- Private investment in scrap tire technologies
- Legislation/regulations to support market development
- Other*
- Strong private/public partnerships

Survey Results

A circular economy is an economic system aimed at eliminating waste and the continual use of resources. Circular systems employ reuse, sharing, repair, refurbishment, re-manufacturing and recycling to create a closed system, minimizing the use of resource input and the creation of waste, pollution and emissions. In your opinion, what steps would need to be taken for scrap tires to be part of a circular economy, with the goal of 100% recycling rate, with scrap tires made into a new tire or other scrap tire products?

A few of the comments submitted:

- Need better, economically sustainable uses for scrap tires. There is a high cost to recycling tires, but the end products are not particularly valuable.
- New or improved markets need to be established for tires that can't be recycled into new tires.
- Manufacturers funded scrap tire take back.
- Increased truck and OTR retreading, increased mileage standards for passenger tires....

Survey Results

In your opinion, what are some of the ways your state specifically could contribute to a circular economy, or reaching 100% recycling rate for scrap tires?

A few of the comments submitted:

- Being able to set a system in play to track waste tires from start to finish.
- Allowing for business to obtain low interest loans for the purposes of recycling tires would increase the recycling rate.
- I believe we can do a better job of researching technologies that are still showing promise like pyrolysis and better understand and try to overcome the stigma associated with certain tire products.
- Require a manufacturer take back or have them partially fund a program.
- Unsure (mentioned a few times).

Survey Results

In your opinion, what are some emerging state issues that could impact your own state's ability to manage/develop markets for scrap tires and scrap tire products?

A few of the comments submitted:

- If these two paper mills that burn 14 million tires as TDF go out of business, we are in a mess.
- Dedicated funding for market development program.
- We are really are beholden to out of state tire recyclers and markets. The lack of alternatives the diminishing TDF market will hurt ***** (and all states).
- By far the greatest impact is the concern raised (and fed) by the media of potential human health issues related to the use of recycled tires (crumb rubber in sports fields and loose fill nuggets in playgrounds). Even if scientific studies conclude there is no exposure above any level of concern, you cannot "un-ring the bell".

Survey Results

In your opinion, what are some emerging national issues that could impact your state's ability to manage/develop markets for scrap tires and scrap tire products?

A few of the comments submitted:

- Unsure (mentioned a few times)
- Health concerns with crumb rubber could cause end-use markets to decrease.
- Economic feasibility and the end use of scrap tires....
- I wish scrap tire products were seen as part of the solution to address climate change.
- ...lack of new markets. Lack of value added products from recycled tires.

Survey Results Final Thoughts

- Many states struggle with the management of scrap tires.
- Many states do not have enough processors or end users of scrap tires and scrap tire products.
- State programs vary, but generally the goals are the same: proper management of scrap tires.
- Reuses / markets are needed to continue to handle scrap tires generated now and in the future.
- States programs are not always built to help create markets for solid wastes.



Conclusions

- The circular economy will continue to become more important to address climate change and end-of-life management issues for consumer products, including scrap tires.
- The Scrap Tire Industry needs to continue to work together regionally and nationally to develop markets and economies of scale to make the circular tire economy a reality.
- Enforcement is critical to maintain a level playing field for the legitimate industry players.
- Funding and education continue to be challenges to market development.
- Sharing of ideas / programs needs to continue nationally and regionally.
- Tire manufacturers in their quest to build better tires need to keep the scrap tire processors in the loop.

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