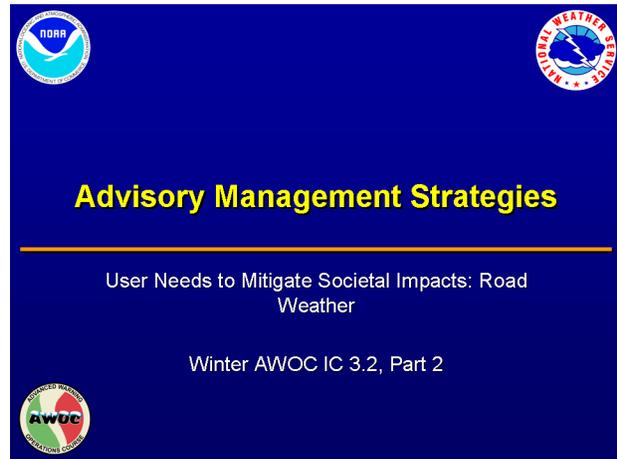

1. Advisory Management Strategies

Instructor Notes: This module is the second part of a lesson that will discuss Road Weather Impacts and Management Strategies. This presentation will describe the advisory management strategies utilized by the transportation community. This presentation should take approximately 10 minutes.

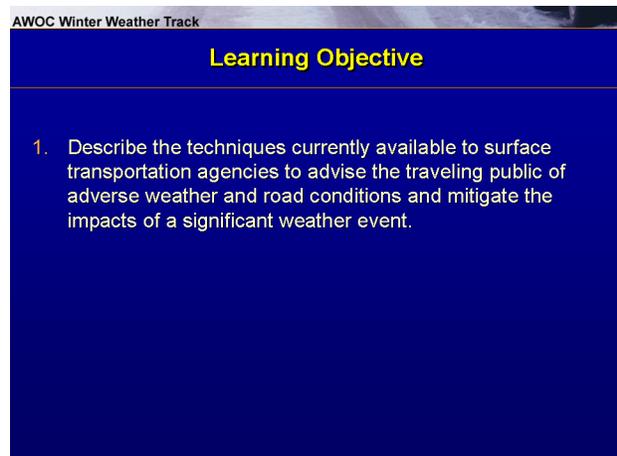
Student Notes:



2. Learning Objective

Instructor Notes: There is one learning objective for this lesson: 1. Describe the techniques currently available to surface transportation agencies to advise the traveling public of adverse weather and road conditions and mitigate the impacts of a significant weather event.

Student Notes:



3. Description of Advisory Strategies

Instructor Notes: One of the ways transportation managers can mitigate the impacts of adverse weather is to disseminate road weather information to current or perspective travelers. The management strategies that involve the dissemination of information to the public are called Advisory management strategies. [CLICK] Advisory management strategies are usually implemented by Transportation Management Centers, Departments of Public Safety, or similar agencies (FHWA, 2006). [CLICK] By informing the traveling public of potentially adverse weather and road conditions, surface transportation agencies can keep the public safe by influencing their decision making process. As a result, travelers may change their departure time, their route, mode of transportation, or even opting not to travel at all. [CLICK] Advisory strategy techniques involve both general and specific information. The reports passed along can be for a general area, a specific route, a short-term forecast of hazardous conditions, or a notification of hazardous conditions observed immediately down the road.

Student Notes:

AWOC Winter Weather Track

Description of Advisory Management Strategies

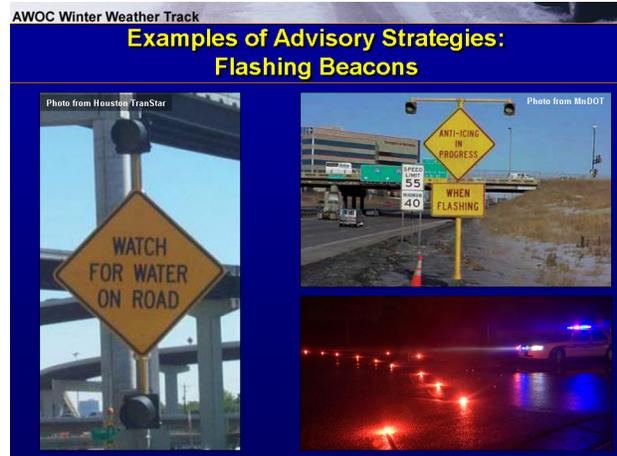


- Implementation: Usually TMCs, public safety, or similar agencies
- Goal: Keep the public safe by influencing their decision making process
- These techniques can involve both general and specific weather & road condition information

4. Flashing Beacons

Instructor Notes: Many static highway signs in hazard-prone, or even highly urbanized, areas will be fitted with flashing yellow lights. These lights, or beacons, can be activated remotely by transportation operators or be connected to RWIS sites that automatically turn them on if specific parameter thresholds are observed. In areas lacking these signs, sometimes public safety vehicles will position themselves with their lights flashing to slow down traffic.

Student Notes:



5. Dynamic Message Signs (DMS)

Instructor Notes: Dynamic or Variable Message Signs (DMS or VMS) display messages to the travelling public passing by a location. Some DMS are portable while others are permanent. Generally speaking, the portable signs are smaller and used to communicate general, concise pre-programmed messages (e.g., “fog ahead”). The larger, permanent DMS sites allow transportation operators to convey more details, but they are often limited to urban, or heavily travelled, highways.

Student Notes:



6. Highway Advisory Radio (HAR)

Instructor Notes: Highway Advisory Radio (or HAR) has been in use for decades and is a relatively common technology. These low-power antennas transmit road and weather conditions to the traveling public using commercial radio frequency bands (usually AM). The frequencies are posted on signs along freeways or in large urban areas. These systems are licensed by the FCC and have a range of a few miles. The message is usually recorded and can be updated as needed.

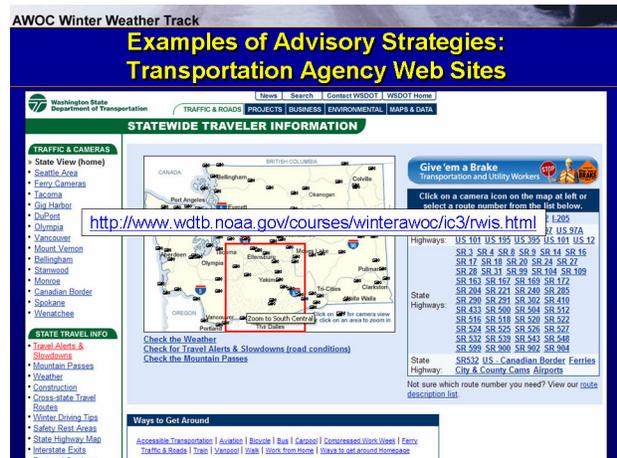
Student Notes:



7. Transportation Agency Web Sites

Instructor Notes: Many state transportation departments operate web sites that provide information about road and weather conditions. The information provided varies widely from state to state. Some states provide interactive web pages with RWIS observations, while others only provide general road condition information. [CLICK] If you are interested in seeing a list of the transportation web sites that area available, visit the URL shown on the screen. It's important to note that many of these sites are only operational during the winter months, so the information may be unavailable at other times of the year.

Student Notes:



8. Interactive Telephone Services (511)

Instructor Notes: Nearly a decade ago, the U.S. Department of Transportation petitioned the FCC to designate a nationwide three-digit telephone number for traveler information. That number, 511, is now available to state and local governments to provide traffic information. Since that time, 511 has become active in most areas of the country and is under development in most other areas. In fact, many DOTs have integrated the

511 telephone service with transportation web sites that provide road and weather conditions (FHWA, 2008).

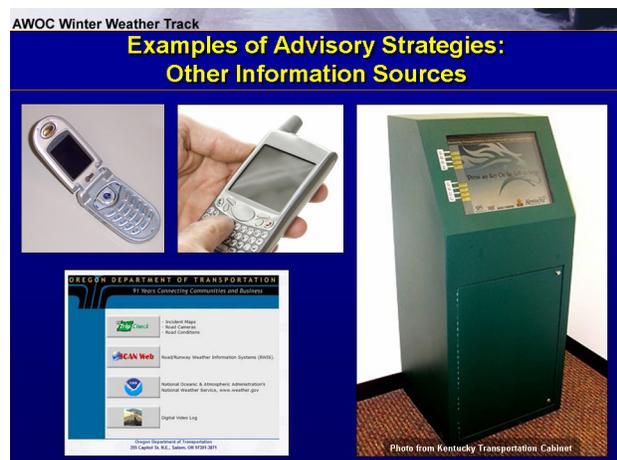
Student Notes:



9. Other Information Sources

Instructor Notes: There are other, relatively new technologies that transportation operators use as well. For instance, Some transportation agencies have web sites that are easily accessible by cell phone browsers, blackberries, and internet-enabled PDAs. More ubiquitous technologies are kiosks and televisions installed at rest areas along highways. These monitors can provide road condition information from DOTs or provide weather information from cable television networks. Public safety officials may also do TV and radio interviews prior to a major event or remind people of safe driving practices prior to the first event of the winter season.

Student Notes:



10. Availability of Specific Strategies Varies

Instructor Notes: While there are a variety of advisory management strategies available, not every transportation department or operator will have all of these tools at their

disposal. The tools available will depend both on the state's resources and on their perceived importance of weather information on traffic management. It would be wise to learn what tools your local transportation operators use to advise the public of potentially dangerous road conditions.

Student Notes:



11. Survey on Changing Driver Behavior: 2003

Instructor Notes: Regardless of the specific technique implemented, advisory management strategies all aim to change driver behavior during adverse weather. Cambridge Systematics, Inc. (2003) surveyed drivers in the Detroit metro area on what factors caused them to alter their regular commute. [CLICK] Adverse weather didn't impact their route so much as it impacted the time they left. [CLICK] The most significant impact was the choice of when people left their homes in the morning. The same study asked drivers to evaluate what information sources would be most valuable to them for obtaining traffic and road condition information. [CLICK] Rated most valuable were: - Radio and TV traffic reports; - Info on alternate routes due to accidents, congestion, or weather; and - Continuous traffic advisory info on a dedicated radio station. [CLICK] Rated least valuable were: - Traffic info on-line; - Customized paging services; and - A toll-free mobile phone number with traffic info. While not directly analyzed by the authors, there were approximately an equal number of push/pull technologies included in the survey. For those of you unfamiliar with this concept, push technologies allow information providers to "push" relevant information to customers whenever it becomes available (e.g., weather radio). Pull technologies require users to go get the information they want (e.g., NWS web site) as they need it. [CLICK] In general, the push technologies were rated higher than the pull technologies. A possible explanation is that drivers in the survey wanted to be told about possible problems awaiting down the road ASAP. Regardless of the technology used, the drivers were generally interested in receiving as much traffic information as they could get. It should be noted that, while this survey was conducted in the last decade, recent advances in information technology might cause this same survey to produce different results today.

Student Notes:

AWOC Winter Weather Track

**Survey on Changing Driver Behavior (2003):
Altering Commuting Times & Road Condition Info**

- Weather usually impacts commuter departure time, not route
- Impacts most significant in the morning
- Most valuable info sources:
 - Radio and TV traffic reports
 - Alternate route info
 - Dedicated radio station w/traffic info
- Least valuable info sources:
 - On-line traffic info
 - Customized paging services
 - Toll-free mobile traffic info
- “Push” technologies generally rated higher than “pull”

12. Summary

Instructor Notes: In summary, advisory management strategies involve techniques used to disseminate information about road and weather conditions to the traveling public. [CLICK] Several examples of advisory management strategies were presented, including flashing roadside beacons, DMS, HAR, web sites, and 511. [CLICK] While all of these techniques are available in the U.S., most areas will not utilize all of them. [CLICK] The primary goal of advisory management strategies is to influence the travelling public’s decision-making process. [CLICK] To proceed to the next section of this lesson, click on the link at the bottom of the slide or use the navigation in the NWS Learning Center.

Student Notes:

AWOC Winter Weather Track

**Summary of “Advisory Management
Strategies” Module**

- Advisory management strategies disseminate info on road and weather conditions
- Examples include flashing beacons, DMS, HAR, web sites, and 511
- Not all technologies are utilized throughout the U.S.
- The goal of advisory strategies is to influence the travelling public’s decision-making process

[Proceed to the next module in the course](#)