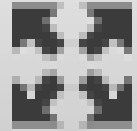


# Worksite Assessment Overview

1/31/2017  
Starts at 9am

Toggle Fullscreen mode with this button above



Assessment	Grant Application	Contract	Am...
Assessment Date: 5/20/2008		Distance to Stream: < 50'/Crossing	
Road Sediment in Stream: Moderate	Outlets to Stream: Directly to Stream		
Wet Site Conditions: Flow in Ditches	Outlet/Bleeder Stability: Moderate		
Road Surface Material: Soft Stone/Dust	Road Ditch Stability: Poor		
Road Slope/Grade: 5 - 10%	Road Bank Stability: Poor		
Road Shape: Fair	Average Canopy Cover: Moderate		
Slope to Stream: 30 - 60%	Off-ROW Impacts: Minimal		
<b>Worksite Assessment Score: 62</b> <b>Modified Assessment Score: 65</b>			

Use Chat box to ask Questions

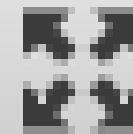
If you are reading this, then you are successfully seeing the webinar video. In addition to audio on the webinar, we have opened a phone conference line to allow attendees to listen and ask questions directly: **866-823-7699**. Please use either the webinar audio or conference line, but not both (will produce feedback).

**Audio also available via phone: 866-823-7699**

For assistance, call: 814-865-5355

Participant phone lines will be muted until after initial presentation

**Toggle Fullscreen mode with this button above**



**Use Chat box to ask Questions**

**Audio also available via phone: 866-823-7699**  
For assistance, call: 814-865-5355

## Purpose:

Provide background, overview, and additional reference material on worksite assessments.

Many new faces in the CD and DGLVR world never had any Assessment training.

- Where did my potential sites come from?
- What is this “dirty dozen” evaluation?
- Is there any reference material for it?
- Should I be using it?

**Audio also available via phone: 866-823-7699**

For assistance, call: 814-865-5355

Assessment Grant Application Cont

Assessment Date: 5/2

Road Sediment in Stream: Moderate

Wet Site Conditions: Flow in D

Road Surface Material: Soft Ston

Road Slope/Grade: 5 - 10%

Road Shape: Fair

Slope to Stream: 30 - 60%

W  
M

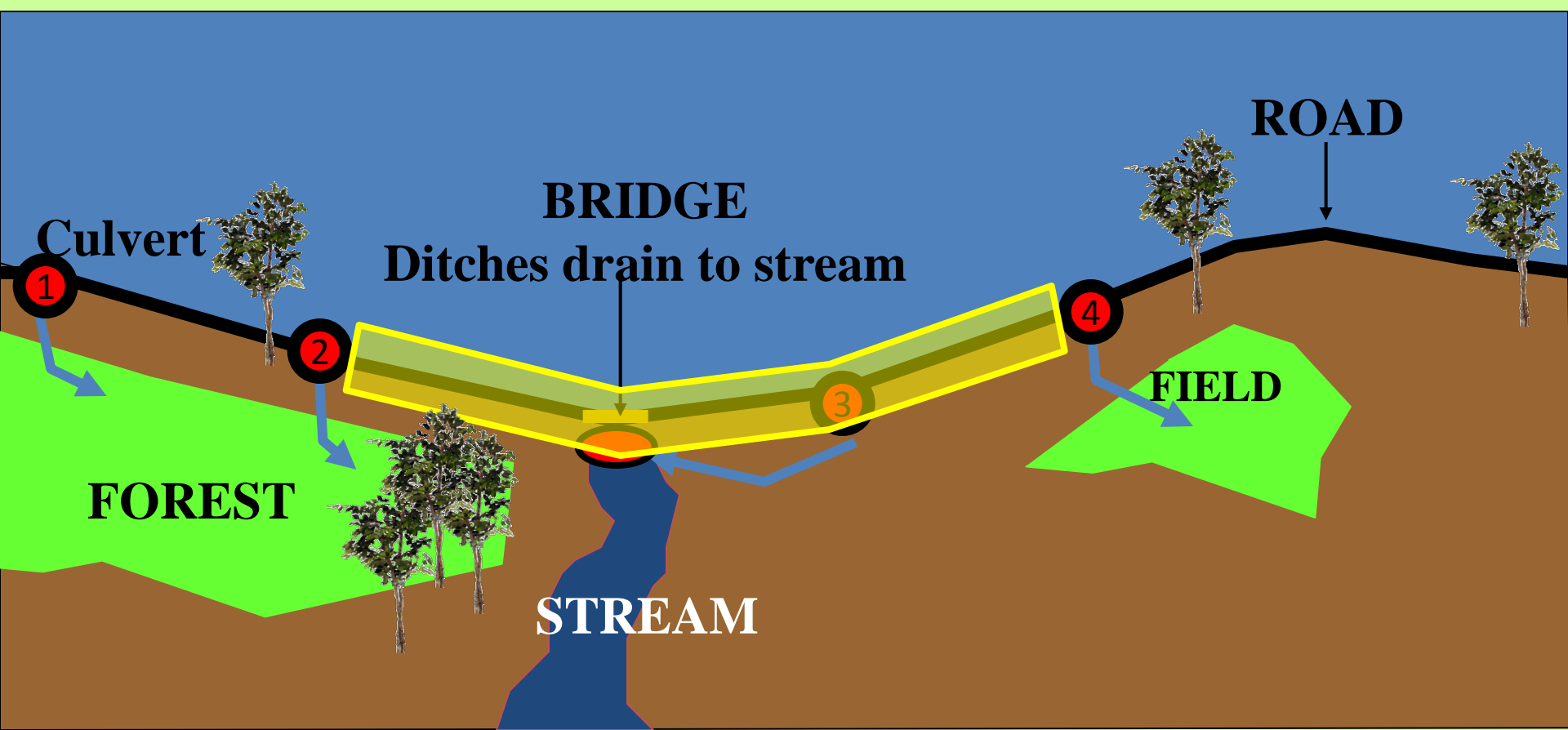


- **Background**
- **Process Overview**
- **Current Use**
- **Assessment and LVRs**

## What is a “Worksite Assessment”

- **Identification of segment of road contributing to stream pollution**
- **Evaluation of that segment using established criteria**

**WORKSITE**: An identified segment of unpaved road where runoff is affecting a stream.



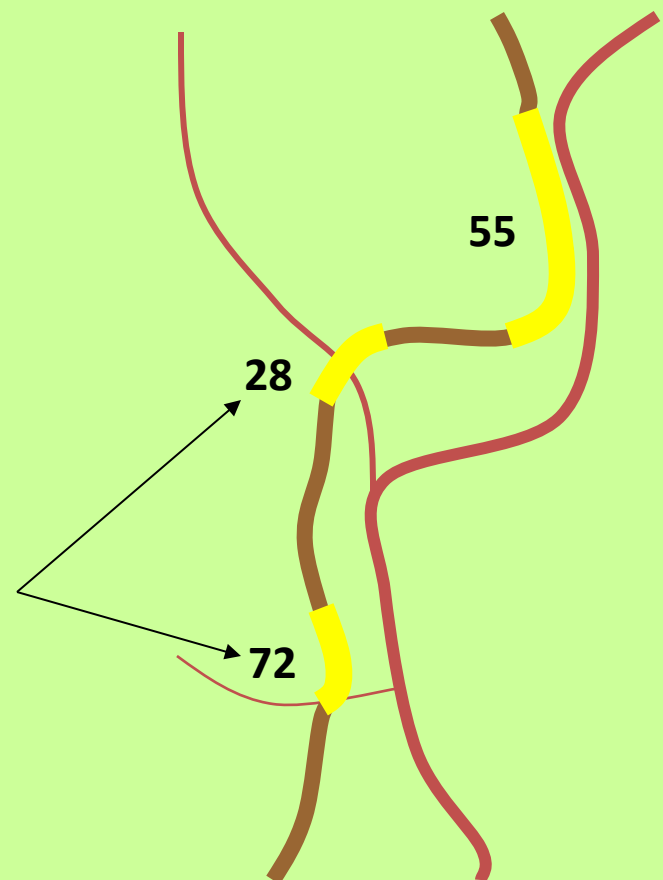
**ASSESSMENT**: Process of inspecting an unpaved road to determine where runoff is affecting a stream.

Turning **NON-POINT SOURCE** pollution into...

**POINT SOURCES**

And providing quantification of pollution potential!

**WORKSITES!**



## HISTORY

**1997** TU Assmt in HQ/EV (900 sites)

**2000** CD Assmt Statewide (12,000 sites)

**2008** CD Assmt Statewide (16,000 sites)



## 1996-1998 TU Volunteer Assessment

- Protected Watersheds only
- 900 worksites statewide

### HISTORY

- 1997 TU Assmt in HQ/EV (900 sites)
- 2000 CD Assmt Statewide (12,000 sites)
- 2008 CD Assmt Statewide (16,000 sites)

- HIGH QUALITY
- EXCEPTIONAL VALUE
- INITIAL T.U. WORKSITES (HOTSPOTS)

PAVED  
Cut off corner if road affects stream

TAR & CHIP

ROAD SURFACE MATERIAL: LIMESTONE SANDSTONE SHALE EARTH OTHER (Note)

ROAD INFORMATION: (cut out, or more)

ROAD SHAPE CROSS SECTION

CREW NAMES: Chris Spurgeon

DATE OBSERVATIONS MADE: 1/19

OBSERVATIONS: 11/27/95

SEDIMENT DEBRIS IN STREAM: Banks

BANK FAILURES, ETC.: Failure

LOCATIONS: Odometer Intersection w/S.R., Twp. # or State Forest Name: 771122 from 7816

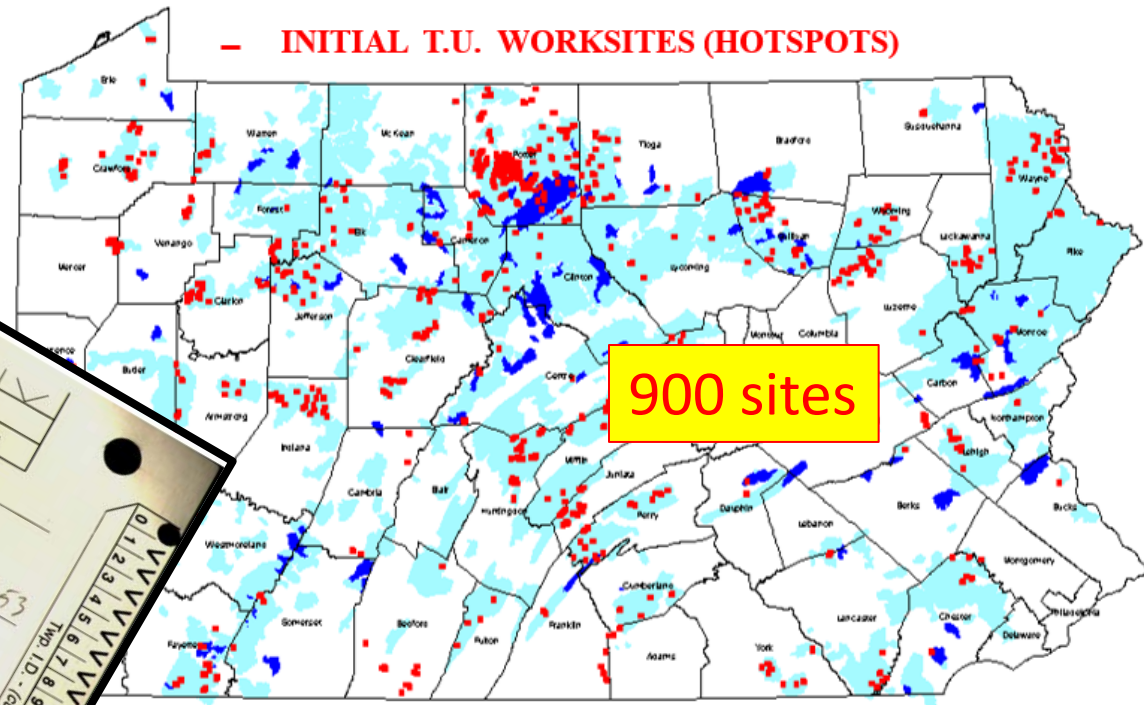
ODOMETER END OF AFFECTING SECTION: 02

ODOMETER BEGINNING OF AFFECTING SECTION: 04

LENGTH OF ROAD SECTION AFFECTING STREAM: 07

WEATHER: Overcast

LEADER'S PHONE: (914) 398-8953



## 1996-1998

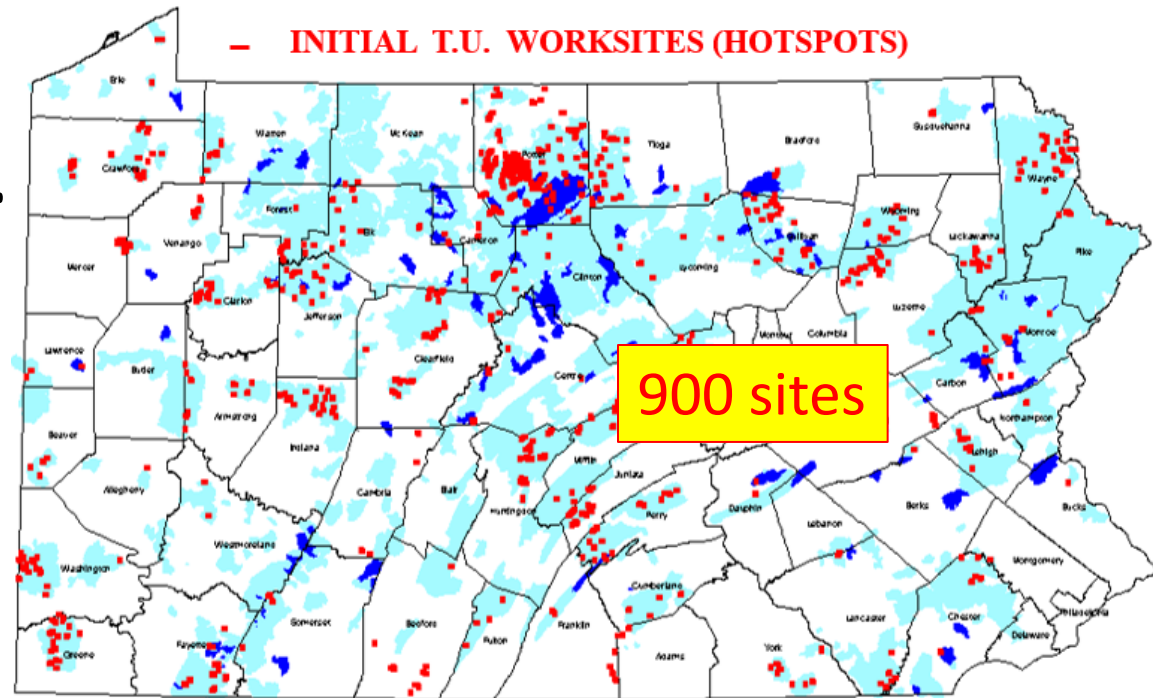
## TU Volunteer Assessment

- Established “verified need” for Program, and justified funding.
- Were only sites funded in first few years.
- More extensive assessment needed.

### HISTORY

- 1997 TU Assmt in HQ/EV (900 sites)
- 2000 CD Assmt Statewide (12,000 sites)
- 2008 CD Assmt Statewide (16,000 sites)

- HIGH QUALITY
- EXCEPTIONAL VALUE
- INITIAL T.U. WORKSITES (HOTSPOTS)

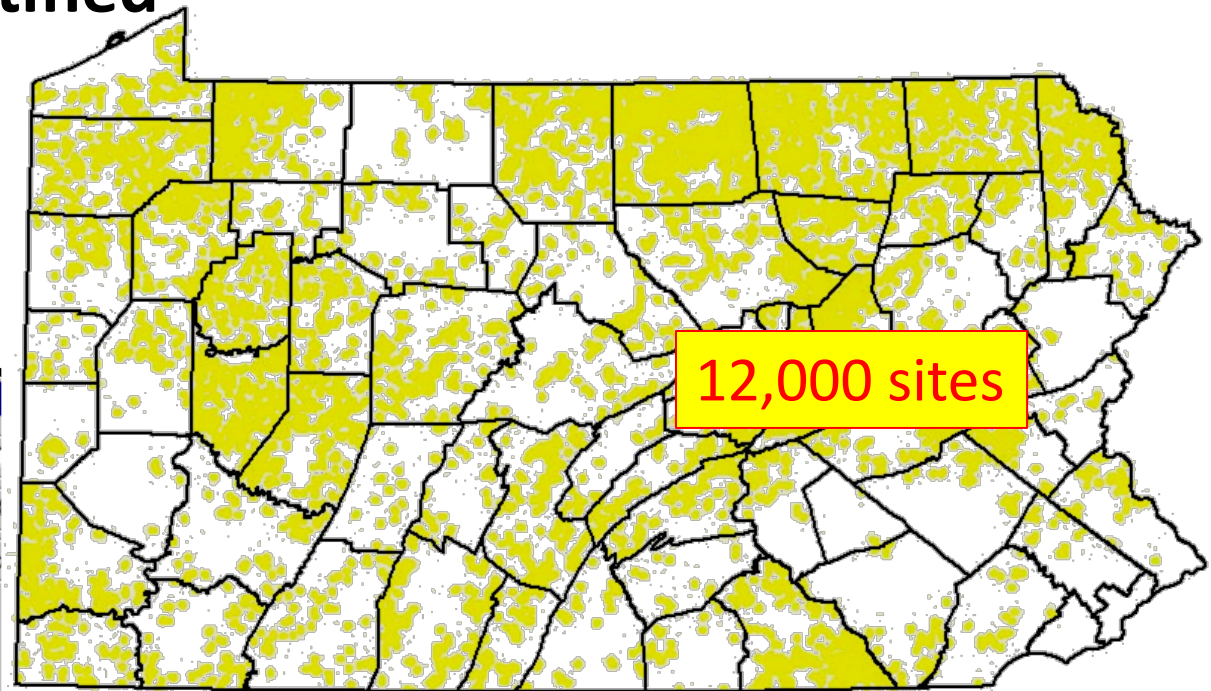


## 2000 CD Statewide Assessment

### HISTORY

- 1997 TU Assmt in HQ/EV (900 sites)
- 2000 CD Assmt Statewide (12,000 sites)**
- 2008 CD Assmt Statewide (16,000 sites)

- Used first version of GIS, introduced “dirty dozen”.
- Had to ask twps. where unpaved roads were!
- ALL watersheds assessed.
- ~12,000 sites identified and assessed





## 2000 CD Statewide Assessment

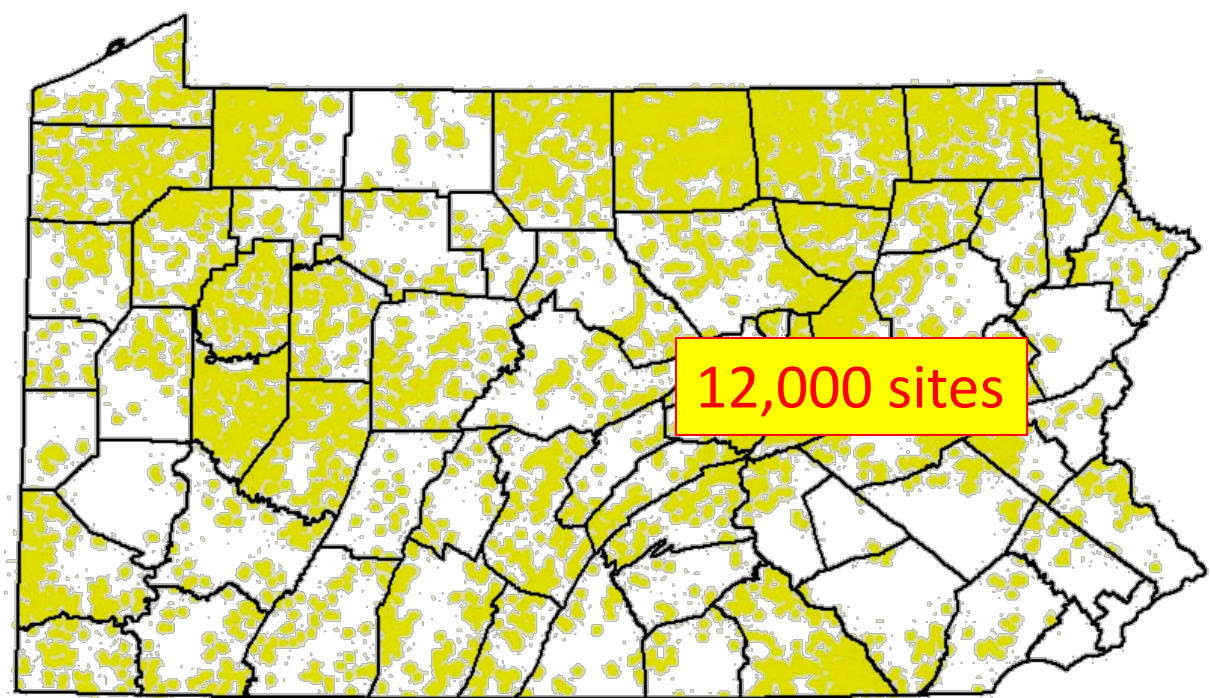
### HISTORY

1997 TU Assmt in HQ/EV (900 sites)

**2000 CD Assmt Statewide (12,000 sites)**

2008 CD Assmt Statewide (16,000 sites)

- 12,000 sites formed basis of projects for Program.
- Formed basis for CD allocations.
- By 2006-2007, some CDs requesting opportunity to re-assess.



## 2007-08

## CD Statewide Assessment

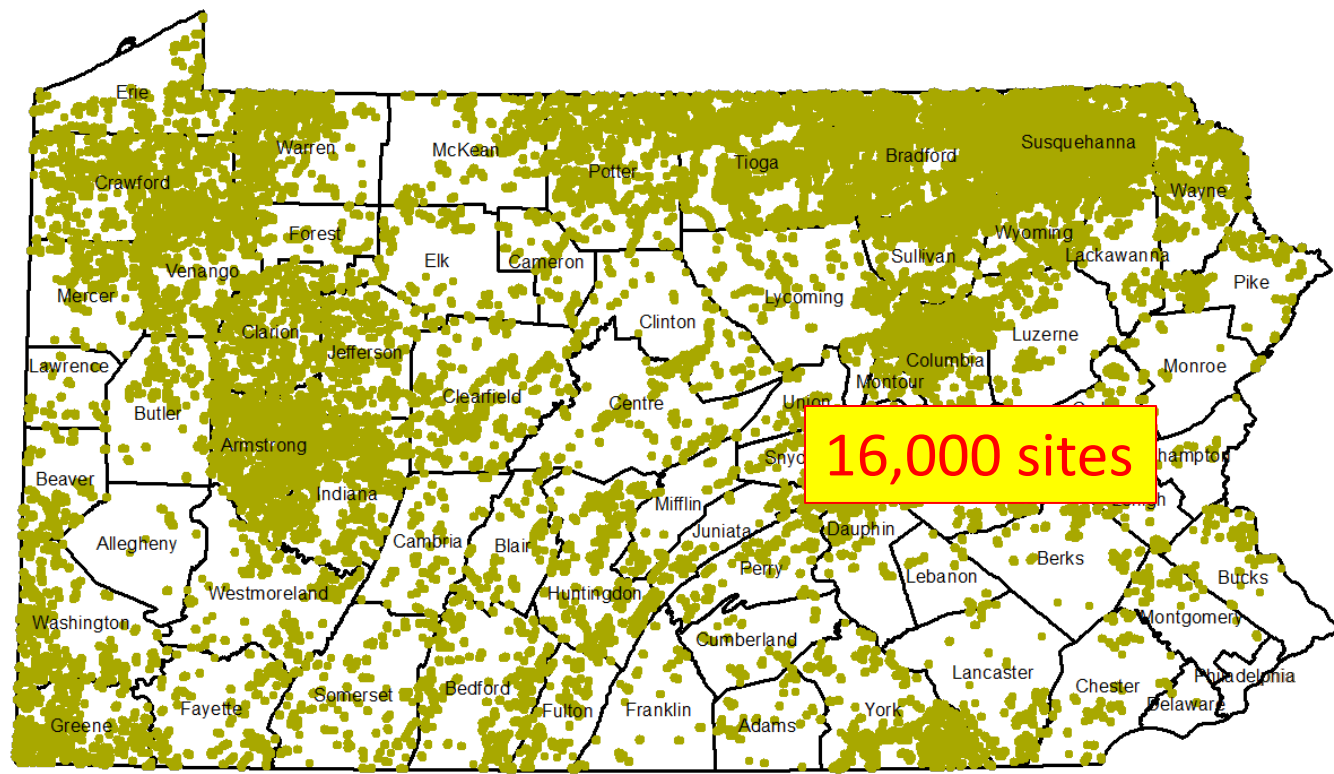
- Voluntary assessment period.
- Increased to 16,000 worksites.
- The basis for those yellow sites you see in GIS today!

### HISTORY

1997 TU Assmt in HQ/EV (900 sites)

2000 CD Assmt Statewide (12,000 sites)

2008 CD Assmt Statewide (16,000 sites)



Assessment Grant Application Cont

Assessment Date: 5/2

Road Sediment in Stream: Moderate

Wet Site Conditions: Flow in D

Road Surface Material: Soft Ston

Road Slope/Grade: 5 - 10%

Road Shape: Fair

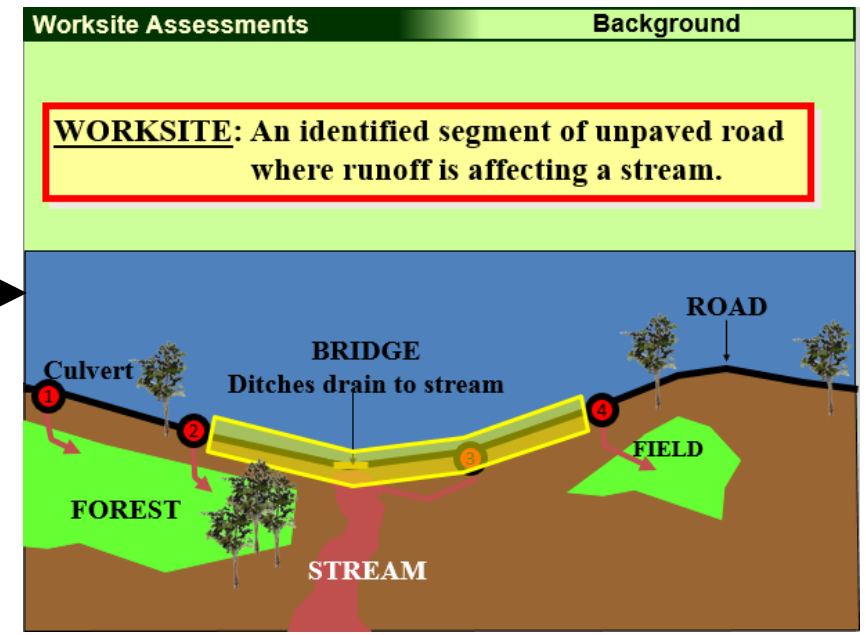
Slope to Stream: 30 - 60%

W  
M



- Background
- Process Overview
- Current Use
- Assessment and LVRs

Once you have identified a “worksite”...



...You need criteria to evaluate it

Audio also available via phone: 866-823-7699  
For assistance, call: 814-865-5355

# The “Dirty Dozen”

- 12 factors – evaluate “pollution potential”
- Assigns score from 0 (no impact) to 100 (worst impact)

Assessment	Grant Application	Contract	Amendments	Completion Report	Photos
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Assessment Date:	5/20/2008	Distance to Stream:	< 50'/Crossing
Road Sediment in Stream:	Moderate	Outlets to Stream:	Directly to Stream
Wet Site Conditions:	Flow in Ditches	Outlet/Bleeder Stability:	Moderate
Road Surface Material:	Soft Stone/Dust	Road Ditch Stability:	Poor
Road Slope/Grade:	5 - 10%	Road Bank Stability:	Poor
Road Shape:	Fair	Average Canopy Cover:	Moderate
Slope to Stream:	30 - 60%	Off-ROW Impacts:	Minimal

**Worksite Assessment Score: 62**  
**Modified Assessment Score: 65**



## The “Dirty Dozen”

- In field trainings held in 2008.
- Assessment Scores are **NO LONGER** part of allocation formulas.
- **Purpose here is just to familiarize you and show you where to go for more info.**

## The “Dirty Dozen” Resources:

### FIELD GUIDE

### 2-page QUICK REFERENCE

#### Dirt and Gravel Road Maintenance Program 2007-08 Unpaved Road Assessment Guide



#### Quick Reference Sheet for Road DGRoads GIS Road Assessment - 4/2007 “Dirty Dozen” Road Assessment Evaluation Criteria

The 12 criteria below attempt to provide a “pollution potential” rating for each worksite. Base evaluation on average conditions over site. If a significant change in assessment conditions exists, consider making two worksites and evaluating separately.

- Road Sediment in Stream:** Overall sediment delivery to stream. Remember that intermittent streams count too.
- **None (0):** No road sediment in stream. Runoff is buffered before entering stream. (Should it be a worksite!?)
  - **Slight (5):** Any material from the road area makes it to the edge of the stream
  - **Moderate (10):** Ditches or ditch outlets drain directly into stream. Road sediment may be visible in channel
  - **Severe / Stream Encroachment (15):** Significant road area drains to stream. Road sediment may be visible in channel stream cutting into road, etc.

- Wet Site Conditions:** General water table conditions of the road area. Consider time of year and recent weather.
- **Dry (0):** Road and ditches are dry. No roadside springs or seeps.
  - **Saturated Ditches (3):** Road ditches are damp. May contain standing water or wetland plants.
  - **Roadside Springs (5):** Springs present on uphill side of road or seeps present under road.
  - **Flow in Ditches (7):** Water moving in ditches from springs and seeps. Significant water problems.
  - **Saturated Base (10):** Significant road area is wet due to springs and seeps in road ditches, banks and base.

- Road Surface Material:** The approximate makeup of the driving surface.
- **Hard Gravel (0):** Predominantly limestone or sandstone. Not necessarily DSA, just hard gravel.
  - **Mixed Stone (5):** A variety of stone material with no dominant type. Commonly with some soil, or a light dust problem.
  - **Soft Stone / dust (7):** Any other type of dominant natural stone material with some soil, or a light dust problem.
  - **Stone/dirt / dust (10):** A mixture of soft stone and native dirt earth, or a dust problem and loss of fines.
  - **Severe dust (15):** Earthen material with little to no stone aggregate. Muddy when wet, and dusty when dry.

- Road Slope (Grade):** Measure of the average steepness of the road in feet of rise in height per feet of road distance.
- **<10% (0):** Relatively flat. Rises less than 1 foot for every 10 feet of road length.
  - **10 – 30% (5):** Steep slope. Rises 1 – 3 feet for every 10 feet of road length.
  - **>30% (10):** Extremely Steep slope. Rises more than 3 feet for every 10 feet of road length.

- Road Shape:** Cross sectional shape of the road for proper runoff pattern. Good slope is 1/4" to 1/2" per foot.
- **Good (0):** Needs no grading work for proper runoff patterns. This includes crowned, in-slope, and out-slope.
  - **Fair (3):** Needs grading to reestablish proper runoff patterns. Small wheel ruts/grader berm trap water on road.
  - **Poor (5):** No specific cross section shape or flat. Rutted or showing signs of water being retained on surface.

- Slope to Stream:** Slope of the land from the side of the road to the stream.
- **<30% (0):** Gentle bank slope from road to stream. Falls less than 3 feet at 10 feet away from road.
  - **30 – 60% (3):** Fairly steep bank slope from road to stream. Falls 3 to 6 feet at 10 feet away from road.
  - **>60% (5):** Steep bank slope from road to stream. Falls more than 6 feet at 10 feet away from road.

- Distance to Stream:** Distance in feet from the side of the road to the stream. Streams can be any size or even dry!
- **>100' (0):** Stream stays at least 100 feet away from road.
  - **50'-100' (3):** Average parallel distance from road to stream is between 50 and 100 feet.
  - **<50' / crossing (5):** Average parallel distance to stream is less than 50 feet or road crosses stream.

- Outlets to Stream:** Location of outlet discharge relative to stream.
- **None (0):** Significant buffer or filter exists between outlets and stream. No channels are cut to stream.
  - **Near stream (3):** Outlets discharge near stream. Runoff and sediment reach stream without proper filtration.
  - **Directly to stream (5):** Outlets cut channel to stream or enter stream directly from road.



## Example Factor: Road Sediment in Stream

Assessment Manual

Quick Reference  
Guide

Dirt and Gravel Road Program  
2007-08 Assessment guide  
Page 1/2


**Road Sediment in Stream:** an overall estimate of sediment delivery to stream

If there is no evidence of road material reaching the stream, you should reconsider why you made a worksite there!

**NONE**

**Slight**

A small amount of road sediment finds its way into the stream. Minimal direct inputs of sediment from parallel ditches. Ditches outlet before stream. Some flow may reach stream through vegetated buffer in high flows. Some minor area may drain to stream at crossings. The roads pictured below turn their ditches out before the stream, but some runoff may reach the stream with minimal filtration.



**MODERATE**

Inadequate buffer exits or some road sediment has a direct route to the stream. The culverts pictured below have direct routes to the stream (located directly across the road), but the amount of drainage entering the stream is small because of the topography, short ditch runs, and adequate road surface.



**Road Sediment in Stream:** Overall sediment delivery to stream. Remember that intermittent streams count too.

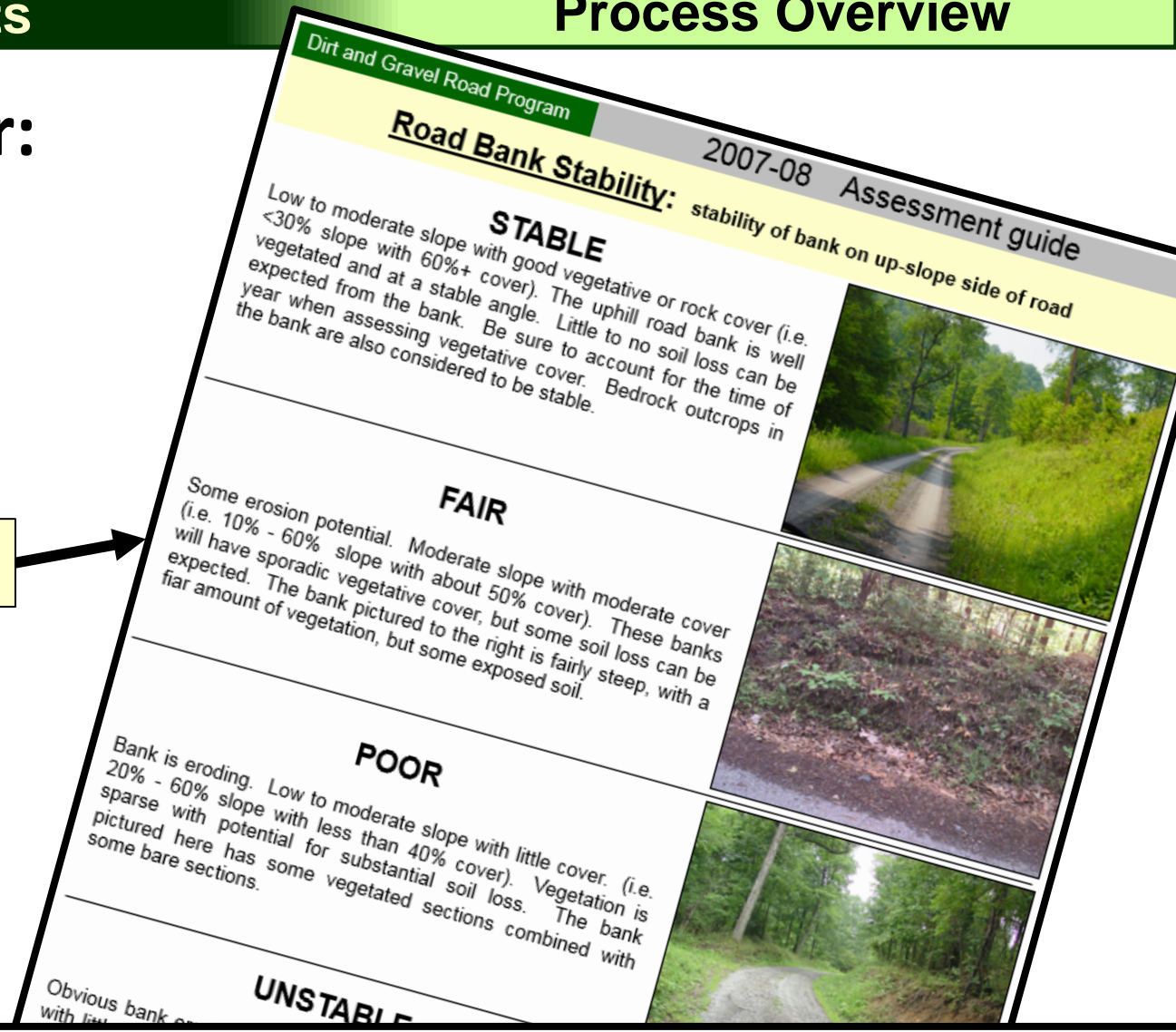
- **None (0):** No road sediment in stream. Runoff is buffered before entering stream. (Should it be a worksite?!?)
- **Slight (5):** Any material from the road area makes it to the edge of the stream
- **Moderate (10):** Ditches or ditch outlets drain directly into stream. Road sediment may be visible in channel
- **Severe / Stream Encroachment (15):** Significant road area drains to stream. Include fords, sediment deltas, stream cutting into road, etc.

## Example Factor: Road Bank Stability

Assessment Manual



Quick Reference  
Guide



**Road Bank Stability:** *Stability of bank on uphill side of road. Consider slope and vegetative or rock cover.*

- **Stable (0):** Minimal erosion. Low to moderate slope, good cover (i.e. <30% slope with 60%+ cover).
- **Fair (3):** Some erosion potential. Moderate slope with some cover (i.e. 10% - 60% slope with 50% cover).
- **Poor (7):** Bank is eroding. Low to moderate slope with little cover (i.e. 20% - 60% slope with <40% cover).
- **Unstable (10):** Obvious bank erosion. Steep slope with little cover (i.e. >30% slope with <30% cover).

# The “Dirty Dozen” Resources:

**FIELD GUIDE**

2-page **QUICK REFERENCE**

Dirt and Gravel Road Maintenance Program  
2007-08 Unpaved Road Assessment Guide

Quick Reference Sheet for Road DGRoads GIS Road Assessment - 4/2007  
“Dirty Dozen” Road Assessment Evaluation Criteria  
The 12 criteria below attempt to provide a “pollution potential” rating for each worksite. Base evaluation on average conditions over site. If a significant change in assessment conditions exists, consider making two worksites and evaluating separately.  
**Road Sediment in Stream:** Overall sediment delivery to stream. Remember:  
• None (0): No road sediment in stream. Runoff:  
• Slight (5): Any material

## Documentation Online:

[www.dirtandgravelroads.org](http://www.dirtandgravelroads.org)

- PA Program Resources
- Program Resources
- Blank Forms – scroll to bottom

to stream (5): Outlets cut channel to stream or enter stream directly from road.



Assessment Grant Application Cont

Assessment Date: 5/2

Road Sediment in Stream: Moderate

Wet Site Conditions: Flow in D

Road Surface Material: Soft Ston

Road Slope/Grade: 5 - 10%

Road Shape: Fair

Slope to Stream: 30 - 60%

W  
M



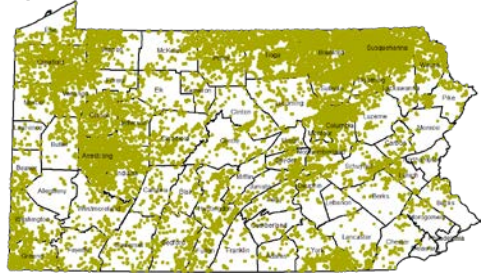
- Background
- Process Overview
- Current Use
- Assessment and LVRs

## Assessments

- **No current plan for another statewide assessment.**
- **Assessment scores NO LONGER a factor in CD Allocations.**
- **Assessment are not required** (*but many CDs use it in their ranking criteria*)

## Assessments

- ~75% of sites have existing assessment, most are 8-16 years old.



- Most CDs use “Dirty Dozen” in ranking criteria.

*This document is provided only as an example. County QABs can use as little or as much of the information here as they desire to establish local priorities in project ranking.*

**Example Dirt, Gravel, and Low-Volume Road Grant**  
**Application Ranking 8/13/14**

Select type of application	
<input type="checkbox"/>	Unpaved (Dirt and Gravel)
<input type="checkbox"/>	Paved (Low Volume Road)

Note the validation criteria in Section 1 serve to insure a project is eligible. Feel free to insert additional county specific criteria.

**SECTION 1: APPLICATION VALIDATION**

Does this road site negatively impact...  
 Will the proposed project reduce...  
 Is someone from the applying entity...  
 Does the proposed application meet...  
 Does the proposed application meet...  
 Has the applicant identified and a...  
**LVR ONLY:** If the traffic count is kn...  
*(see traffic count is required by...  
 If any of the questions abo...*

**If you use assessment score in ranking, you should re-evaluate instead of relying on 8 to 16 year old data**

**SECTION 2: APPLICATION RANKING**

Feel free to delete criteria, add criteria, or change weighting of criteria to better fit local County needs.

**SEVERITY OF PROBLEM**

- I. "Modified" Worksite Assessment:
  - a. Road Sediment in Stream: none-0 Slight-5 Moderate-10 Severe-15 \_\_\_\_\_ (15)
  - b. Wet Site Conditions: Dry-0 Saturated Ditches-3 Roadside Springs-5 \_\_\_\_\_ (10)  
 Flow in Ditches-7 Saturated Base-10
  - c. Road Surface Condition \_\_\_\_\_ (15)
    - i. **LVR EVALUATION: Pavement Condition:** good-0 fair, some cracking-5  
 Poor, cracking, unevenness-7 Damaged-10 Severely Damaged-15
    - ii. **D&G EVALUATION:** Hard Gravel-0 Mixed Stone-5 Soft Stone-7  
 Mixed stone/dirt/dust-10 Severe Dust-15
  - d. Road Slope: <5%-0 5-10%-5 >10%-10 \_\_\_\_\_ (10)
  - e. Road Shape (cross-slope/crown): Good-0 Fair-3 Poor-5 \_\_\_\_\_ (5)
  - f. Slope to Stream: <30%-0 30-60%-3 >60%-5 \_\_\_\_\_ (5)
  - g. Distance to Stream: >100'-0 50'-100'-3 <50'/crossing-5 \_\_\_\_\_ (5)
  - h. Outlets to Stream: None-0 Near Stream-3 Directly to Stream-5 \_\_\_\_\_ (5)
  - i. Outlet/Bleeder Stability: Stable-0 Moderate-3 Unstable-5 \_\_\_\_\_ (5)
  - j. Road Ditch Stability: Stable-0 Fair-3 Poor-7 Unstable-10 \_\_\_\_\_ (10)
  - k. Road Bank Stability: Stable-0 Fair-3 Poor-7 Unstable-10 \_\_\_\_\_ (10)
  - l. Average Canopy Cover: Moderate-0 Minimal-3 Heavy-5 \_\_\_\_\_ (5)
  - m. Off-ROW Impacts resolved: None-0 Minimal-3 Some-7 Many-10 \_\_\_\_\_ (10)

Note the assessment above has been modified from the original version. Feel free to use the original version or change the scores to reflect county priorities. Regardless of the method used, sites should be re-evaluated when they are applied for. Outdated GIS assessment scores should not be used for project ranking.

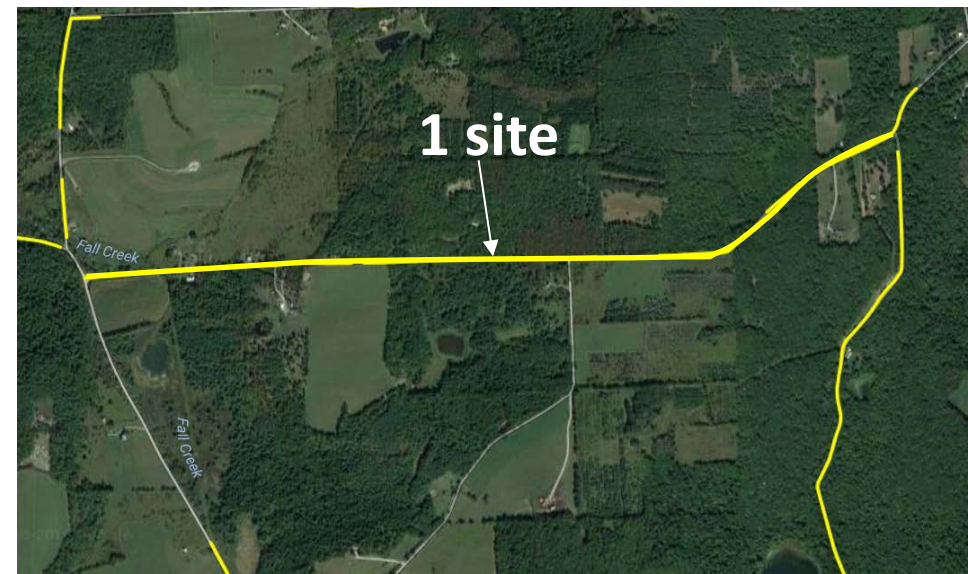
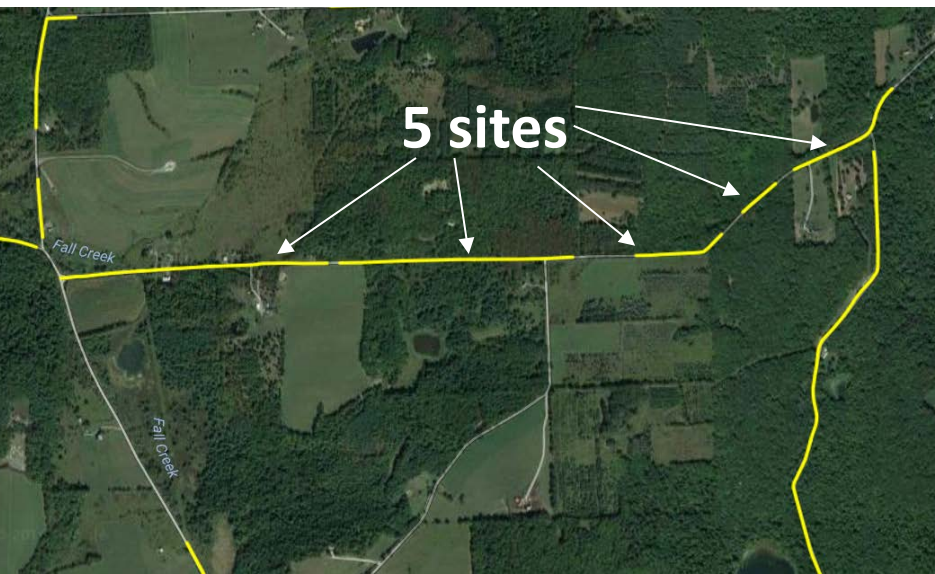
Modified Assessment Subtotal: \_\_\_\_\_ (110)

**Audio also available via phone: 866-823-7699**  
 For assistance, call: 814-865-5355



## Assessments

- **CDs can add and assess potential sites to GIS at any time. *Please notify CDGRS/SCC if you plan to do any kind of significant assessment effort.***
- **Old potential sites can be combined, moved, lengthened, or deleted in GIS as necessary.**



Assessment Grant Application Cont

Assessment Date: 5/2

Road Sediment in Stream: Moderate

Wet Site Conditions: Flow in D

Road Surface Material: Soft Ston

Road Slope/Grade: 5 - 10%

Road Shape: Fair

Slope to Stream: 30 - 60%

W  
M



- Background
- Process Overview
- Current Use
- Assessment and LVRs

- **With exception of “road surface condition” LVR and D&G Assessments are identical:**

c. **Road Surface Condition**

\_\_\_\_\_ (15)

- i. **LVR EVALUATION: Pavement Condition:** good-0 fair, some cracking-5  
Poor, cracking, unevenness-7 Damaged-10 Severely Damaged-15
- ii. **D&G EVALUATION:** Hard Gravel-0 Mixed Stone-5 Soft Stone-7  
Mixed stone/dirt/dust-10 Severe Dust-15

## - Did you notice in GIS?



- Unpaved worksites need a “potential” site first.
- LVR worksites don’t have “potential” sites, they are made directly on LVRs.
- Because there is no historical “assessment” of LVRs.



## There is no current or planned LVR Statewide Assessment

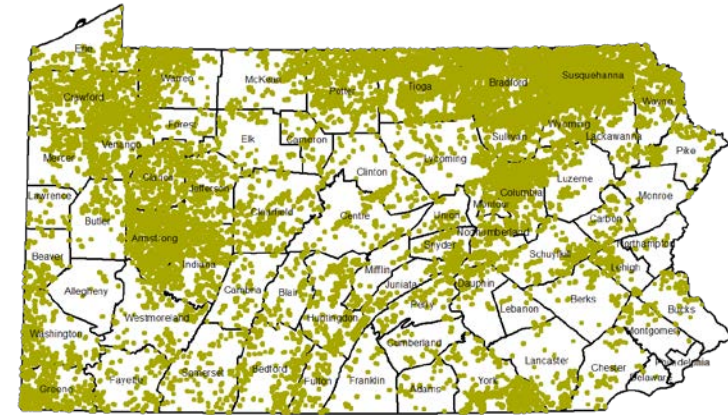
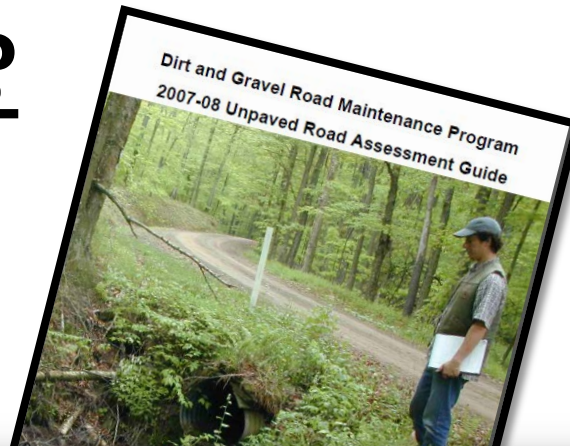
### WHY NOT?



- No comprehensive statewide traffic count exists to tell us which roads are Low Volume.
- That leaves ~60,000+ miles of potential LVRs.
- Estimated 4-5 person-years to complete assessment, not including doing traffic counts!

**Create LVR worksites for new contracts. Assessment is needed if it is part of your ranking criteria.**



## Questions?



Assessment	Grant Application	Contract	Amendments	Completion Report	Photos
   					
Assessment Date:	5/20/2008		Distance to Stream:	< 50'/Crossing	
Road Sediment in Stream:	Moderate		Outlets to Stream:	Directly to Stream	
Wet Site Conditions:	Flow in Ditches		Outlet/Bleeder Stability:	Moderate	
Road Surface Material:	Soft Stone/Dust		Road Ditch Stability:	Poor	
Road Slope/Grade:	5 - 10%		Road Bank Stability:	Poor	
Road Shape:	Fair		Average Canopy Cover:	Moderate	
Slope to Stream:	30 - 60%		Off-ROW Impacts:	Minimal	
<b>Worksite Assessment Score: 62</b> <b>Modified Assessment Score: 65</b>					