

Survey Report

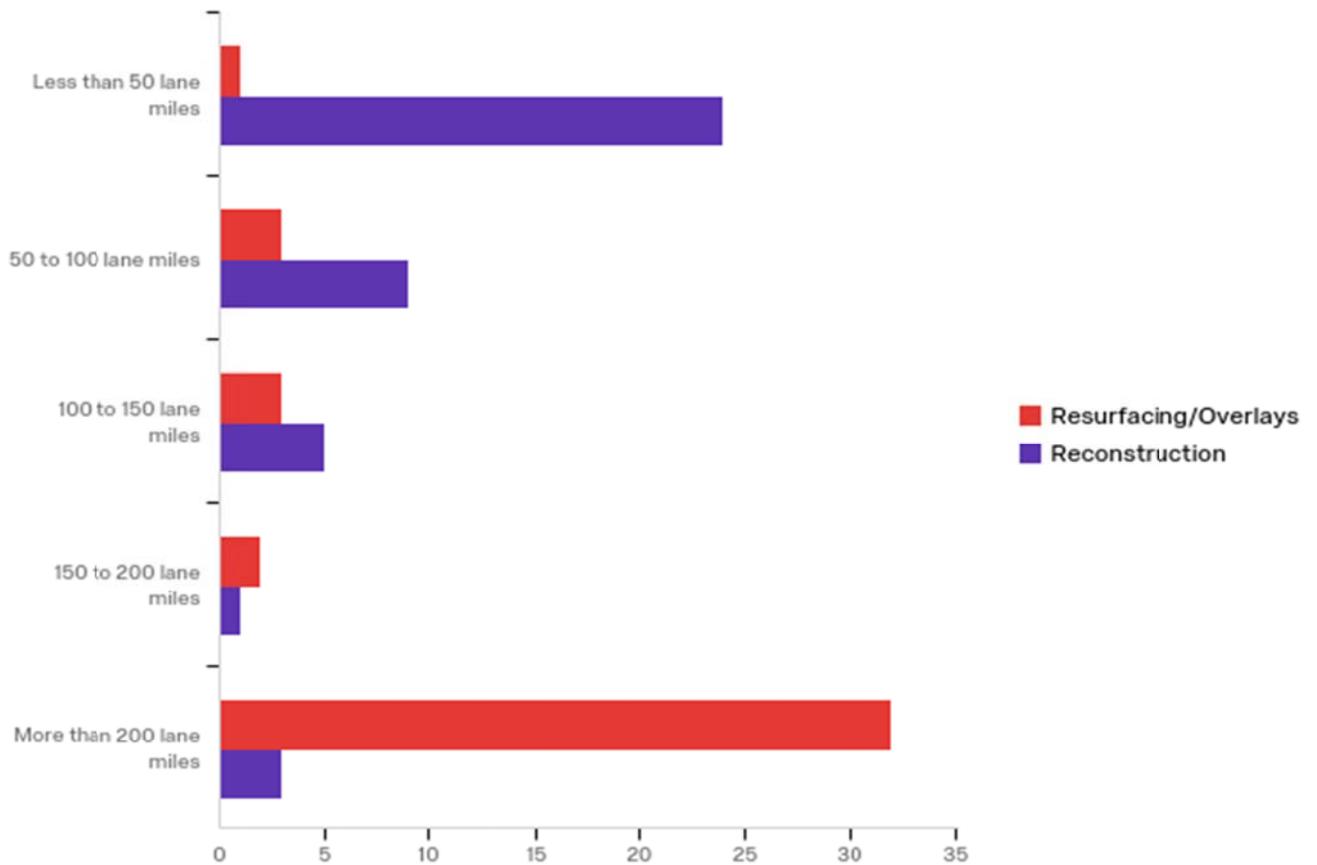
Synthesis of Long-term Performance Data from States with Active In-place Recycling Programs

May 14, 2018

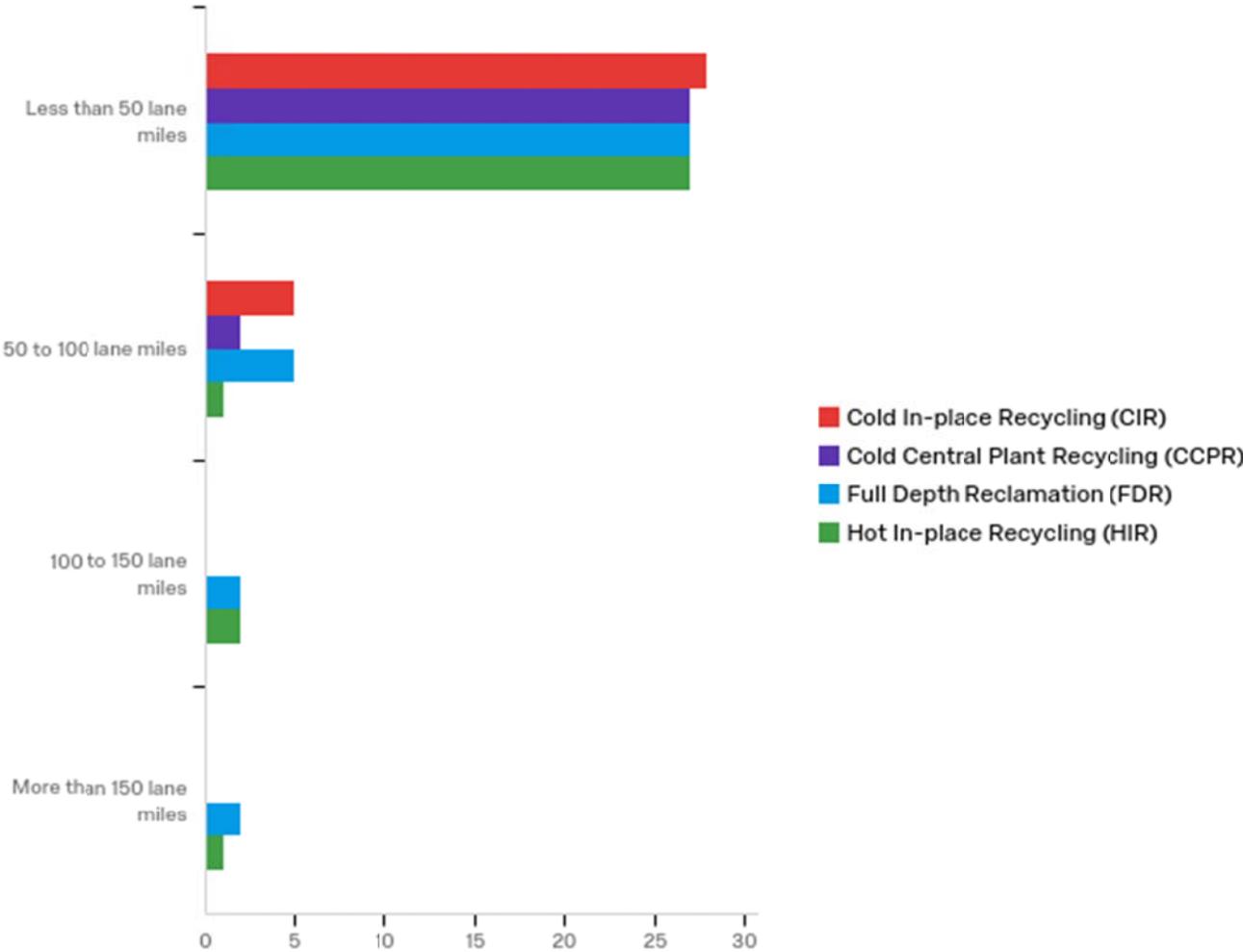
Q1 - Contact Information

Responses were received from 45 US state agencies and one Canadian provincial agency

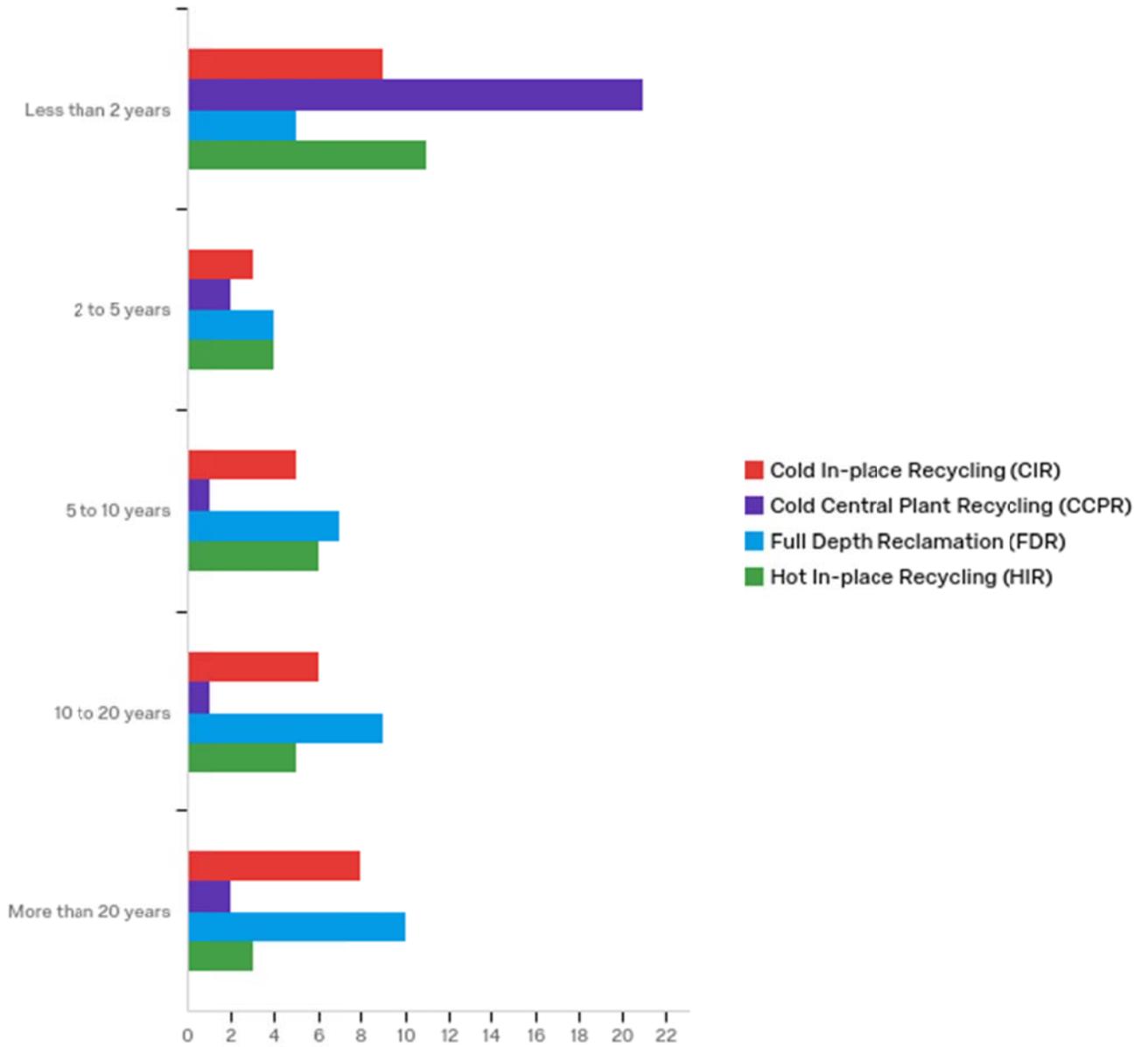
Q2 - Estimate the average extent of your annual pavement maintenance/rehabilitation programs using the following traditional methods:



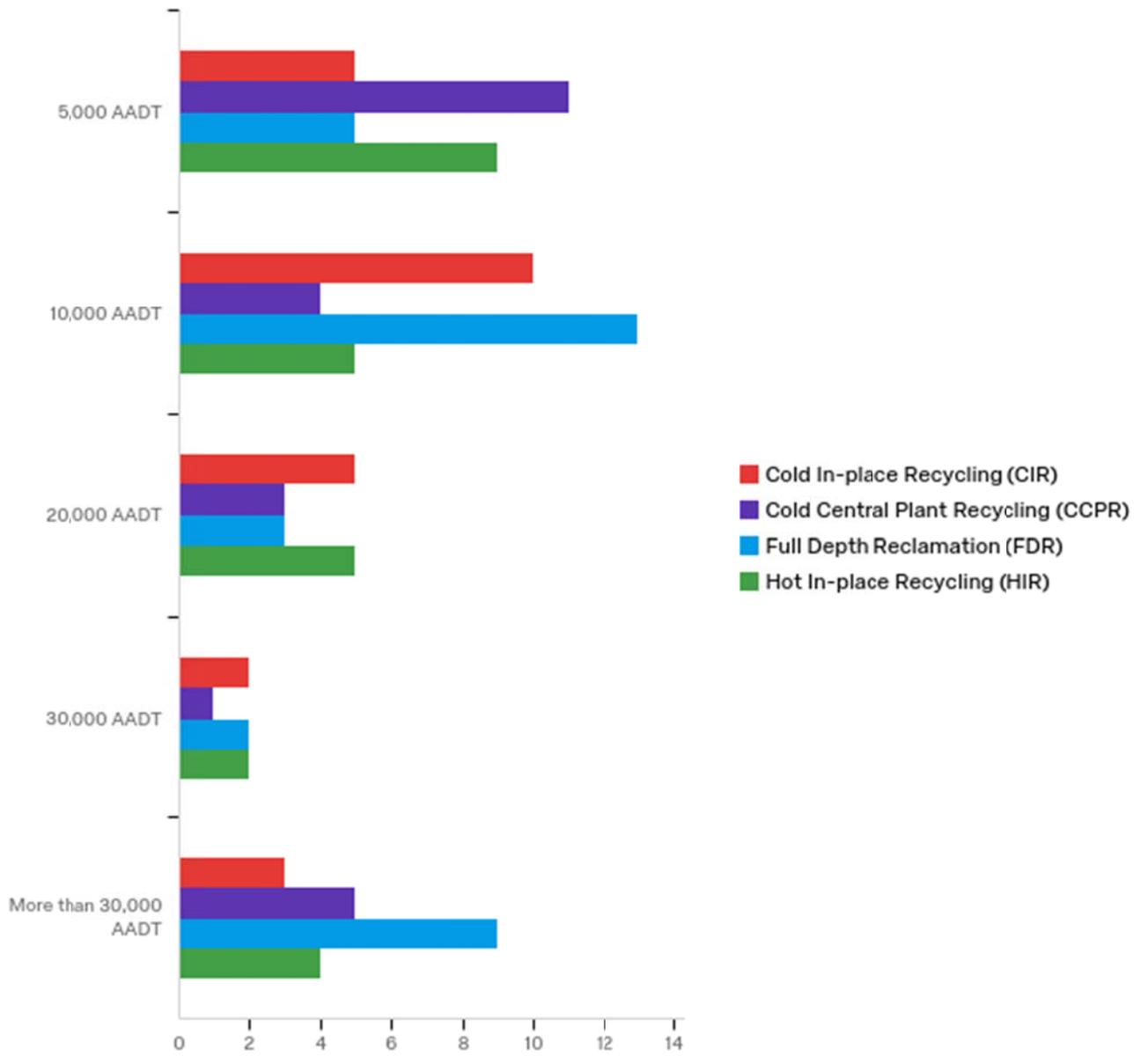
Q3 - Estimate the average extent of your annual pavement recycling program:



Q4 - Indicate how long you have been using each type of in-place recycling process:



Q5 - I would consider recycling a roadway with AADT values up to:



Q6 - In Question 5, if you consider any traffic restrictions for recycling, would you please include any reasons:

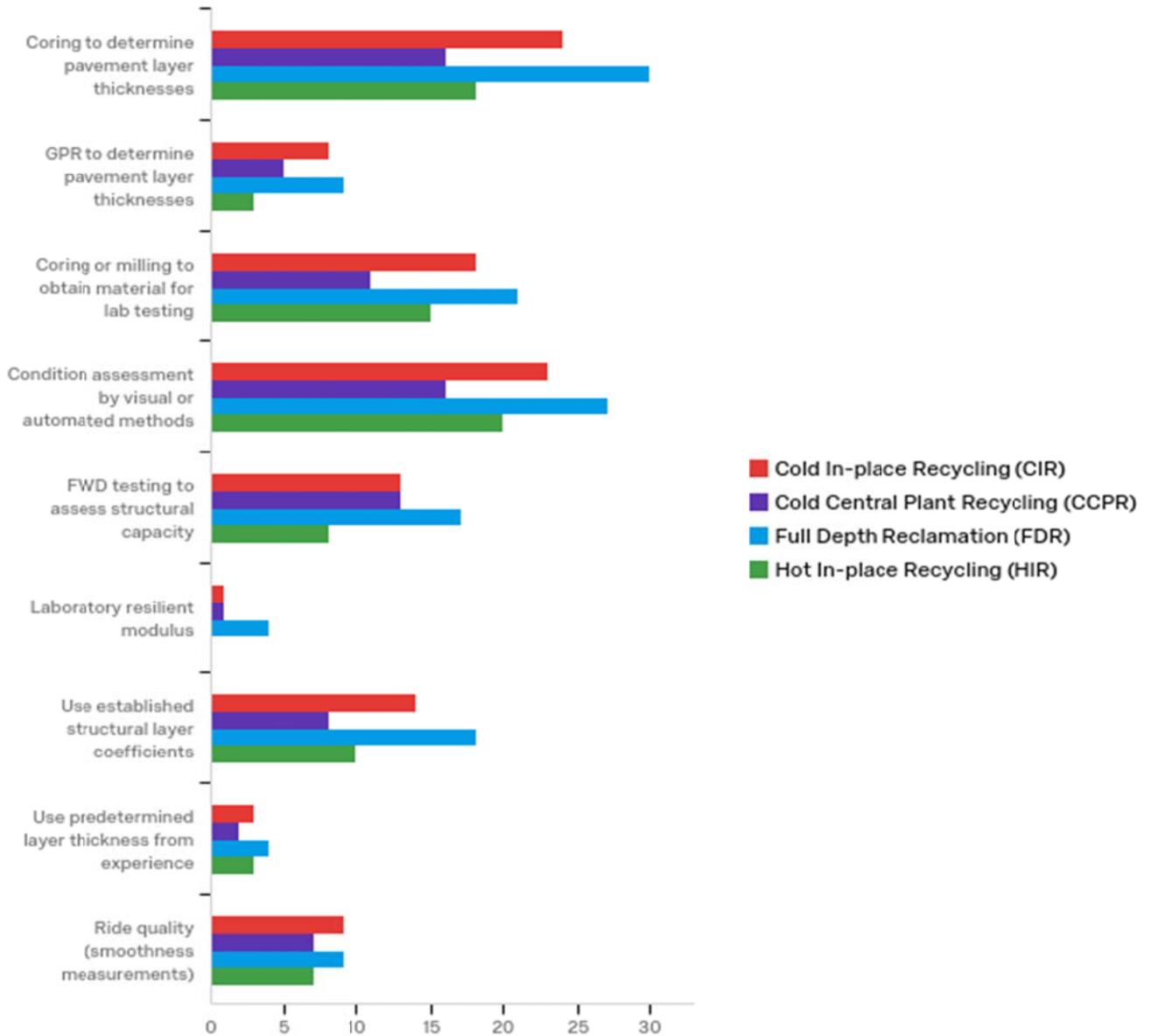
Cold In-place Recycling (CIR)	Cold Central Plant Recycling (CCPR)	Full Depth Reclamation (FDR)	Hot In-place Recycling (HIR)
Not meant for truck hauling activities.	Not meant for truck hauling activities.	None.	Not meant for truck hauling activities.
Must be overlaid before season end.	We don't specify this.	None	Must be overlaid before season end.
Curing time	Curing time		
Length of paving train, traffic speeds and volume of traffic	traffic speeds and volume of traffic	Length of paving train, traffic speeds and volume of traffic	Length of paving train, traffic speeds and volume of traffic
Piloted traffic control	No experience	No experience	Not currently used
Requires HMA overlay with higher ESALS	Requires HMA overlay with higher ESALS	none	None
Have not done in state yet	Have not done in state yet	Primarily has been limited to low volume routes	We have had good success with this in fairly high volume roads.
CIR needs to cure and can ravel before HMA overlay	CCPR needs to cure and can ravel before HMA overlay	FDR is a bit more unstable and can ravel before overlay	
have not yet used successfully on higher volume roads	have not yet used successfully on higher volume roads	have not yet used successfully on higher volume roads	have not yet used successfully on higher volume roads
We are considering excluding roadways w high percentage heavy trucks	Same as above	Same as above	Same as above
		Opening considerations are sometimes made for high truck volumes. Restrictions are considered for the length and or duration a temporary	

		surface can be open to high speed and high volumes.	
		For more than 10,000 AADT, typically in urban areas, mill-and-fill is more desirable than FDR because of curb-and-gutter presence.	
		Not used for heavily trafficked roadways such as interstate. Too much existing HMA to make it feasible.	Needs decent existing structure (i.e. 2" of HMA under the HIR layer) to accomodate construction traffic. Good for opening to traffic immediately, but have only used when a final surface is used on top of the HIR layer.
Would rather control the materials better than this process allows		Limited to less AADT due to the length of curing time required.	This method is only being considered by our counties.
rutting concerns during cure period		no restrictions - traffic not allowed on FDR - only used for base for PCCP at this time	rutting concerns especially when the surface treatment is a chip seal, microsurfacing or ultrathin bonded asphalt surface (and not a conventional overlay)
No control over process, will not do it			Reheating asphalt is just plain stupid.
		Process slows traffic too much.	
Lack of experience with treatment performance.	Lack of experience with treatment performance.	Lack of experience with treatment performance.	Lack of experience with treatment performance.
traffic control, need to open to traffic for curing	Do not use.	Traffic control during construction and during curing.	Do not use
Want to validate the process before increasing traffic levels	Want to validate the process before increasing traffic levels	Only used on low volume roads	Not used on state network at this time
Need a viable detour route	Haven't done	Need a viable detour route	Haven't done
Number of lanes in each direction	Number of lanes in each direction	Number of lanes in each direction	Number of lanes in each direction
Unknown nature of CIR as	Unknown nature of CIR as		Lift size not large enough to handle high traffic.

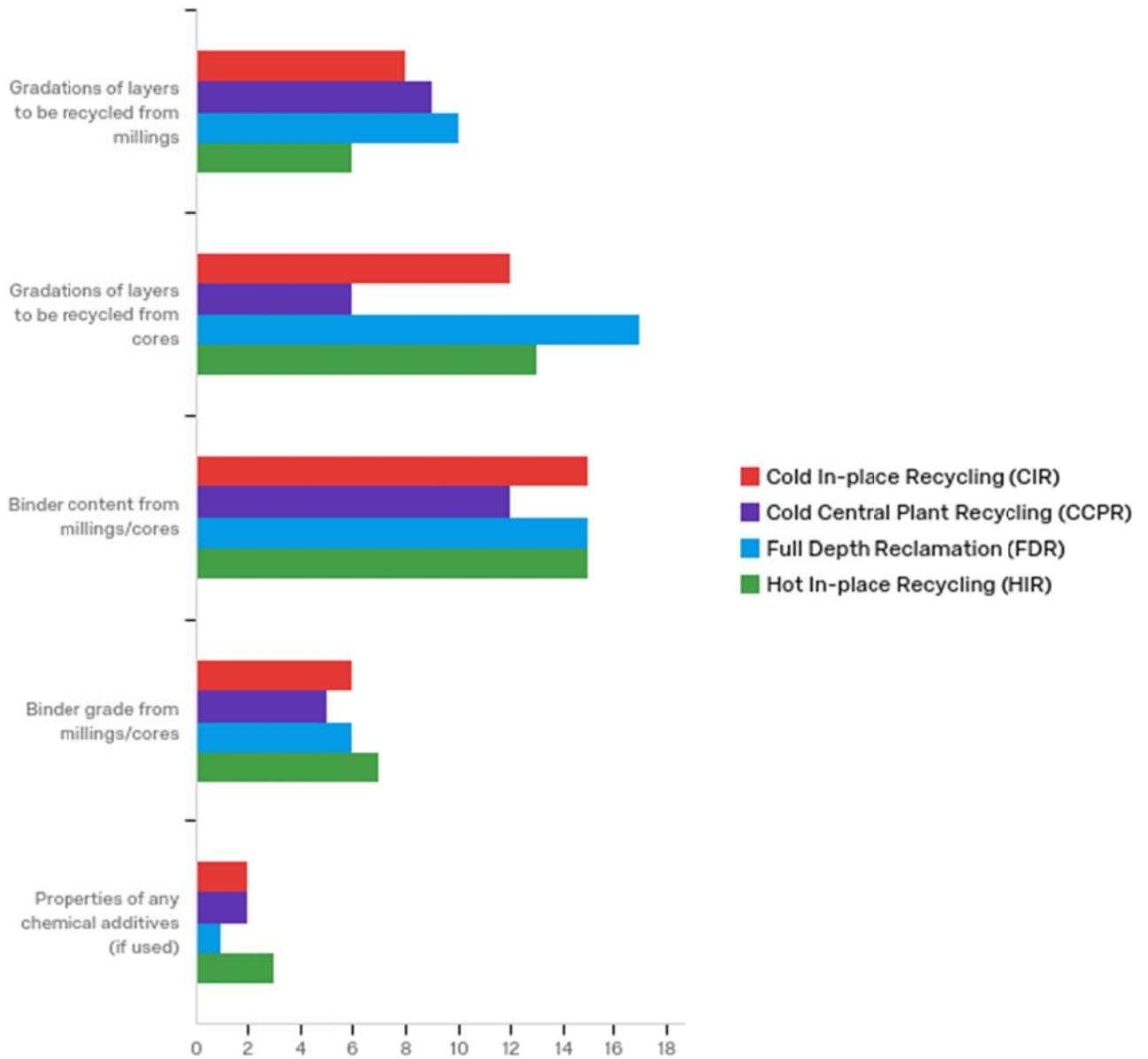
intermediate lift
at this time.

intermediate lift
at this time.

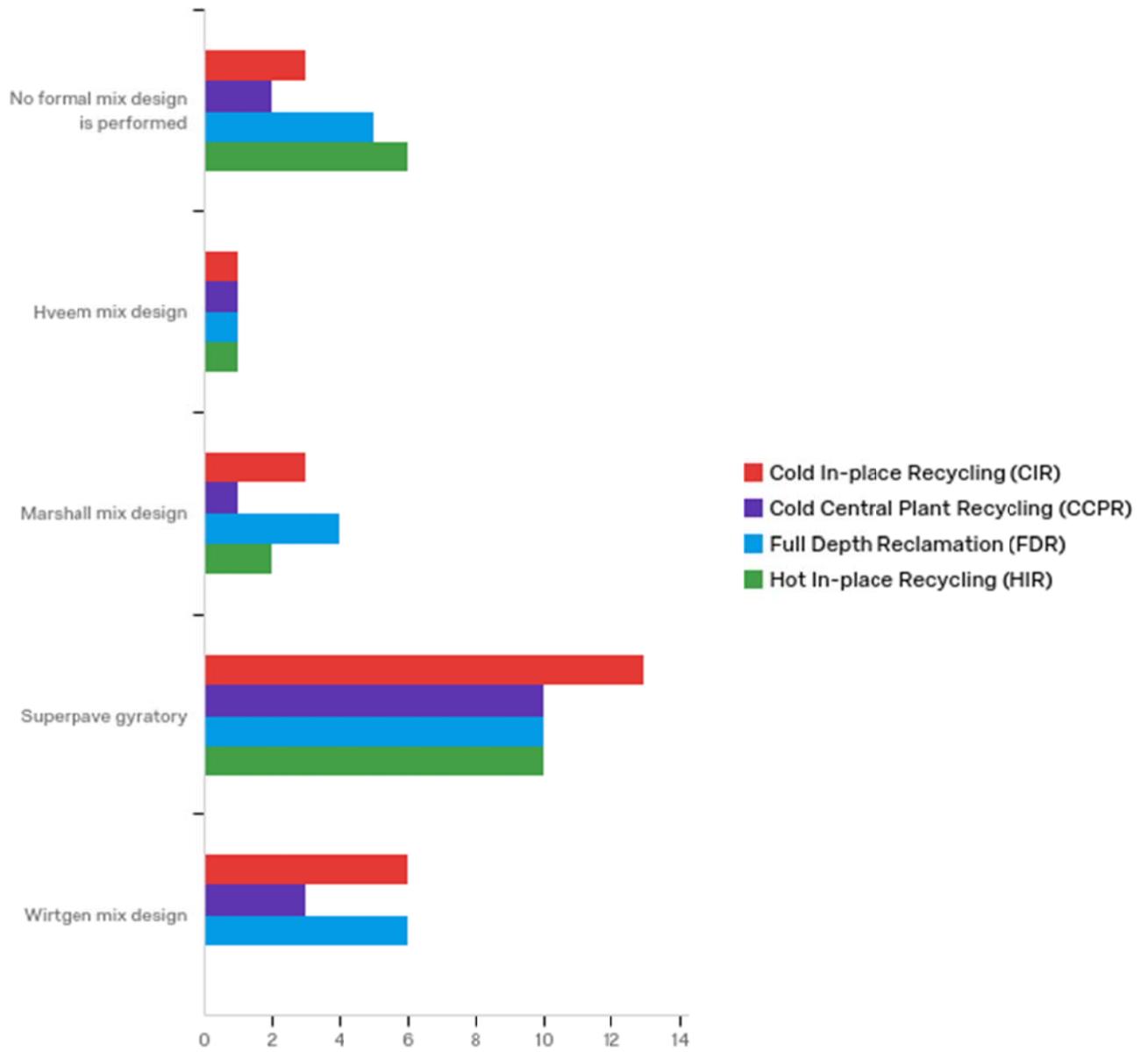
Q7 - Pre-construction Field Testing - when developing a recycling project design, I typically use (select all that apply):



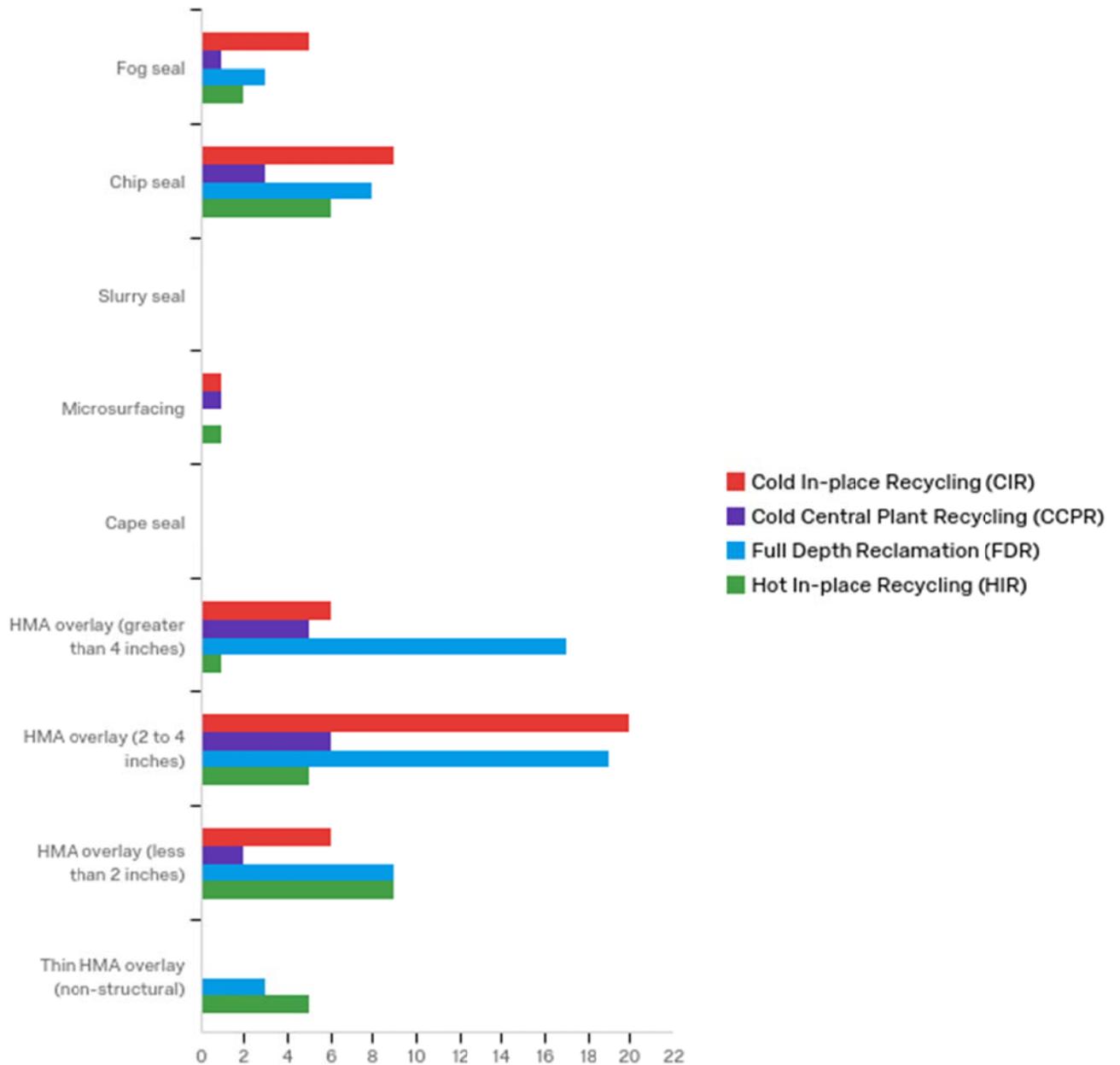
Q8 - Pre-construction Laboratory Testing - Prior to construction, I typically determine (select all that apply):



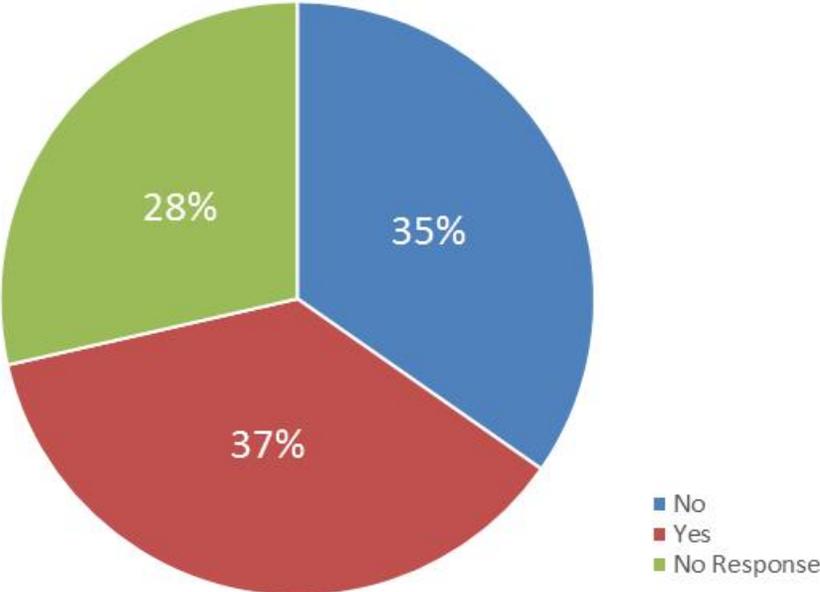
Q9 - Mix Design Testing - Prior to construction, I or my contractor design our recycled mixtures based on the following (select all that apply):



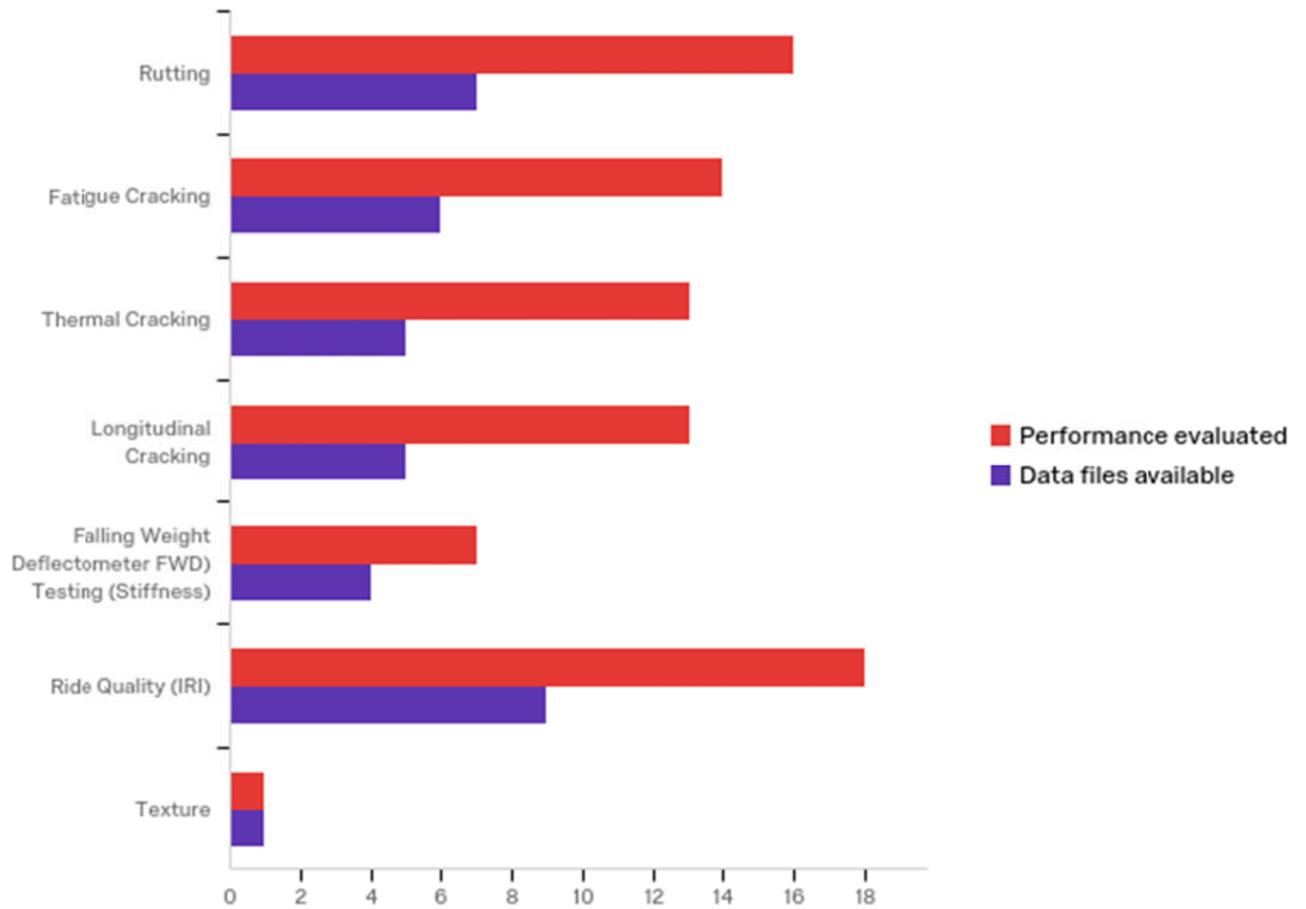
Q10 - Surfacing - Please indicate the types(s) of surfaces that you have used in the past 5 years (select all that apply):



Q11 - Have you collected any performance data on recycled pavements using either CIR, CCPR, FDR or HIR?



Q12 - Which of the following performance indicators were evaluated (select all that apply)? Also, please indicate if data files are available:



Q13 - Are you willing to share this data?

