



Reclamation Plan Content Checklist

The Division of Mine Reclamation (DMR) reviews reclamation plans for compliance and completeness pursuant to Public Resources Code (PRC) Section 2772.1(b)(1). When submitting a reclamation plan to DMR, the lead agency must certify that the reclamation plan is a complete submission and is in compliance with SMARA and associated regulations and the lead agency's mining ordinance pursuant to PRC 2772.1(a)(3) (A-E). Additionally, pursuant to PRC 2772.1(a)(2), information prepared as part of a permit application or environmental document (pursuant to CEQA) shall be incorporated into the reclamation plan if it is used to satisfy the requirements of SMARA and associated regulations. These items shall be properly indexed in a Required Contents Chart and included in an appendix to the reclamation plan.

This checklist may assist operators and lead agencies when preparing and reviewing draft proposed reclamation plans and reclamation plan amendments in determining if they meet the minimum content requirements of the Surface Mining and Reclamation Act of 1975 (SMARA) and associated regulations (see box below for sections relevant to reclamation plans).

**Surface Mining and Reclamation Act of 1975
Public Resources Code (PRC)**

Division 2. Geology, Mines and Mining
Chapter 9. Surface Mining and Reclamation Act of 1975
Section 2710 et seq.

This portion includes requirements for reclamation plans.

**Associated Regulations
California Code of Regulations (CCR)**

Title 14. Natural Resources
Division 2. Department of Conservation
Chapter 8. Mining and Geology
Subchapter 1. State Mining and Geology Board

Article 1. Surface Mining and Reclamation Practice. Commencing with Section 3500

This portion includes minimum acceptable mining and reclamation practices for surface mining operations.

Article 9. Reclamation Standards. Commencing with Section 3700

This portion includes performance standards, which may apply to surface mining operations pursuant to CCR Section 3700.

The checklist is divided into seven topical areas: General Considerations, Geology and Geotechnical, Hydrology and Water Quality, Sensitive Species and Habitat, Topsoil, Revegetation, and Agriculture. To use the checklist, place a checkmark next to items that have been addressed by the reclamation plan or leave it blank if the reclamation plan is deficient. Alternatively, write N/A if the item is not applicable to the specific surface mining operation being reviewed.

Disclaimer: This checklist, prepared by DMR, paraphrases portions of SMARA and associated regulations that address the content of reclamation plans and plan amendments. DMR staff uses this checklist internally in performing our review of reclamation plans. However, use of this checklist is not required and it is provided only as a helpful tool. DMR always recommends consulting the full text of SMARA and associated regulations, available at the link below. Additionally, completion of this checklist does not guarantee completeness or compliance of the reclamation plan pursuant to PRC Section 2772.1(b)(1). Analysis of completeness and compliance requires thorough review of each specific project.

<http://www.conservation.ca.gov/index/Pages/lawsregs.aspx>

Mine Name:	Checklist Completed by:
End Use:	Date:

GENERAL CONSIDERATIONS

Authority	Requirements/Practices/Standards	✓ or N/A
PRC 2772(b)	Required contents chart: A chart identifying the location (e.g. page number, chapter, appendix, or other location in the reclamation plan) of content that meets the requirements of PRC Sections 2772, 2773, 2773.3 and CCR Articles 1 and 9 (as delineated in this checklist).	
PRC 2772(c)(1)	Contact information: Name and address of the surface mining operator and any person designated by the operator as an agent for service of process (must reside in CA).	
PRC 2772(c)(2)	Material quantity and type: The anticipated total quantity and type of minerals to be mined (see Annual Report Instructions, Exhibit B, for mineral types and units of measure).	
PRC 2772(c)(3)	Dates: The initiation and termination dates of mining (be as specific as possible, e.g. December 31, 2030).	
PRC 2772(c)(4)	Depth of mining: The maximum anticipated depth of the surface mining operation.	
PRC 2772(c)(5) (A-F)	Reclamation plan maps shall include:	
	Size and legal description of lands affected by surface mining operations;	
	Names and addresses of owners of all surface interests and mineral interests;	
	Property lines, setbacks, and the reclamation plan boundary;	
	Existing and final topography with contour lines at appropriate intervals;	
	Detailed geologic description of the area of the surface mining operation;	
	Locations of railroads, utility features, and roads (access roads, temporary roads to be reclaimed, and any roads remaining for the end use).	
	All maps, diagrams, or calculations that are required to be prepared by a California-licensed professional shall include the preparer's name, license number, signature & seal.	
PRC 2772(c)(6)	Mining method and schedule: A description of the mining methods and a time schedule that provides for completion of mining on each segment so that reclamation can be concurrent or phased.	
PRC 2772(c)(7)	Subsequent use(s): A description of the proposed subsequent use(s) after reclamation	
	Evidence that all landowners have been notified of the proposed use.	
PRC 2772(c)(9)	Impact on future mining: A statement regarding the impact of reclamation on future mining on the site.	
PRC 2772(c)(10)	Signed statement: Statement signed by the operator accepting responsibility for reclamation of the mined lands per the reclamation plan.	
PRC 2776(b-c)	Pre-SMARA areas: Reclamation plans shall apply to operations conducted after January 1, 1976 or to be conducted in the future. Mined lands disturbed prior to January 1, 1976 <i>and not disturbed after that date</i> may be excluded from the reclamation plan.	
CCR 3502(b)(2)	Public health and safety: A description of how any potential public health and safety concerns that may arise due to exposure of the public to the site will be addressed.	
CCR 3709(a)	Equipment storage and waste disposal: Designate areas for equipment storage and show on maps.	
	All waste shall be disposed of in accordance with state and local health and safety ordinances.	
CCR 3709(b)	Structures and equipment removed:	

	Structures and equipment should be dismantled and removed at closure, except as demonstrated to be necessary for the proposed end use.	
CCR 3713(a)	Well closures: Drill holes, water wells, monitoring wells will be completed or abandoned in accordance with laws, unless demonstrated necessary for the proposed end use.	
CCR 3713(b)	Underground openings: Any portals, shafts, tunnels, or openings will be gated or protected from public entry, and to preserve access for wildlife (e.g. bats).	

GEOLOGY AND GEOTECHNICAL

Authority	Requirements/Practices/Standards	✓ or N/A
PRC 2772(c)(5)	A description of the general geology of the area A detailed description of the geology of the mine site.	
PRC 2773.3	If a metallic mine is located on, or within one mile of, any "Native American sacred site" and is located in an "area of special concern," the reclamation plan shall require that all excavations and/or excess materials be backfilled and graded to achieve the approximate original contours of the mined lands prior to mining.	
CCR 3502(b)(4)	The source and disposition of fill materials used for backfilling or grading shall be considered in the reclamation plan.	
CCR 3502(b)(3)	The designed steepness and treatment of final slopes must consider the physical properties of slope materials, maximum water content, and landscaping.	
	The reclamation plan shall specify slope angles flatter than the critical gradient for the type of slope materials.	
	When final slopes approach the critical gradient, a Slope Stability Analysis will be required.	
CCR 3704.1	Backfilling required for surface mining operations for metallic minerals.	
CCR 3704(a)	For urban use, fill shall be compacted in accordance with Uniform Building Code, local grading ordinance, or other methods approved by the lead agency.	
CCR 3704(b)	For resource conservation, compact to the standards required for that end use.	
CCR 3704(d)	Final reclamation fill slopes shall not exceed 2:1 (H:V), except when allowed by site-specific engineering analysis, and the proposed final slope can be successfully revegetated. See also Section 3502(b)(3).	
CCR 3704(e)	At closure, all fill slopes shall conform with the surrounding topography or approved end use.	
CCR 3704(f)	Final cut slopes must have a minimum slope stability factor of safety that is suitable for the end use and conforms with the surrounding topography or end use.	

HYDROLOGY AND WATER QUALITY

Authority	Requirements/Practices/Standards	✓ or N/A
PRC 2770.5	For operations within the 100-year flood plain (defined by FEMA) and within one mile up- or downstream of a state highway bridge, Caltrans must be notified and provided a 45-day review period by the lead agency.	
PRC 2772(c)(8)(A)	Description of the manner in which contaminants will be controlled and mine waste will be disposed.	
PRC 2772(c)(8)(B)	The reclamation plan shall include a description of the manner in which stream banks/beds will be rehabilitated to minimize erosion and sedimentation.	
PRC 2773(a)	The reclamation plan shall establish site-specific sediment and erosion control criteria for monitoring compliance with the reclamation plan.	
CCR 3502(b)(6)	Temporary stream and watershed diversions shall be detailed in the reclamation plan.	
CCR 3503(a)(2)	Stockpiles of overburden and minerals shall be managed to minimize water and wind erosion.	

CCR 3503(b)(2)	Operations shall be conducted to substantially prevent siltation of groundwater recharge areas.	
CCR 3503(a)(3)	Erosion control facilities shall be constructed and maintained where necessary to control erosion.	
CCR 3503(b)(1)	Settling ponds shall be constructed where they will provide a significant benefit to water quality.	
CCR 3503(d)	Disposal of mine waste and overburden shall be stable and shall not restrict natural drainage without suitable provisions for diversion.	
CCR 3503(e)	Grading and revegetation shall be designed to minimize erosion and convey surface runoff to natural drainage courses or interior basins.	
	Spillway protection shall be designed to prevent erosion.	
CCR 3706(a)	Surface mining and reclamation activities shall be conducted to protect on-site and downstream beneficial uses of water.	
CCR 3706(b)	Water quality, recharge potential, and groundwater storage that is accessed by others shall not be diminished.	
CCR 3706(c)	Erosion and sedimentation shall be controlled during all phases of construction, operation, reclamation, and closure of surface mining operations to minimize siltation of lakes and water courses as per RWQCB/SWRCB.	
CCR 3706(d)	Surface runoff and drainage shall be controlled to protect surrounding land and water resources.	
	Erosion control methods shall be designed for not less than 20 year/1 hour intensity storm event.	
CCR 3706(e)	Impacted drainages shall not cause increased erosion or sedimentation. Mitigation alternatives shall be proposed in the reclamation plan.	
CCR 3706(f)(1)	Stream diversions shall be constructed in accordance with the Lake and Streambed Alteration Agreement (LSAA) between the operator and the Department of Fish and Wildlife.	
CCR 3706(f)(2)	Stream diversions shall also be constructed in accordance with Federal Clean Water Act and the Rivers and Harbors Act of 1899.	
CCR 3706(g)	All temporary stream diversions shall eventually be removed and the affected land reclaimed.	
CCR 3710(a)	Surface and groundwater shall be protected from siltation and pollutants in accordance with the Porter-Cologne Act, the Federal Clean Water Act, and RWQCB/SWRCB requirements.	
CCR 3710(b)	In-stream mining shall be conducted in accordance with Section 1600 et seq. of the California Fish and Game Code, Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act of 1899.	
CCR 3710(c)	In-stream mining shall be regulated to prevent impacts to structures, habitats, riparian vegetation, groundwater levels, and banks.	
	In-stream channel elevations and bank erosion shall be evaluated annually using extraction quantities, cross-sections, and aerial photos.	
CCR 3712	Mine waste and tailings and mine waste disposal units are governed by SWRCB waste disposal regulations and shall be reclaimed in accordance with this article: CCR Article 1. Surface Mining and Reclamation Practice. Section 3500 et seq.	

SENSITIVE SPECIES AND HABITAT

Authority	Requirements/Practices/Standards	✓ or N/A
CCR 3502(b)(1)	A description of the environmental setting (identify sensitive species, wildlife habitat, sensitive natural communities, e.g. wetlands).	
	Impacts of reclamation on surrounding land uses.	
CCR 3503(c)	Fish and wildlife habitat shall be protected by all reasonable measures.	
CCR 3703(a)	Sensitive species shall be conserved or mitigated as prescribed by the federal and California Endangered Species Acts.	
CCR 3703(b)	Wildlife habitat shall be established on disturbed land at least as good as pre-project, unless end use precludes its use as wildlife habitat.	
CCR 3703(c)	Wetlands shall be avoided or mitigated at 1:1 minimum for both acreage and habitat value.	
CCR 3704(g)	Piles or dumps shall not be placed in wetlands without mitigation.	
CCR 3710(d)	In-stream mining shall not cause fish to be trapped in pools or off-channel pits, or restrict migratory or spawning activities.	

TOPSOIL

Authority	Requirements/Practices/Standards	✓ or N/A
CCR 3503(a)(1)	Removal of vegetation and overburden preceding mining shall be kept to a minimum.	
CCR 3503(f)	When the reclamation plan calls for resoiling, mine waste shall be leveled and covered with a layer of finer material. A soil layer shall then be placed on this prepared surface.	
	The use of soil conditioners, mulches, or imported topsoil shall be considered where such measures appear necessary.	
CCR 3704(c)	Mine waste shall be stockpiled to facilitate phased reclamation and kept separate from topsoil or other growth media.	
CCR 3705(e)	If soil is altered or other than native topsoil, soil analysis is required. Add fertilizers or soil amendments if necessary.	
CCR 3711(a)	All salvageable topsoil shall be removed as a separate layer.	
	Topsoil and vegetation removal should not precede mining by more than one year.	
CCR 3711(b)	Topsoil resources shall be mapped prior to stripping and location of topsoil stockpiles shown on map included in the reclamation plan.	
	Topsoil and other growth media shall be maintained in separate stockpiles.	
	Test plots may be required to determine the suitability of growth media for revegetation purposes.	
CCR 3711(c)	Soil salvage operations and phases of reclamation shall be set forth in the reclamation plan to minimize the area disturbed and to achieve maximum revegetation success.	
CCR 3711(d)	Topsoil and growth media shall be used to phase reclamation as soon as can be accommodated following the mining of an area.	
	Topsoil stockpiles shall not be disturbed until needed for reclamation.	
	Topsoil stockpiles shall be clearly identified.	
	Topsoil shall be planted with vegetation or otherwise protected to prevent erosion and discourage weeds.	
CCR 3711(e)	Topsoil shall be redistributed in a manner resulting in a stable, uniform thickness consistent with the end use.	

REVEGETATION

Authority	Requirements/Practices/Standards	✓ or N/A
PRC 2773(a)	The reclamation plan shall be specific to the property and shall establish site-specific criteria for evaluating compliance with the reclamation plan with respect to revegetation.	
CCR 3503(g)	Available research regarding revegetation methods and selection of species given the topography, resoiling characteristics, and climate of the mined areas shall be used.	
CCR 3705(a)	Baseline studies shall be conducted prior to mining activities to document vegetative cover, density, and species richness.	
	Vegetative cover shall be similar to surrounding habitats and self-sustaining.	
CCR 3705(b)	Test plots shall be conducted simultaneously with mining to ensure successful implementation of the proposed revegetation plan.	
CCR 3705(c)	Decompaction methods, such as ripping and disking, shall be used in areas to be revegetated to establish a suitable root zone for planting.	
CCR 3705(d)	Roads shall be stripped of roadbase materials, resoiled, and revegetated, unless exempted.	
CCR 3705(f)	Temporary access shall not disrupt the soil surface on arid lands except where necessary for safe access. Barriers shall be installed to keep unauthorized vehicles out.	
CCR 3705(g)	Use local native plant species (unless non-native species meet the end use).	
	Areas to be developed for industrial, commercial, or residential shall be revegetated for the interim period to control erosion.	
CCR 3705(h)	Planting shall be conducted during the most favorable period of the year for plant establishment.	
CCR 3705(i)	Use soil stabilizing practices and irrigation when necessary to establish vegetation.	

CCR 3705(j)	If irrigation is used, demonstrate that revegetation has been self-sustaining without irrigation for two years prior to the release of financial assurance.	
CCR 3705(k)	Noxious weeds shall be monitored and managed.	
CCR 3705(l)	Plant protection measures such as fencing and caging shall be used where needed for revegetation success. Protection measures shall be maintained until revegetation efforts are successfully completed and the lead agency authorizes removal.	
CCR3705(m)	Quantitative success standards for vegetative cover, density, and species richness shall be included in the reclamation plan.	
	Monitoring to occur until success standards have been achieved.	
	Sampling techniques for measuring success shall be specified. Sample size must be sufficient to provide at least an 80 percent statistical confidence level.	

AGRICULTURE

Authority	Requirements/Practices/Standards	✓ or N/A
CCR 3707(a)	Where the end use will be agriculture, prime agricultural land shall be returned to a fertility level specified in the reclamation plan.	
CCR 3707(b)	Segregate and replace topsoil in proper sequence by horizon in prime agricultural soils.	
CCR 3707(c)	Post reclamation productivity rates for prime agricultural land must be equal to pre-project condition or to a similar site for two consecutive years.	
	Productivity rates shall be specified in the reclamation plan.	
CCR 3707(d)	If fertilizers and amendments are applied, they shall not cause contamination of surface or groundwater.	
CCR 3708	For sites where the end use is to be agricultural, non-prime agricultural land must be reclaimed to be capable of sustaining economically viable crops common to the area.	