

NCHRP SYNTHESIS 394

Reducing Litter on Roadsides: A Synthesis of Highway Practice



The synthesis was undertaken

- To offer a status on efforts to reduce roadside litter by State Departments of Transportation
- To provide information concerning the prevention and removal of roadside litter and
- To uncover unfulfilled needs, knowledge gaps and underperforming activities.

In addition, the synthesis covers:

- Enforcement
- Education
- Awareness
- Engineering Methods

For both litter prevention and collection

Focus on:

- Primarily State DOT personnel involved in roadside litter prevention
- Contractors who conduct litter prevention and collection
- Policymakers and practitioners from other State agencies
- Environmental organizations
- Groups and volunteers

46-Question Survey Distributed and Literature Review Undertaken

- Survey was distributed to all 50 US DOTs, Puerto Rico and 10 Canadian Provinces
- Response rate for US jurisdictions was 63%
- Together, the survey and literature review provided a comprehensive snapshot of the state of the practice of roadside litter abatement
- Four case studies from DOTs considered leaders in the field were undertaken (Florida, Georgia, Texas and Washington)

Major Findings

- Impacts of litter and its collection are staggering
- Estimated cost of collection by DOTs exceeds \$130 million per year and approaches \$500 million by all levels of government
- Roadside litter affects tourism dollars

Major Findings

- Increased vehicle-animal crashes are possible but haven't been studied
- Emerging concern is toxic litter from clandestine and portable meth labs
- Road debris is conservatively responsible for 80 to 90 fatalities and some 25,000 crashes nationwide

Other Major Findings:

- It is clear that North America has a roadside litter problem
- It is also clear that DOTs have developed programs to address the problem
- It is unclear what programs are in effect
- It is unclear what organization structures work
- It is unclear what resources are required
- It is unclear which programs are producing results

Other Major Findings

- A lack of program evaluations in particular has resulted in undocumented program success
- Consequently, despite the commitment of DOTs and community volunteers, the approach has been piecemeal
- One of the primary obstacles in developing effective anti-litter campaigns and attracting supporting funds is a lack of reliable data on the litter problem

Other Major Findings

- Evaluations are produced by only a few litter prevention programs
- These evaluations typically use the frequency or density of visible litter as the sole measure of success

Conclusions

- Existing efforts lack the synergy that might be created by a national coordination of roadside litter prevention efforts
- The successes of various programs in reducing roadside litter have been documented only by some of the well-developed State programs

Conclusions

- Some roadside litter prevention efforts have enjoyed some success but many more have not
- Since quality effectiveness evaluations are rare, road authorities and government agencies may be hesitant to invest in programs that have not proven effective

Conclusions

- State DOTs by and large do not have a consistent metric for roadside litter collection (weight, volume, etc.)
- Better documentation and wider publicity of costs and impacts of roadside litter to the general public and decision makers could bring greater resources to bear