HYDROLOGY - SURFACE WATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
36. Stream crossing construction should not exceed 2 weeks.	Revegetation and Reclamation plans and supporting documentation shall be submitted and reviewed prior to commencement of work. Areas requiring special reclamation shall be identified on construction drawings. Reviewed during normal construction inspection.			

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HYDROLOGY - SURFACE WATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
37. Streams should be crossed at periods of low flow.	Site specific plans for streambank and streambed disturbances shall be filed with the SLC prior to construction. Reviewed during normal construction inspection.			

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HYDROLOGY - SURFACE WATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
38. Stream Crossings should be stabilized quickly.	Reviewed during post-construction inspection.			

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HYDROLOGY - SURFACE WATER

COMPANY: _____ SPREAD: _____

MONITOR: _____

MITIGATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILEPOSTS	COMMENTS
39. If required by state or federal permit hydrostatic water should be tested and treated before release.	Applications for state and/or federal discharge permits must be presented to the SLC to assure compliance. Reviewed during normal construction inspection. Permit requirements must be met.			

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HYDROLOGY - SURFACE WATER

COMPANY: _____ SPREAD: _____

MONITOR: _____

MI GATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILEPOSTS	COMMENTS
40. Hydrostatic test water shall be released properly to reduce the potential for scour.	Reviewed during normal construction inspection. Permit requirements must be met.			

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MINUTE PAGE 844

HYDROLOGY - SURFACE WATER

COMPANY: _____ SPREAD: _____

MONITOR: _____

MITIGATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILEPOSTS	COMMENTS
41. Water discharged in hydrostatic testing must be done in accordance with local, state and federal permits.	Applications for state and/or federal discharge permits must be presented to the SLC to assure compliance. If retention ponds are required they shall be identified on construction drawings. Reviewed during normal construction inspection. Permit must be obtained.			

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HYDROLOGY - SURFACE WATER

COMPANY: _____ SPREAD: _____

MONITOR: _____

MITIGATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILEPOSTS	COMMENTS
42. No streams with inadequate flow rates shall be used as a source of hydrostatic test water; adequate flow rates shall be maintained for instream uses and downstream withdrawals.	A list of all streams and other water sources slated for hydrostatic testing as well as the amounts of water required shall be filed with the SLC prior to commencement of testing. Reviewed during normal construction inspection.			

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HYDROLOGY - SURFACE WATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
43. Water for hydrostatic testing shall be reused wherever possible.	Areas where hydrostatic test water shall be obtained must be identified and reasons for not reusing water given.			

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HYDROLOGY - SURFACE WATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
44. The pipeline shall be buried at stream crossings below the estimated scour depths associated with 100 year flood event.	Construction methods for all stream crossings shall be identified, giving information on the methods to be utilized, the depth of the crossing and the rationale for determining the methods to be used. These plans will be reviewed by a qualified hydrologist and/or hydrological engineer. Also obtain COE 404 permit and state stream crossing permits.			

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HYDROLOGY - SURFACE WATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
45. Pipeline operators shall check the pipeline burial depth periodically at stream crossings.	The pipeline companies will file a yearly report on the inspection of pipeline burial depth on all state lands.			

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HYDROLOGY - SURFACE WATER

COMPANY: _____ SPREAD: _____

MONITOR: _____

MITIGATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILEPOSTS	COMMENTS
45. Coffer dams shall be utilized only when necessary.	If coffer dams are required at stream crossings, detailed analyses shall be provided on the need, location, and engineering design prior to initiation of construction.			

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HYDROLOGY - SURFACE WATER

COMPANY: _____ SPREAD: _____

MONITOR: _____

MITIGATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILEPOSTS	COMMENTS
47. Stream crossings shall be made perpendicular to axis of the channel.	Construction drawings on stream crossings shall be provided to the SLC. Reviewed during normal construction inspection.			

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HYDROLOGY - SURFACE WATER

COMPANY: _____ SPREAD: _____

MONITOR: _____

MITIGATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILEPOSTS	COMMENTS
48. Spoil from excavations shall be placed out of streams. Backfilling at streams shall be performed slowly to minimize sedimentation.	Reviewed during normal construction inspections. Obtain COE 404 permit.			

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HYDROLOGY - SURFACE WATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
49. Chemicals, fuels, and lubricating oils shall not be stored near stream channels. Any accidental spills shall be promptly clean up.	Locations of all chemical, fuel and maintenance activities shall be identified on construction drawings. Reviewed during normal construction inspections. See also COM Plan.			

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HYDROLOGY - SURFACE WATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
50. Additional erosion control measures shall be completed where necessary to prevent sedimentation into streams.	Site specific plans for streambank and streambed disturbances shall be filed with the SLC prior to construction. These plans shall provide detailed information on erosion and sedimentation measures that will be employed. Reviewed during normal construction inspection.			

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HYDROLOGY - SURFACE WATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
51. The ROW width shall be minimized in high erosion areas.	Construction drawings shall indicate right-of-way widths for all portions of the route. These widths shall be designated by the placement of lath at the outer boundaries of the right-of-way.			

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HYDROLOGY - GROUNDWATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
52. Install Ditch Plugs where necessary to minimize channeling.	Areas which may be subjected to groundwater channeling shall be identified and specific construction methods identified. Reviewed during normal construction inspections.			

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HYDROLOGY - GROUNDWATER

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
53. Identify nearby springs which serve as sources of water supply and take precautions to avoid impacts.	Construction drawings shall identify all nearby springs and provide site specific mitigation for springs closer than 500 ft to the edge of the ROW. Reviewed during normal construction inspection.			

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HYDROLOGY - FRESHWATER BIOLOGY

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
54. Work draglines from stream banks.	Submit construction methods to be employed on submerged stream crossings for SLC approval. Reviewed during normal construction inspections.			

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HYDROLOGY - FRESHWATER BIOLOGY

COMPANY: _____ SPREAD: _____

MONITOR: _____

MITIGATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILEPOSTS	COMMENTS
55. Construct sedimentation basins near streams and lakes on federal land as required.	Identify the locations and types of sedimentation measures which shall be employed along the pipeline routes. Reviewed during normal construction inspections.			

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HYDROLOGY - FRESHWATER BIOLOGY

COMPANY: _____ SPREAD: _____

MONITOR: _____

MITIGATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILEPOSTS	COMMENTS
56. Reclaim vegetation on stream crossings by replacing topsoil and replanting native riparian species; fence riparian habitat if necessary.	Site specific reclamation and revegetation plans shall be submitted to the SLC for each stream crossing. Reviewed during normal construction inspections. Obtain COE 404 permit.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
57. A revegetation plan shall be developed.	Revegetation and Reclamation plans and supporting documentation shall be submitted and reviewed prior to commencement of work. Areas requiring special reclamation shall be identified on construction drawings. Reviewed during normal construction inspection.			

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MINUTE PAGE 861

BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
58. In sensitive areas, the minimum ROW width possible shall be utilized to minimize damage.	Revegetation and Reclamation plans and supporting documentation shall be submitted and reviewed prior to commencement of work. Areas requiring special reclamation shall be identified on construction drawings. Reviewed during normal construction inspection.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
59. Existing vegetation shall be cleared and piled only to the extent necessary.	Revegetation and Reclamation plans and supporting documentation shall be submitted and reviewed prior to commencement of work. Areas requiring special reclamation shall be identified on construction drawings. Reviewed during normal construction inspection.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
60. Trees and shrubs that are not cleared from the ROW shall be protected from damage.	Reviewed during normal construction inspections.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
61. Trench backfilling should done in a manner which will have minimal impact on vegetation.	Reviewed during normal construction inspections.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
62. Joint inspection of ROW by all appropriate agencies to monitor the success of the revegetation efforts shall be completed.	No longer required in California.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
63. On federal lands, seed shall be planted by drilling, broadcasting, or hydroseeding.	No longer required in California. See additional mitigation measures for vegetation.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
64. Seed types should be from native species and adapted to the local soil and climatic conditions.	Revegetation and Reclamation plans and supporting documentation shall be submitted and reviewed prior to commencement of work. These plans shall include seed types and methods used in revegetation. Areas requiring special reclamation shall be identified on construction drawings. Reviewed during normal construction inspection.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
65. Seed testing must be completed and meet state, federal, and local agency requirements.	Results of seed testing shall be presented to the SLC for approval.			

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BIOLOGY - VEGETATION

COMPANY: _____ SPREAD: _____

MONITOR: _____

MITIGATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILESTS	COMMENTS
66. Seeding shall be done when seasonal or weather conditions are most favorable.	Revegetation and Reclamation plans and supporting documentation shall be submitted and reviewed prior to commencement of work. Areas requiring special reclamation shall be identified on construction drawings. Reviewed during normal construction inspection.			

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BIOLOGY - VEGETATION

COMPANY: _____ SPREAD: _____

MONITOR: _____

MITIGATION MEASURE	REQUIREMENT TO COMPLY	DATE/APPROVAL	MILEPOSTS	COMMENTS
67. Grazing on federal lands shall be delayed for a period as directed to allow vegetation to become established.	COM Plan and consultation as necessary.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
68. Preclear timber areas prior to dozer work. The materials shall be windrowed and placed along the edge of the ROW.	Submit locations where all preclearing activities will occur and outline procedures for clearing merchantable timber.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
69. Avoid sensitive plant species where practicable. This shall be accomplished by conducting field surveys at appropriate times of the year. Where feasible the plants shall be avoided by realignment.	Plans have been submitted and approved regarding avoidance of sensitive plant and sensitive plant communities. Pre-construction surveys must be conducted prior to commencement of construction activities. Pipeline company biological monitors will be present to assure that no sensitive plants species are impacted during construction. Reviewed during normal biological monitoring inspections.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
70. Construct barricades in areas of sensitive plants to reduce impacts along the ROW.	Locations of barricades, fences and/or signs shall be identified prior to operation of the pipeline.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
71. Wetland and riparian vegetation shall be replaced inkind.	Areas of impact to wetland and riparian vegetation shall be identified and the methods for revegetation presented to the SLC for approval. Reviewed during post-construction monitoring. COE 404 and state stream crossing permits will outline work necessary and replacement ratios.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
72. Removal of certain plant species in California may be a feasible way to reduce impacts. If plants are removed, replanting shall occur in suitable habitat outside the zone of potential disturbance.	Plans have been submitted and approved regarding avoidance of sensitive plant and sensitive plant communities. Pre-construction surveys must be conducted prior to commencement of construction activities. Pipeline company biological monitors will be present to assure that no sensitive plants species are impacted during construction. Reviewed during normal biological monitoring inspections.			

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BIOLOGY - VEGETATION

MITIGATION MEASURE	REQUIREMENT TO COMPLY	COMPANY: _____ SPREAD: _____ MONITOR: _____ DATE/APPROVAL	MILEPOSTS	COMMENTS
73. Conduct plant surveys to locate plant species of special concern.	Plans have been submitted and approved regarding avoidance of sensitive plant and sensitive plant communities. Pre-construction surveys must be conducted prior to commencement of construction activities. Pipeline company biological monitors will be present to assure that no sensitive plants species are impacted during construction. Reviewed during normal biological monitoring inspections.			

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