

RISK LEVEL DETERMINATION

Frequently Asked Questions

1. Q - Where do I get guidance for doing Risk Level Determination?
A - Caltrans has developed guidance to assist Project Engineers to determine RL for a variety of projects: <http://www.dot.ca.gov/hq/oppd/stormwtr/index.htm> Refer to guidance for more information.

2. Q – Why do we have to do a risk level analysis?
A - The new Construction General Permit (CGP) (State Water Board Order 2009-0009-DWQ) went into effect on July 1, 2010 and requires a Risk Level Determination. The CGP is a risk-based permit that establishes three levels of environmental risk possible for a construction site.

3. Q – How is Risk Level calculated?
A - The Risk Level (RL) is calculated in two parts: 1) Project Sediment Risk, and 2) Receiving Water Risk. Caltrans Project Engineers and Consultants must determine if a project has a combined Risk Level 1, 2 or 3. The CGP RL determination quantifies sediment and receiving water characteristics and uses these results to determine the project's overall RL. Highly erodible soils, in higher rainfall areas, on steep slopes increase the 'sediment risk'. Monitoring and reporting requirements increase as the RL goes from 1 to 3.

4. Q – When determining sediment risk, what should be considered?
A - Considerations to determine sediment risk are based on the following: location of the site, construction work window, top soil layer of the site, "non-vegetated"/bare ground condition of the site (e.g., lengths and slopes), and disturbed soil areas only.

5. Q – How is sediment risk expressed?
A - The sediment risk is expressed as Low Sediment Risk: < 15 tons/acre, Medium Sediment Risk: >=15 and <75 tons/acre, or High Sediment Risk: >= 75 tons/acre.

6. Q –What is receiving water risk based on and how is it expressed?
A - Receiving water risk is based on whether a project drains to a sediment-sensitive waterbody. A sediment-sensitive waterbody must meet one of the following three criteria to be considered a high risk:
 - 1) on the most recent 303d list for waterbodies impaired for sediment
 - 2) has a USEPA-approved Total Maximum Daily Load implementation plan for sediment

3) has fish habitat beneficial uses of COLD, SPAWN, and MIGRATORY (all three beneficial uses must be listed).

A water body is considered to be a low risk if it doesn't meet the high risk criteria.

7. Q – What is the Combined Risk Level Matrix?

A – Once the sediment and receiving water risks have been considered an overall project risk level can be determined from the following table:

		Sediment Risk		
		Low	Medium	High
Receiving Water Risk	Low	Level 1	Level 2	
	High	Level 2		Level 3

Note that projects with high receiving water risk and high sediment risk will be considered a Risk Level 3 risk to water quality. Likewise projects with low receiving water risk and low sediment risk will be considered a Risk Level 1 risk to water quality. All other projects are considered to be Level 2.

8. Q – What are risk level requirements?

A – Risk Level 1 projects will be subject to minimum BMP and visual monitoring requirements, Risk Level 2 projects will be subject to NALs and some additional monitoring requirements, and Risk Level 3 projects will be subject to NELs, and more rigorous monitoring requirements such as receiving water monitoring and in some cases bioassessment.

9. Q – What type of highway construction projects are considered?

A – Contiguous Linear Highway Construction Site Projects and Multiple (non-contiguous) Construction Sites within a Project.

10. Q – What is a non-contiguous construction site?

A – Caltrans projects vary in type. Some have several locations where construction will occur such as an HOV ramp widening project. The proposed work would consist of widening the existing ramps, installing meters, and modifying the existing drainage system at several locations. These types of projects where construction areas are not contiguous and usually not defined as a Common Plan of Development. For more information on non-contiguous projects refer to EPA's Fact Sheet (page 7 of 52, 2nd paragraph) on how to apply to Caltrans projects.

http://www.epa.gov/npdes/pubs/cgp2008_finalfactsheet.pdf (paragraph inserted below for reference purposed)

To help clarify what projects must be addressed as part of a “common plan of development or sale” and what projects can be considered on their own merit, EPA is addressing the issue of non-contiguous construction activities. Where discrete construction projects within a larger common plan of development or sale are located at least 1/4 mile apart and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed. For example, oil and gas well pads separated by 1/4 mile could be treated as separate “common plans.” However, if the same two well pads and an interconnecting access road were all under construction at the same time, they would generally be considered as part of a single “common plan” for permitting purposes. If a utility company was constructing new trunk lines off an existing transmission line to serve separate residential subdivisions located more than 1/4 mile apart, the two trunk line projects could be considered to be separate projects.

11. Q – Do I calculate a Disturbed Soil Area (DSA) for each non-contiguous construction site?

A – The DSA for multiple location projects should be calculated for each site.

12. Q – Do I calculate a separate risk level for each non-contiguous construction site when one acre or more of DSA is calculated?

A – Yes, if determined to be one acre or more of DSA, a separate RL determination will need to be performed for each location. Each site will be entered into SMARTS as a separate project if one or more acres are disturbed. If less than one acre, no RL determination is required and not required to be entered into SMARTS.

13. Q – What do I need to know about planning watersheds and why?

A – As many Caltrans projects are linear in nature, there is a reference in the CGP that needs to be considered. Section VIII Risk Determination of CGP Order states, “For any site that spans two or more planning watersheds, (watersheds that range in size from 3,000 to 10,000 acres as defined by Calwater watershed documents <http://cain.ice.ucdavis.edu/calwater/calwfaq.html>) the discharger shall calculate a separate Risk Level for each planning watershed. The discharger shall notify the State Water Board of the site’s Risk Level determination(s) and shall include this determination as a part of submitting the PRDs. If a discharger ends up with more than one Risk Level determination, the Regional Water Board may choose to break the project into separate levels of implementation.”

This means that when evaluating your Risk Level within a project, you must be cognizant of where your project is in relation to separate planning level watersheds. More information is provided within this guidance.

Not all watersheds have been mapped to the planning watershed level. The watersheds shown on the Water Quality Planning Tool (WQPT) and the District 8 website are the most recent and up to date watershed maps available by the State. These maps are not true hydrologic datasets following ridgelines and are approximate. The PE should document which hydrologic boundaries are being used for the project.

The following questions are from the December 7, 2010 Risk Level Determination Webinar:

14. Q – Is duration based on start-date to finish-date, or the number of working days? Can winter suspension time be deducted?

A – Start date is the first calendar day of soil disturbance, the finish date is the calendar date when final stabilization is achieved. Winter suspension time cannot be deducted. See the RLD Guidance for more information

The start date and finish date are what we're concerned about. The number of working days is really just what the start to finish dates are added up to be. As far as winter suspension time being deducted, no. Again, it's based on the R value (erosivity) as that is where the start and finish dates come from.

15. Q – How often is the web-based Water Quality Planning Tool Updated?

A – The WQPT is updated whenever there is a major change to its source information. Currently, the WQPT is being revised to accommodate several CGP requirements including planning level watersheds. This revision should be available by March 2011.

The WQPT includes total maximum daily loads (TMDLs) and impaired water bodies as described on the 2006 303(d) list. The CGP currently used the 2006 303(d) list.

16. Q – What version of the 303 (d) listed waterbodies should I use for my project that is planned to start construction in 2011 or 2012?

A – If it appears that a newer list of the 303 (d) listed water bodies is going to be approved before the project in question is in finished PS&E, then evaluate the new list to see if there are new impairments that would affect your Risk Level Determination. If so, coordinate with the District SW Coordinator and document as such in your SWDR. This will allow the project to be prepared for the higher risk.

17. Q – What constitutes an "indirect" discharge?

A – This is covered in Section 1.5 of the RLD Guidance.

18. Q – If the GIS method results in a lower tons/acre (lower risk) than the individual method, would you go with the GIS or Individual... even at PS&E?

A – Based on 'best professional judgment' if the GIS Map method was done correctly, the resulting RLD can be used. In general, the lower Risk Level is desirable.

In general, the examples we've reviewed in testing out the methods, the GIS Method has resulted in a higher Sediment Risk.

19. Q – So for calculating R level, we use the first date of soil disturbance for start date and last day of disturbing soil for finish date. Please advise.

A – Start date is the first calendar day of soil disturbance, the finish date is the calendar date when final stabilization is achieved. See the RLD Guidance for more information.

You can use the first day of soil disturbing activity (like grading or clearing and grubbing) as the first date for calculating R, but the last date has to be when final stabilization is complete. So the last day of grading is not appropriate for use here.

20. Q – When determining watershed slope and sheet flow length, is this the information for the watershed area near the project or is it the project area itself only?

A – The receiving water body that is associated with the disturbed soil area is the appropriate watershed.

It may be best to read through the guidance on this. Assuming you're doing this for a roadway project, you'd look at the footprint of the existing roadway or of the proposed work; look at what's within the right of way. This may give you a better value than taking it off the KLS map. You may also be asking if you should be doing the Individual Method and focusing your slope and sheet flow length in areas where there will be disturbance and that is also detailed in the RLD Guidance.

21. Q – If there is more than one RL for a project, how could that be described in the corresponding SSP?

A – It would require a non-standard Special Provision, but that's not that unusual. We often have projects that have more than one location, so we'd set up something similar.

22. Q – How does project phasing effects RLD?

A – Project phasing is irrelevant other than the first calendar day of soil disturbance and the final day of final soil stabilization.

The only way this would affect RLD is on the timing selected to do the work, such as when you select the start and end dates of the project. The other things would not make a difference.

23. Q – You mentioned in Q&A that the GIS method is usually higher than Individual method, but in D-6 that apparently doesn't happen as often as you think. I have several projects where GIS results in lower sediment risk and so have other SWC's.

A – This is unusual in our experience; however, the Water Board website does not prohibit using either the GIS Map or the Individual Method. In general, it is beneficial to Caltrans to have a lower Risk Level.

24. Q – In general should we use the higher, or lower risk levels when there are two different results from the two different procedures for calculating risk?

A – In general, it is beneficial to Caltrans to have a lower Risk Level.

25. Q – What happens if a project took longer to build than planned, or start and finish dates changed?

A – The CGP requires you to redo the RLD if the project duration is different than what was originally assessed, especially if it pushes you into a different Risk Level. So if construction extends beyond the planned completion date, you'll have to perform a new RLD and make all the changes. This could possibly include a contract change order (CCO) to cover making those changes.

26. Q – The State Water Board approved the 2010 Integrated Report on August 4, 2010. The 2010 Integrated Report includes changes to the 2006 Clean Water Act Section 303(d) list of impaired water bodies see SWRCB website...

A – State Water Board CGP references 2006 303(d) list. When it is updated, we will update our guidance.

27. Q – You said the Receiving Water risk map provided by the State Board is Draft. Any idea when it will be final?

A – I don't think we presented the Receiving Water risk map from the State Board. We referenced the WQPT. The District 8 GIS mapping, I believe, does use the State Board map and there has been some discussions about some potential errors in it, but we didn't go into that today. At this point, I don't think we should be talking about whether the map is draft or not. If there's a map available by the State Board, we should be using it.

28. Q – If our project is involves 2 bridges with widening where the slope lengths are the longest and elsewhere are flat. When cutting at every 1000 feet interval as suggested by the RLD Guidance, the bridges' slopes are missed. Should we include the slope at the bridges?

A – Use best professional judgment where to take representative cross-sections to develop LS.

29. Q – Where can I find a recorded version of this presentation for later review? Are there any plans for future presentations using VOIP (Voice over Internet Protocol) instead of using the telephone?

A – We will post the recording of the webinar, the PowerPoint slides, and the FAQs on Stormwater Design's website. We are always looking into new technologies.

30. Q – Regarding the end date of soil disturbing activity being date of soil stabilization, Will stabilization include plant establishment period?

A – Do not include the plant establishment period (PEP) as part of the project duration. According to the CGP, PEP is considered a maintenance period and is not included part of project construction.

31. Q – Is it the designer's obligation to bring down the risk level, since for some projects, the cost difference is not significant at design phase, but support costs during construction will be higher.

A – Yes it is the designer's obligation to determine an appropriate risk level. This includes trying to minimize construction support cost by justifying the lowest risk level possible.

32. Q – For example, a widening project extends from coastline towards inland about 10 miles. As slope changes significantly from coast to inland, which risk level should be used for the project?

A – It is not realistic to expect an assessment based upon this description. Please use best professional judgment and the RLD Guidance.

33. Q – Does the PPDG or other documentation explain why there are two methods for determining RL? If the individual method is considered a more forgiving method why would a regulatory agency accept use of the individual method?

A – The PPDG does not speculate upon why the SWRCB provided two methods in the CGP. The PPDG and the RLD Guidance describes possible differences in the results of the two methods.

34. Q – Are there web site addresses that take us to where the various values, data, etc. provided within the various documents that require the use of those values (e.g. SWDR, etc.)?

A – Yes. Please see webinar PowerPoint presentation. Also, the RLD Guidance provides web links.

35. Q – My project crosses two different planning level watersheds. How should RLD be done?

A – If your project crosses two different planning level watersheds, you'll have to do a RLD for each planning level watershed. This involves finding which parts of your project are within that watershed. The source for finding the planning level watershed is called out in the CGP. They give a website and you go to it to find boundaries. Then you go through the same process for finding the RLD. Then you need to contact your Regional Board and see if they want to manage the project as two different risk determinations or combined together under the same risk determination.

36. Q – My project has several locations separated by at least 1/4 mile, but two will have \geq 1.0 acre of disturbed soil area (DSA). Is RLD done for each location?

A – Each site is considered a separate project as defined by EPA's factsheet criteria and agrees to the meeting the Office of Storm Water Management had with the State Water Board. Do a separate RLD for each location that is more than 1 acre. Each location will be considered a separate project as far as the Regional Water Quality Control Boards and State Water Board are concerned.

37. Q – Except for the topographic data, most of the RLD data are readily attainable. What's the best way to get a weighted average for LS?

A – For linear projects, we actually have a method for doing this described in the guidance. Briefly, this involves selecting regularly spaced cross-sections from the beginning to end of the project. You consider the footprint of the existing roadway, which includes the existing slopes and existing pavement. Then also look at what the proposed work would be, such as the new slopes and the footprint of the new work. Then come up with an average slope length and slope steepness for that cross-section. Using this slope length and steepness, select the corresponding LS value from the LS Table. Then you aggregate all the cross-sections together by averaging the LS values. This will give you a weighted average for slope length and slope steepness for the entire project.