## OREGON TRAFFIC INCIDENT MANAGEMENT STRATEGIC PLAN









Prepared by:

**DKS** Associates

in partnership with

Oregon Department of Transportation

and

**Oregon State Police** 

December 23, 2015







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### Introduction

"For every minute that a freeway travel lane is blocked during a peak period, four minutes of travel delay results after the incident is cleared."

"Traffic incidents account for about onequarter of all congestion on U.S. roadways."

National Traffic Incident Management Coalition (NTIMC) Benefits Summary

#### Introduction

Traffic incident management (TIM) strategies are essential for a safe and reliable transportation system.



Traffic Incident Management (TIM) consists of a planned and coordinated, multi-disciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safety and quickly as possible. TIM partners include transportation departments, fire and rescue, law enforcement, emergency medical services, towing, hazardous material clean up crews, and media. Each of these partners has a key role to play in detecting, responding to, and clearing incident scenes. Good TIM practices help to improve safety for on scene responders, incident victims, and the traveling public. They also alleviate congestion impacts from incident scenes, and reduce the chance of secondary incidents.

Oregon's original TIM Strategic Plan was adopted in 2011. Since 2011, Oregon Department of Transportation (ODOT), Oregon State Police (OSP), and local agency partners made significant strides in advancing TIM practices across the state.

TIM strategies require ongoing commitment of resources and funding, and therefore demand more frequent strategic planning than capital projects. With support from FHWA, ODOT's 2014 Transportation System Management and Operations (TSMO) Capability Maturity Implementation Plan paved the way to update Oregon's TIM Strategic Plan.

The 2011 TIM Strategic Plan was organized around the National Unified Goal (NUG), introduced in 2007 by the National Traffic Incident Management Coalition (NTIMC). This updated plan continues to support the key elements of the NUG, but is reorganized to better meet the needs and goals of the state of Oregon.

Through a collaborative process with TIM partners, the updated TIM Strategic Plan presents a new vision, a new set of goals, new objectives, and both new and revised actions.

#### **Benefits of TIM**



Traffic incidents can significantly impact the mobility of a region as well as causing fatalities, injuries, and destruction of goods.

TIM strategies offer widespread benefits.

The longer incidents remain on the roadway, the risks for secondary crashes and injured responders increase. It is in everyone's best interest to invest in a robust TIM program.

Typical benefits from TIM strategies include:

- Improved safety for responders and the traveling public
- Reduced secondary crashes
- Improved efficiency and mobility of the roadway system
- Reduced economic impact due to the delay of commercial goods
- Reduced environmental impacts and energy use (less air pollution and wasted fuel)
- Minimized delay of commercial goods

For more specific benefit information the following two resources are recommended:

FHWA's Best Practices in Traffic Incident Management, September 2010.

US DOT's ITS Knowledge Resource website: <a href="www.itskrs.its.dot.gov">www.itskrs.its.dot.gov</a> (regularly updated with the latest studies documenting TIM benefits)

## Key TIM Successes in Oregon



Since implementing the original TIM Strategic Plan in 2011, Oregon's TIM partners have made significant advances, completing roughly half of the 57 actions identified in the original plan.

#### Key accomplishments include:

- Implementing regular quarterly meetings for the three Regional TIM Teams currently active in the state (Central Oregon, Rogue Valley, Greater Portland) and sharing that information with other TIM partners.
- Analyzing crashes that exceed the 90 minute clearance goal.
- Developing guidance to address when incident responders should move vehicles, debris, and/or cargo (part of the Push, Pull and Drag Program).

- Tracking roadway clearance duration, roadway closure duration, and incident clearance duration performance measures.
- Integrating a new State Radio System for all maintenance and operations radio operators to communicate with OSP and local TIM partners.
- Granting OSP viewing access to ODOT incident clearance reports.
- Training over 2,800 responders in National TIM Responder Training



# Existing TIM Practices in Oregon

The SafeClear instant towing program in Houston, TX cleared almost 90 percent of incidents in under 6 minutes in 2008. This program is attributed with a reduction of approximately 1,400 incidents per year, saving \$49 million annually.

– Best Practices in Traffic Incident Management, FHWA

### Current Oregon Laws and Policies



- The Portland metro area implemented instant towing on specific roadways and also uses staged towing during winter storm events when necessary.
- Statewide, both ODOT and OSP use the same list of contractors, however each agency has its own rotation order.



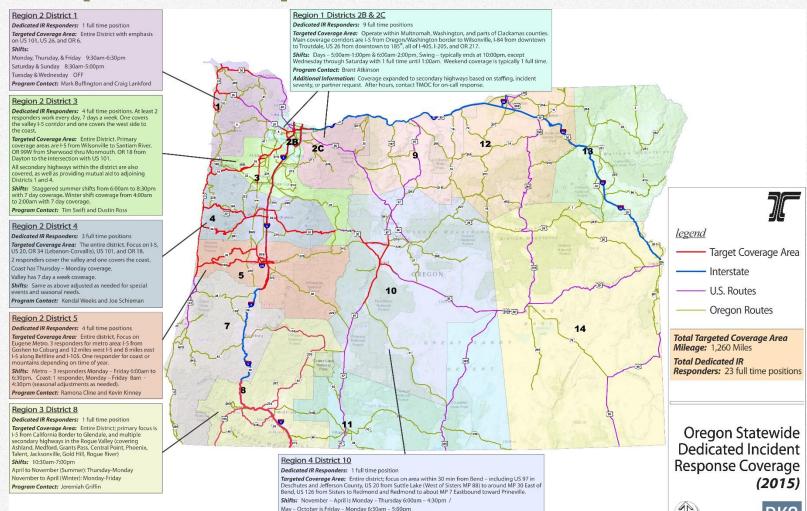
- Oregon Move Over Law requires drivers to move to a lane not adjacent to the responder vehicle or reduce speed to 5 mph under the speed limit if lane changing is not feasible.
- Oregon's Authority Removal Law allows for law enforcement to remove vehicles or debris or direct a driver to do so if the incident is blocking traffic.
- Oregon's Move It Law requires drivers involved in an incident to remove their vehicle from the travel lanes if there are no serious injuries.



- ODOT and OSP prepared and agreed to a Mutual Assistance Agreement in 2008.
- Current ODOT TIM Strategic Plan was adopted in 2011.
- Oregon Transportation Plan (OTP) was adopted in 2006.

### Dedicated Incident Responder Map

This map shows Oregon regions and districts with dedicated incident responder coverage and the details of the existing coverage as of 2015.



Program Contact: Tim McGinnis, Joe Harmon, and David Moyer

Additional Information: Also responds to help Santiam Jct. crew when needed.

### Current Performance Metrics

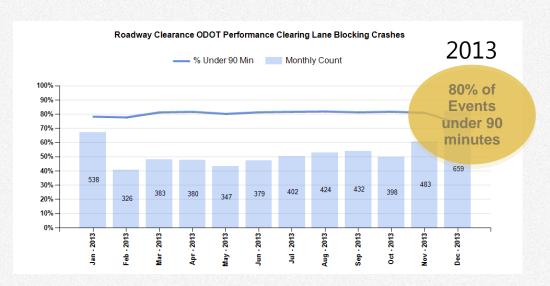
Oregon tracks roadway clearance times (the amount of time between the first recordable awareness of the incident by a responsible agency to the time that all lanes are available for traffic flow) for all lane-blocking crashes on state facilities.

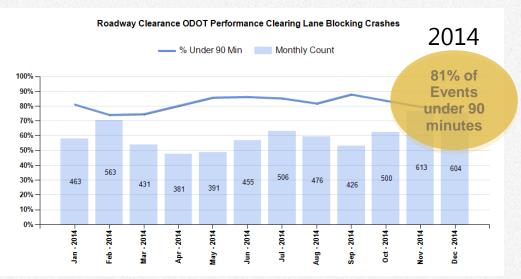
Oregon Legislature set the current goal to clear 100 percent of all lane-blocking crashes within 90 minutes.

In 2013 and 2014 there were approximately 5,000 to 6,000 lane-blocking crashes each year. During the warmer weather months a slightly higher percent of incidents are cleared in less than 90 minutes compared to during the winter months.

#### Statewide Lane Blocking Crashes and Percent Cleared Under 90 Minutes

Source: ODOT Transportation Operations Center System (TOCS)







### TIM Stakeholders

"About 20 percent of all firefighter deaths are not related to firefighting at all, but occur due to vehicle-related incidents.

On average, at least two emergency responders are struck each day in the US."

National Traffic Incident Management
 Coalition (NTIMC) Benefits Summary

## **Stakeholders**



#### **Core Partners**

- OSP Oregon State Police
- ODOT Oregon Department of Transportation
- FHWA Federal Highway Administration



#### Other Lead Agencies and Stakeholders

- 911 Dispatch
- DOJ Department of Justice
- · DPSST Department of **Public Safety Standards** and Training
- Technicians
- Fire Agencies
- HazMat Response Hazardous Material
- LE Law Enforcement Agencies

- Local Transportation/ **Public Works Agencies**
- Media
- · OACP Oregon Association Chiefs of Police
- EMTs Emergency Medical ODOT DMV Department of Motor Vehicles
  - OERS Oregon **Emergency Response** System
  - OFCA Oregon Fire Chiefs Association

- · OSFM Oregon State Fire Marshall
- OSSA Oregon State Sheriff's Association
- OTTA/Tow industry Oregon Tow Truck Association
- OVFA Oregon Volunteer Fire Association
- TMCs Local Agency Traffic Management Centers
- Transportation Safety
- Volunteer Responders





# Vision, Goals, & Objectives

In a study that linked police enforcement to a reduction in crashes, the authors found that if Oregon State Police had maintained their levels from 1979, that by 2005 there would have been 2,302 fewer fatalities due to stricter speed enforcement and increased citations.

– DeAngelo and Hansen, American Economic Journal: Economic Policy 2014

#### Vision

Enhancing the safety and efficiency of Oregon's transportation system for incident responders and travelers

The TIM vision statement was developed through a collaborative process with TIM partners and expresses the intended outcome of the Strategic Plan.





## Goals and Objectives



The plan's goals establish overarching principles that guide decision making, while the objectives are specific steps to achieve each goal.

There are five goals in the plan and each goal has three to five specific objectives. Most of the objectives use the **SMART** framework:

- Specific
- Measurable
- Achievable
- o Realistic
- Time-bound

Using SMART objectives allows progress to be tracked by clearly identifying what will be measured. Measurement can have different forms. In some cases it is quantitative, whereas in other cases measurement may be qualitative.

While the objectives in this plan are specific and measureable, most of them have not been assigned a specific timeframe for achievement. Without having baseline data, it is difficult to determine a reasonable target date. The overall timeframe for

the plan is five years, at which point the objectives should be reassessed. With more baseline data the objectives can be even more specific in the future.

Tying the objectives to performance metrics provides several benefits:

#### Demonstrates accountability and program effectiveness:

Provides documentation about how TIM programs improve safety and incident clearance times.

#### **Demonstrates process efficiency:**

Monitors and compares performance outcomes of different TIM strategies to determine which results in greater efficiency.

#### Demonstrates improvements over time:

Uses TIM performance metrics to monitor improvement from one year to the next.

#### **Supports future planning:**

By monitoring and analyzing TIM performance, resources can be allocated strategically to target areas with higher safety problems and longer incident clearance times.

## Tracking Performance

To actively monitor the progress of the Plan's objectives and progress, specific performance metrics should be collected. The table to the right show three categories of performance metrics: those that Oregon is currently tracking, performance metrics the state plans to begin tracking as identified in this TIM Strategic Plan (see Actions Section), and additional performance metrics Oregon may want to consider collecting in the future.

With these performance metrics, Oregon will be able to demonstrate accountability and program effectiveness of TIM actions, and be able to better support future TIM planning.

Currently Tracked

- Roadway clearance duration
- Roadway closure duration
- Incident clearance duration
- Number of responders trained in National TIM Training Classes

Performance Metrics this TIM Plan Identifies as Actions to Begin Tracking

- Secondary crashes (see SE-01) Near Term
- Incident responder struck-bys (see SE-05) Mid Term
- Incident responder fatalities (see SE-05) Mid Term

Performance Metrics to Consider Tracking in the Future

- Time of key incident milestones (examples: arrival time of each responder, time traffic control is established, transport time of injured persons, time flow returns to normal, etc.)
- Frequency of traveler info updated during an incident
- Number of responder updates per incident
- Number of after action reviews
- Number of responders trained in specific categories
- Percent of incidents where tow companies arrive with correct equipment

#### Goals









#### Safety

Reliability

Three Cs

**Foundation** 

**Goal 1:** Enhance the safety of first responders

**Goal 2:** Enhance the safety of the traveling public

**Goal 3:** Improve the reliability and efficiency of the transportation system

Goal 4: Strengthen the communication, coordination, and collaboration between response partners **Goal 5:** Establish TIM as a core public safety discipline



#### **Goal 1**: Enhance the safety of first responders

- a) Achieve zero responder fatalities
- b) Reduce responder "struck-bys" on incident scenes
- c) Increase the number of responders trained to properly use personal protective equipment (PPE) across disciplines
- d) Increase the number of responders across all disciplines train in the national best practices and standards of incident scene management





#### Goal 2: Enhance the safety of the traveling public

- a) Reduce secondary incidents
- b) Update traveler information regarding incidents within 10 minutes of a condition change (consistent with ODOT/OSP agreement)
- c) Enhance the timeliness and accuracy of traveler information
- d) Increase the frequency incident responders communicate on-scene incident information to a TOC





### Reliability Objectives



### **Goal 3**: Improve the reliability and efficiency of the transportation system

- a) Reduce roadway clearance time to under 90 minutes for all incidents (legislative measure)
- b) Reduce the duration of lane closures, roadway clearance, and incident clearance
- c) Reduce the time between incident detection and tow truck arrival at incidents
- d) Improve the percent of time tow companies arrive with the correct tow equipment.



## Three C's Objectives

### **Goal 4**: Strengthen the communication, coordination, and collaboration between response partners

- a) Improve communication between incident responders before, during, and following incidents
- b) Train 10,000 TIM responders and partners in the National TIM Responder Training by 2021 and instate on-going training requirements
- c) Include tow policies, tow best practices, and tow regulations in all TIM training
- d) Form and sustain TIM teams in all targeted areas
- e) Share TIM data and data-sharing policies with all response partners

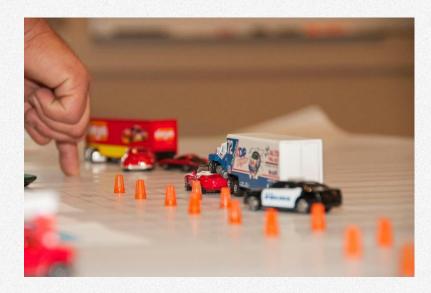




## Establishment Objectives

#### Goal 5: Establish TIM as a core public safety discipline

- a) Increase the frequency of TIM outreach and education to agency leadership
- b) Improve public awareness about the benefits of maintaining an active TIM program and current TIM policies
- c) Integrate TIM strategies into agencies' planning and programming processes





### TIM Actions

"The likelihood of a secondary crash increases by 2.8% for each minute the primary incident continues to be a hazard."

#### - Karlaftis et al Study

The St Louis Motorist Assist program (equivalent to ODOT's dedicated incident response program) produced an annual benefit-cost ratio of over 38:1 (based on 2009 dollars), decreased annual secondary crashes by 1,082, and lowered annual congestion costs by over \$1.1 million.

- US DOT ITS Benefits database, Feb 2010

## Organization of Action Plan

The actions in this TIM Strategic Plan are grouped into one of six categories, and then prioritized within those categories.

The timeframe in which an action is placed represents when the action is initiated (not completed), and the project number with a priority level is arbitrary. It does not reflect priority in relation to other actions in the same timeframe.

This section of the document provides a description of all the actions included in the plan. The first page in each category provides a summary table.

#### **Six Categories of Actions**



Agency/Stakeholder Collaboration (SC)



Public Outreach & Traveler Information (PO)



Policy & Regulatory (PR)



Technology Integration (T)



System Evaluation & Performance Measures (SE)



Responder Training & Education (RT)

#### **Three Timeframes/Priority Levels**

Near Term 2016-2017

Mid Term 2018-2021

Longer Term Beyond 2021

#### **Abbreviations**

There are several abbreviations used throughout this document. The list to the right includes abbreviations used to identify the responsible party and key partners for the actions, as well as a few abbreviations specific to the action items.

#### **Responsible Party and Key Partner Abbreviations:**

**DOJ** – Department of Justice

**DPSST** – Department of Public Safety Standards and Training

**EMTs** – Emergency Medical Technicians

FHWA - Federal Highway Administration

**LE** – Law Enforcement Agencies

**OACP** – Oregon Association Chiefs of Police

**ODOT** – Oregon Department of Transportation

**OERS** – Oregon Emergency Response System

**OFCA** – Oregon Fire Chiefs Association

**OSFM** – Oregon State Fire Marshall

**OSP** – Oregon State Police

**OSSA** – Oregon State Sheriff's Association

**OTTA** – Oregon Tow Truck Association

**OVFA** – Oregon Volunteer Fire Association

TMCs – Traffic Management Centers

#### **Other Action Related Abbreviations:**

VMS - Variable Message Sign

**DMV** – Department of Motor Vehicles

**R.E.S.C.U.M.E.** – Response, Emergency Staging, Communications, Uniform

Management, and Evacuation



## Agency/ Stakeholder Collaboration

## **Summary Table**

No.	Action	Responsible	Other Key Partners			
140.	Action	Party	Other Key Farthers			
NEAR TERM						
SC-01	TIM Meetings (on-going)	ODOT	OSP, OACP, OTTA, OSSA, LE, DPSST, Fire Agencies			
SC-02	After Action Reviews	ODOT	OSP, OACP, OTTA, OSSA, LE, DPSST, Fire Agencies, HazMat			
SC-03	TIM Design Check List	ODOT	none			
MID TERM						
SC-04	Interoperable Communication Procedures	ODOT/ OSP	OACP, OTTA, OSSA, LE, DPSST, Fire Agencies, 911 dispatch			
SC-05	TIM Team Development	ODOT	OSP, OACP, OTTA, OSSA, LE, DPSST, Fire Agencies			
SC-06	VMS Message Policies – Review	ODOT	LE			
SC-07	VMS Message Policies – Education	ODOT	LE			
SC-08	Information Exchange	ODOT/OSP	OTTA, OSSA, LE, Fire Agencies			
SC-09	ODOT/OSP Mutual Assistance Agreement	ODOT/OSP	none			
SC-10	Statewide Price Agreement	ODOT	OSP			
LONG TERM						
SC-11	Joint Policy Statement	ODOT	OSP, LE, OTTA, OSSA, OACP, Fire Agencies, OSFM			



## Agency/ Stakeholder Collaboration



#### Near Term (2016-2017)

#### SC o1 – TIM Meetings

**Description:** Continue to support existing TIM team meetings and sharing information from meetings via newsletters and websites.

Lead Agency: ODOT

Key Partners: OSP, OACP, OTTA, OSSA, LE,

DPSST, Fire Agencies

#### SC 02 - After Action Reviews

**Description:** Develop a procedure for after action reviews by regional TIM teams and create a template for statewide use. Include sharing information from reviews with partner agencies, and allow an agency to request an after action review even if an incident does not meet the specific criteria.

Lead Agency: ODOT

Key Partners: OSP, OACP, OTTA, OSSA, LE,

DPSST, Fire Agencies, HazMat

#### SC 03 – TIM Design Check List

**Description:** Prepare a check list to be used during the planning and design process of roadway related projects to ensure that critical TIM features are not overlooked (such as breaks in cable barriers for emergency vehicles to turn around, or providing wide enough shoulders for emergency vehicles, etc.).

Lead Agency: ODOT

Key Partners: none

#### Mid Term (2018-2021)

#### SC 04 – Interoperable Communication Procedures

**Description:** Develop standardized protocols for using radios between all incident responder partners during an incident.

Lead Agency: ODOT/OSP

Key Partners: OACP, OTTA, OSSA, LE, DPSST,

Fire Agencies, 911 dispatch

#### SC o5 – TIM Team Development

**Description:** Form additional TIM teams along the I-5 Corridor - Salem, Eugene, and Roseburg, and the I-84 Corridor - Pendleton / La Grande. Determine if additional TIM teams are beneficial. Convene routine TIM team meetings in identified areas.

Lead Agency: ODOT

Key Partners: OSP, OACP, OTTA, OSSA, LE,

DPSST, Fire Agencies



## Agency/ Stakeholder Collaboration



#### Mid Term (2018-2021) cont.

#### SC o6 – Variable Message Sign (VMS) Message Policies (Review Component)

**Description:** Review VMS message policies and update if necessary.

Lead Agency: ODOT

**Key Partners:** LE

#### SC 07 – VMS Message Policies (Education Component)

**Description:** Share VMS message policies with response partners as an awareness

effort.

Lead Agency: ODOT

**Key Partners:** LE

#### SC o8 – Information Exchange

**Description:** Develop guidelines to improve information exchange between responders, dispatchers, and tow companies.

Lead Agency: ODOT/OSP

Key Partners: OTTA, OSSA, LE, Fire Agencies

#### SC 09 – ODOT/OSP Mutual Assistance Agreement

**Description:** Update ODOT/OSP Mutual

Assistance Agreement

Lead Agency: ODOT/OSP

Key Partners: none

#### Mid Term (2018-2021) cont.

#### SC 10 – Statewide Price Agreement

**Description:** Develop statewide price agreements that could be used by all response agencies to purchase TIM related traffic control items. This contract could leverage the purchase power of the state, and enable response agencies to use interchangeable equipment.

Lead Agency: ODOT

Key Partners: all

#### Longer Term (Beyond 2021)

#### SC 11 – Joint Policy Statement

**Description:** Develop a joint policy statement between responder agencies to support safe quick clearance policies and laws.

Lead Agency: ODOT

Key Partners: OSP, LE, OTTA, OSSA, OACP,

Fire Agencies, OSFM





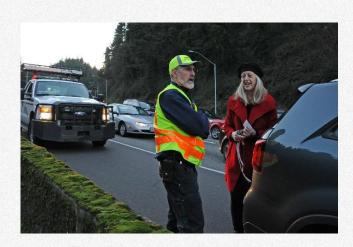
# Public Outreach & Traveler Information

## **Summary Table**

No.	Action	Responsible Party	Other Key Partners			
NEAR TERM						
PO-01	Move It and Move Over Law Education	ODOT	OSP, LE, OSSA, OACP			
PO-02	Frequent Traveler Information Updates	ODOT	Local TMCs			
PO-03	Media Partnerships	ODOT	Media, OSP, OTTA, Transportation Safety			
PO-04	Damage Tag Program	ODOT	OSP, OACP, OTTA, OSSA, LE			
MID TERM						
PO-05	DMV Test Questions	OSP	ODOT-DMV			
PO-06	End of Queue Warning - Traveler Information	ODOT	none			
LONG TERM						
	None identified					



# Public Outreach & Traveler Information



#### Near Term (2016-2017)

#### PO o1 – Move It Law and Move Over Law Education

**Description:** Develop a plan to improve public education regarding the Move It and Move Over Laws. Explore the option of additional signing along roadways.

Lead Agency: ODOT

Key Partners: OSP, LE, OSSA, OACP

#### PO 02 – Frequent Traveler Information Updates

**Description:** Develop a procedure to improve how existing resources are used by TOCs to regularly update traveler information during an incident. This action includes developing ways to improve the accuracy of incident information.

Lead Agency: ODOT

Key Partners: local TMCs

#### PO 03 – Media Partnerships

**Description:** Leverage media partnerships to push forward public outreach of TIM initiatives including:

- communicating benefits of TIM to the general public
- providing guidance to travelers on safe travel through incident scenes

Lead Agency: ODOT

Key Partners: Media, OSP, OTTA,

**Transportation Safety** 

#### PO 04 – Damage Tag Program

**Description:** Continue to implement a "Damage Tag" program similar to the program demonstrated by Indiana State Police and DOT.

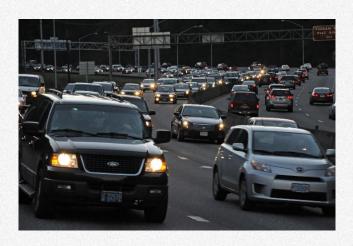
(Began as a pilot program in Oregon in July 2012, and went statewide in 2013. Continued promotion and education is needed).

Lead Agency: ODOT

Key Partners: OSP, OACP, OTTA, OSSA, LE



# Public Outreach & Traveler Information



#### Mid Term (2018-2021)

#### PO o5 - DMV Test Questions

**Description:** Work with the DMV to include licensing test questions regarding TIM related policies (driver removal law, slow down/move over law, authority removal law, etc.)

Lead Agency: OSP

**Key Partners: ODOT-DMV** 

#### PO o6 – End of Queue Warning - Traveler Information

**Description:** Develop protocol (policies, what types of incidents, how to warn travelers, etc.) based on national best practices for warning travelers approaching a vehicle queue due to an incident.

Lead Agency: ODOT

**Key Partners:** none

#### Longer Term (Beyond 2021)

No longer term actions identified



## Policy & Regulatory

## **Summary Table**

No.	Action	Responsible Party	Other Key Partners			
NEAR TERM						
PR-01	Tow Reform	OSP	ODOT, OTTA, LE, OACP, Fire Agencies, OSSA			
PR-02	Push Pull Drag Program	ODOT	OSP, OSSA, OTTA, OACP, LE			
PR-03	Enhance HazMat Response	OSFM Regional HAZMAT	ODOT, OSP, OERS, Fire Agencies			
PR-04	Abandon Vehicle Tag Reform	OSP	ODOT			
MID TERM						
PR-05	Incentivized Tow Policy and Pilot Project	ODOT	OSP, OTTA, LE, OACP, OSSA			
PR-06	Tow Contract Plans	ODOT	OSP, OTTA, LE			
PR-07	Quick Clearance Capabilities	ODOT	DOJ, OSP			
PR-08	Quick Clearance Enhancement	ODOT	OACP, OTTA, LE, OSSA			
PR-09	Dedicated Responder Evaluation	ODOT	OSSA, OTTA, OACP, OSP, LE, Fire Agencies			
PR-10	HazMat Permitting Issues	ODOT	HazMat			
PR-11	Incident Detour Plans for Rural Areas	ODOT	Local Public Works, County Road Departments, LE			
LONG TERM						
PR-12	Instant Tow	ODOT	OSP, OTTA, LE, OACP, Fire Agencies, OSSA			
PR-13	Stricter Move Over/Slow Down Laws	ODOT/OSP	OSSA, OACP			



## Policy & Regulatory



#### NearTerm (2016-2017)

#### PR 01 - Tow Reform

**Description:** Begin the process of tow reform discussion and coordination with stakeholders. Review the Oregon Administrative Rules (OARs) for possible revisions based on input from key partners.

Lead Agency: OSP

Key Partners: ODOT, OTTA, LE, OACP, Fire

Agencies, OSSA

#### PR 02 - Push Pull Drag Program

**Description:** Develop standard clearance guidelines that address when to relocate vehicles, cargo, and debris. Also develop guidelines for when to upright overturned vehicles.

Lead Agency: ODOT

Key Partners: OSP, OSSA, OTTA, OACP, LE

#### PR o3 - Enhance HazMat Response

**Description:** Continue to work with OERS to identify ways to enhance HAZMAT response and efficient use of Oregon's HAZMAT resources.

Lead Agency: OSFM Regional HAZMAT

Key Partners: ODOT, OSP, OERS, Fire

Agencies

#### PR 04 – Abandon Vehicle Tag Reform

**Description:** Update policy to allow ODOT to alert OSP when previously tagged vehicle has expired tow tags. OSP can then call for a tow instead of sending an officer to verify the expired tag. The update should also allow for reciprocity, allowing OSP to contact ODOT to notify of expired tow tags.

Lead Agency: OSP

**Key Partners: ODOT** 



## Policy and Regulatory



#### Mid Term (2018-2021)

#### PR 05 – Incentivized Tow Policy and Pilot Project

**Description:** Identify areas where incentivized towing for commercial vehicle involved incidents could be beneficial. Implement a pilot project for incentivized towing in one of the identified areas, and use the pilot project to evaluate the benefit cost ratio of the strategy.

Lead Agency: ODOT

Key Partners: OSP, OTTA, LE, OACP, OSSA

#### PR o6 - Tow Contract Plans

**Description:** Determine regions that may benefit from tow contract plans and develop contract tow plans for those areas.

Lead Agency: ODOT

Key Partners: OSP, OTTA, LE

#### PR 07 – Quick Clearance Capabilities

**Description:** Improve liability and "hold harmless" protections for ODOT personnel to maximize responders' abilities.

Lead Agency: ODOT

Key Partners: DOJ, OSP

#### PR o8 – Quick Clearance Enhancement

**Description:** Enhance Oregon's Safe Quick Clearance Laws based on national best practices.

Lead Agency: ODOT

Key Partners: OACP, OTTA, LE, OSSA

#### PR 09 – Dedicated Responder Evaluation

**Description:** Develop a program to determine if a dedicated incident responder(s) is warranted in a certain area.

(There is a District 8 pilot program and evaluation in the works).

Lead Agency: ODOT

Key Partners: OSSA, OTTA, OACP, OSP, LE,

Fire Agencies

#### PR 10 - HazMat Permitting Issues

**Description:** Address HazMat permitting issues - prearranged or other alternatives. Evaluate the option of flexible service contracts for each District.

Lead Agency: ODOT

Key Partners: HazMat



### Policy and Regulatory

#### Mid Term (2018-2021) cont.

#### PR 11 - Incident Detour Plans for Rural Areas

**Description:** Create ready to implement detour plans for sections of rural roadways where roadway closures leave travelers with few alternatives.

Lead Agency: ODOT

Key Partners: Local Public Works, County

Road Departments, LE



#### PR 12 - Instant Tow

**Description:** Evaluate OSP's tow rotation for viability of instant tow applications.

Lead Agency: ODOT

Key Partners: OSP, OTTA, LE, OACP, Fire

Agencies, OSSA

#### PR 13 - Stricter Move Over/Slow Down Laws

**Description:** Review incident data from states that have stricter Move Over/Slow Down laws. Determine if the Oregon law should be stricter, and if so, begin legislative process to update the law.

Lead Agency: ODOT/OSP

Key Partners: OSSA, OACP





# Technology Integration

# **Summary Table**

No.	Action	Responsible Party	Other Key Partners				
NEAR T	NEAR TERM						
T-01	Photo Sharing TOCS and INVIEW	ODOT	OSP, LE, Fire Agencies, OTTA				
T-02	Photo Sharing Tow Industry and Others	ODOT	OTTA, Fire Agencies, 911 Dispatch, LE				
T-03	CAD 911 Interconnect	ODOT/OSP	911 Dispatch				
T-04	Robotic Total Station	OSP	ODOT				
T-05	TIM Cross-Discipline Social Media Site	ODOT	OSP, Local Public Works, County Roads Departments, FHWA				
T-06	Automated Response Plan	ODOT	none				
MID TERM							
T-07	Crowd Source Data	ODOT	OSP, 911 Dispatch				
T-08	Automatic On-Scene Time Notification	ODOT/OSP	911 Dispatch, LE, Fire Agencies				
T-09	Evaluate Historic Incident Duration	ODOT	OSP				
T-10	R.E.S.C.U.M.E. Program	ODOT	FHWA				
T-11	Crash Investigation Technology Pilot Project	OSP	none				
LONG TERM							
T-12	End of Queue Technology	ODOT	OSP, LE, Fire Agencies				
T-13	Early Ice Detection Technology	ODOT	none				
T-14	Electronic Crash Reporting System	ODOT	LE, 911 Dispatch				
T-15	TIM Focused Situational Awareness Technology	ODOT	OSP, Fire Agencies, LE				
T-16	Improve Emergency Vehicle Preemption and Routing	ODOT/Local Public Works, County Roads Departments	LE, Fire Agencies				

# ?

# Technology Integration



Picture of a Robotic Total Station used to quickly map a crash scene for crash investigation.

## Near Term (2016-2017)

# T o1 – Photo Sharing TOCS and INVIEW

**Description:** Identify and implement a system for responders to attach pictures to an incident in TOCS and INVIEW.

Lead Agency: ODOT

Key Partners: OSP, LE, Fire Agencies, OTTA

# T o2 – Photo Sharing Tow Industry and Other Responders

**Description:** Establish a system for sharing on-scene photos (and/or video) with the tow industry and other incident responder partners.

Lead Agency: ODOT

**Key Partners:** OTTA, Fire Agencies, 911

Dispatch, LE

#### T 03 - CAD 911 Interconnect

**Description:** Continue development of CAD 911 Interconnect. Some counties are equipped with this function, and additional counties need to be added as priorities and funding allows.

Lead Agency: ODOT/OSP

Key Partners: 911 Dispatch

#### To4 - Robotic Total Station

**Description:** Advance and broaden the use of Robotic Total Stations for crash investigation.

**Lead Agency:** OSP **Key Partners:** ODOT

T o<sub>5</sub> – TIM Cross-Discipline Social Media Site

**Description:** Create a more robust TIM cross-discipline social media framework to share information with the public and other incident responders including performance measures.

Lead Agency: ODOT

**Key Partners:** OSP, Local Public Works, County Roads Departments, FHWA

#### To6 - Automated Response Plan

**Description:** Develop software for automated dispatch and traveler information response plans during incidents for traffic management across the state.

Lead Agency: ODOT

Key Partners: none



# Technology Integration



## Mid Term (2018-2021)

#### To7 - Crowd Source Data

**Description:** Explore methods to use crowd sourced data, or apps that already use crowd sourced data (like WAZE), to detect incidents faster.

Lead Agency: ODOT

Key Partners: OSP, 911 Dispatch

#### T o8 – Automatic On-Scene Time Notification

**Description:** Create an automated system to notify incident responders at a scene when certain time milestones are approaching (30 minutes, 60 minutes, 90 minutes, etc.).

Lead Agency: ODOT/OSP

Key Partners: 911 Dispatch, LE, Fire Agencies

#### T og – Evaluate Historic Incident Duration

**Description:** Compile and evaluate historic incident duration data that can be used to estimate incident duration of current incidents based on incident type, location, severity, and other factors. Data could also benefit corridor analysis.

Consider using the compiled data to provide traveler information about current incident duration estimates.

Lead Agency: ODOT

**Key Partners: OSP** 

#### T<sub>10</sub> – R.E.S.C.U.M.E. Program

**Description:** Track the progress of FHWA's R.E.S.C.U.M.E prototype for the INC-ZONE and RESP-STG applications. Inquire about becoming a pilot project for the applications.

- Incident Scene Work Zone Alerts for Drivers and Workers (INC-ZONE) alerts both drivers and workers when a vehicle is approaching a work zone at an unsafe speed or trajectory.
- Incident Scene Pre-Arrival Staging Guidance for Emergency Responders (RESP-STG) provides incident responders with information while en-route and at the scene to help responders make more informed decisions in regard to incident work zones, routing, and staging.

Lead Agency: ODOT

**Key Partners: FHWA** 

# T 11 – Crash Investigation Technology Pilot Project

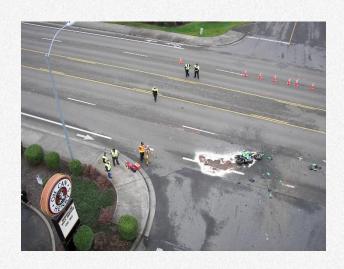
**Description:** Implement a pilot project to test new crash investigation technology. Complete a benefit cost analysis based on the pilot project to determine if other regions should invest in the technology.

Lead Agency: OSP

**Key Partners:** none



# Technology Integration



# Longer Term (Beyond 2021)

#### T 12 - End of Queue Technology

**Description:** Investigate and implement a technology that estimates end of queues based on incident information and roadway conditions. Use this technology in conjunction with warning travelers approaching a vehicle queue (see "End of Queue Warning - Traveler Information").

Lead Agency: ODOT

Key Partners: OSP, LE, Fire Agencies

### T<sub>13</sub> – Early Ice Detection Technology

**Description:** Develop early detection for ice

in high incident locations.

Lead Agency: ODOT

Key Partners: none

# T 14 – Electronic Crash Reporting System

**Description:** Create an electronic crash reporting system for ODOT and explore the possibility of combining cross-discipline

incident databases.

Lead Agency: ODOT

Key Partners: LE, 911 Dispatch

#### T 15 – TIM Focused Situational Awareness Technology

**Description:** Implement a situational awareness strategy that uses existing vehicle locator technology, shares it with interested agencies, and allows each agency to show the location of different responders on their own maps in real-time. The purpose of this technology is to keep dispatcher and incident responders informed about the location of all incident responders working or approaching an incident scene.

Lead Agency: ODOT

Key Partners: OSP, Fire Agencies, LE

# T 16 – Improve Emergency Vehicle Preemption and Routing

**Description:** Coordinate with the ODOT traffic section to investigate technology to improve emergency vehicle preemption and system routing capabilities.

Lead Agency: ODOT/Local Public Works,

**County Roads Departments** 

**Key Partners**: LE, Fire Agencies



# System Evaluation & Performance Measures

# **Summary Table**

No.	Action	Responsible Party	Other Key Partners		
NEAR TERM					
SE-01	Track Secondary Incidents	ODOT	LE, 911 Dispatch, Fire Agencies		
SE-02	Evaluation of Incidents Exceeding 90 Minutes	ODOT	LE, OTTA, Fire Agencies, OSFM		
SE-03	Performance Measure Review	ODOT	none		
SE-04	Performance Targets	ODOT	OSP, LE, Fire Agencies		
MID TERM					
SE-05	Track Responder Fatalities and Struck-Bys in Oregon	ODOT	LE, 911 Dispatch, Fire Agencies		
SE-06	Performance Measure Report	ODOT	none		
LONG TERM					
SE-07	Establish Standard Incident Data Protocol	ODOT	OSP		



# System Evaluation & Performance Measures



## NearTerm (2016-2017)

#### SE 01 – Track Secondary Incidents

**Description:** Develop a method and protocol to consistently report and track secondary incidents

Lead Agency: ODOT

Key Partners: LE, 911 Dispatch, Fire Agencies

# SE 02 – Evaluation of Incidents Exceeding 90 Minutes

**Description:** Continue to evaluate incidents that exceed 90 minutes and improve reporting methods. Develop a procedure to ensure that all incidents that exceed 90 minutes are evaluated. Ensure that the evaluation documents the primary reason the incident exceeded 90 minutes.

Take steps to turn the primary reasons for exceeding 90 minutes into action items.

Lead Agency: ODOT

Key Partners: LE, OTTA, Fire Agencies, OSFM

#### SE 03 – Performance Measure Review

**Description:** Continue to integrate performance measure reviews at all regional TIM stakeholder meetings. Develop a consistent format for the performance measure review.

Lead Agency: ODOT

Key Partners: none

#### SE 04 - Performance Targets

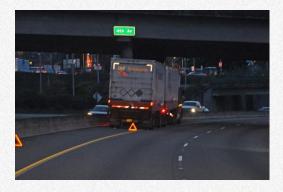
**Description:** Develop performance targets specific to geographic context (urban vs rural, peak vs non-peak, etc.) as well as by incident type.

Lead Agency: ODOT

Key Partners: OSP, LE, Fire Agencies



# System Evaluation & Performance Measures



### Mid Term (2018-2021)

# SE 05 – Track Responder Fatalities and Struck-Bys in Oregon

**Description:** Develop a method to consistently report and track incident responder fatalities and struck-bys.

Lead Agency: ODOT

Key Partners: OSP, Fire Agencies, LE, OTTA

#### SE o6 – Performance Measure Report

**Description:** Create an annual report to document performance measures. Incorporate regional performance targets and performance measures as they become available. Share all performance measure data with other incident responder agencies. Once the "TIM Cross-Discipline Social Media Site" strategy in the technology section is implemented, the performance measure report can be shared via the website.

**Lead Agency:** ODOT **Key Partners:** none

## Longer Term (Beyond 2021)

# SE 07 – Establish Standard Incident Data Protocol

**Description:** Develop standard protocol for what data to collect during an incident, using the FHWA TIM timeline as a guide. Examples include: time dispatch is first notified of an incident, time responders arrive at the scene (ODOT, police, tow, etc.), time signs or cones are placed, time that injured people are transferred, time vehicles are cleared, time flow returns to normal, etc.

Lead Agency: ODOT

**Key Partners: OSP** 



# **Summary Table**

No.	Action	Responsible Party	Other Key Partners		
NEAR TERM					
RT-01	Education of TIM Leadership	ODOT/OSP	OSP, OSSA, OTTA, OACP, Fire Agencies, Volunteer Responders		
RT-02	Unified TIM Training at Academies	ODOT/OSP	OSSA, OTTA, OACP, OSFM, DPSST, Fire Agencies		
RT-03	Continue Multidisciplinary TIM Training	ODOT	OSP, OSSA, OTTA, OACP, OSFM, DPSST, Fire Agencies		
RT-04	Policy Education – Tow, Warrants, and Quick Clearance	OSP	LE, OACP, DOJ, ODOT, OSSA		
RT-05	Push, Pull and Drag Education	ODOT	OSP, OSSA, OTTA, OACP, Fire Agencies		
RT-06	HazMat Education	OSFM	ODOT, HazMat Responders, LE, Fire Agencies, OSP		
RT-07	Driver Removal Law - Dispatcher Education	ODOT	OSP, 911 Dispatch		
MID TERM					
RT-08	TIM Planning	ODOT	none		
RT-09	ODOT Responder Safety Classes	ODOT	LE, OACP, DOJ, ODOT, OSSA, OSP		
RT-10	Incident Milestone Reporting	ODOT	OSP, LE, Fire Agencies, OTTA		
RT-11	Volunteer Responder Training	ODOT	DPSST, OFCA, OVFA, OSP, LE		
LONG TERM					
RT-12	TIM Program-Level Goals	ODOT	OSP		





## NearTerm (2016-2017)

#### RT o1 – Education of TIM Leadership

**Description:** Develop material (handout and/or presentation) to educate agency leadership about TIM benefits, roles and responsibilities, and the TIM Strategic Plan. Establish regular TIM briefings with leaders of involved incident response agencies. Present at current gatherings of TIM professionals, such as the OSSA and OACP conferences, as well as at other insurance forums.

Lead Agency: ODOT/OSP

**Key Partners:** OSP, OSSA, OTTA, OACP, Fire Agencies, volunteer responders

# RT 02 - Unified TIM Training at Academies

**Description:** Develop and implement a unified training among response disciplines (ODOT/OSP) addressing incident responder safety and scene management as well as the benefits gained when different TIM disciplines work together. Integrate TIM responder training into various disciplines' academy basic training courses.

Lead Agency: ODOT/OSP

Key Partners: OSSA, OTTA, OACP, OSFM,

DPSST, fire agencies

# RT 03 – Continue Multidisciplinary TIM Training

**Description:** Continue current regional multidisciplinary TIM training.

Lead Agency: ODOT

Key Partners: OSP, OSSA, OTTA, OACP,

OSFM, DPSST, Fire Agencies

# RT 04 – Policy Education – Tow, Warrants, and Quick Clearance

**Description:** Create educational materials and/or classes to help incident responders understand how tow policies, quick clearance legislation, and search and seizure laws work together.

**Lead Agency: OSP** 

Key Partners: LE, OACP, DOJ, ODOT, OSSA

#### RT 05 - Push, Pull and Drag Education

**Description:** Educate ODOT incident responders about how the push pull drag policies work.

Lead Agency: ODOT

Key Partners: OSP, OSSA, OTTA, OACP, Fire

Agencies





## Near Term (2016-2017) cont.

#### RT o6 - HazMat Education

**Description:** Develop an educational program and/or materials to enhance incident responders' understanding of HazMat's role at an incident scene. Include the OSFM Regional HazMat teams outreach and education as a component of Oregon's TIM Training events.

Lead Agency: OSFM

Key Partners: ODOT, HazMat Responders,

LE, Fire Agencies, OSP

# RT 07 - Driver Removal Law - Dispatcher Education

**Description:** Develop a plan to educated dispatchers on Oregon's Driver Removal Law

Lead Agency: ODOT

Key Partners: OSP, 911 Dispatch

#### Mid Term (2018-2021)

#### RT o8 – TIM Planning

**Description:** Develop an outreach program to inform the planning groups at ODOT about incorporating TIM strategies into future planning and programming processes.

Lead Agency: ODOT

**Key Partners:** none

# RT 09 – ODOT Responder Safety Classes

**Description:** Review the current ODOT TIM responder training courses and explore ways to enhance them and ensure compliance with national best practices.

Lead Agency: ODOT

Key Partners: LE, OACP, DOJ, ODOT, OSSA,

OSP





## Mid Term (2018-2021) cont.

#### RT 10 - Incident Milestone Reporting

**Description:** Review procedures for updating and communicating TIM milestones at an incident scene (such as tow arrival, lane cleared, tow departure, etc.). Educate incident responders about these procedures at TIM trainings and/or TIM Meetings.

Lead Agency: ODOT

Key Partners: OSP, LE, Fire Agencies, OTTA

#### RT 11 - Volunteer Responder Training

**Description:** Develop a strategy to reach out to volunteer incident responders and provide TIM training.

Lead Agency: ODOT

Key Partners: DPSST, OFCA, OVFA, OSP, LE

# Longer Term (Beyond 2021)

#### RT 12 – TIM Program-Level Goals

**Description:** Continue to identify TIM program-level goals surrounding the following topics: conducting cross training and participation in multi-agency table top exercises; 100% training compliance with dedicated incident responders (IR) and maintenance staff in National Incident Management System (NIMS) and IR training.

Lead Agency: ODOT

**Key Partners:** OSP

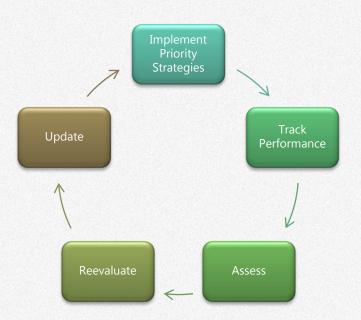


# **Next Steps**

In Washington State, collisions were reduced by 65 to 75 percent along a 7.5 mile corridor where an active traffic management system (which included TIM strategies) was deployed.

- Washington's Gray Notebook, 2010

# Living Document



The Oregon TIM Strategic Plan is a living document that needs to be reassessed every few years, especially considering they dynamic nature of technology and practices. This TIM Strategic Plan is intended for a five year planning horizon. By 2021, if not sooner, the TIM actions and priorities should be reevaluated and realigned to match the strides taken since adopting this plan.

Following plan adoption, work will begin immediately on near term strategies, advancing current TIM efforts across the sate being led by ODOT, OSP, and FHWA. A leadership team should convene regularly to direct the appropriate next actions for implementation.

Once a strategy is implemented, its performance needs to be tracked and evaluated. As the Oregon TIM program evolves, the needs and priorities should be reevaluated and updated as necessary.

The core technical advisory committee with ODOT and OSP members should convene on an annual or semi-annual basis to continue ensuring progress is being made toward the TIM goals. Progress updates can be presented at the annual statewide TIM Workshop.

As far as providing opportunities to reevaluate and assess TIM needs, the TIM Team meetings provide an ideal forum on a regional level. During those meetings the progress of TIM strategies should be addressed and actions can be assigned to participants to continue implementing TIM strategies.

On a statewide level the annual TIM Workshop provides an environment that can connect TIM teams across the state. It can serve as a means to advance the TIM program by uniting all responders and providing guidance for implementing the next set of high priority TIM actions.