

APPENDIX F
Hydrology and Water Quality



PROJECT MEMORANDUM

To : Mr. David Tanner
From : Steve Chiu, PE, QSD
Subject: Aliso Viejo Ranch Project, APA's Response to Hydrology and Water Quality Impact Assessment

a) *Would the project violate any water quality standards or waste discharge requirements?*

The proposed project will be designed to conform to the current City of Aliso Viejo water quality design standards. Wastewater facilities and disposal will comply with the current standards of Aliso Wastewater Management Agency. All building wastewater and sewerage disposal systems within the site will be connected to a public sewer system and be conveyed to the regional treatment plan for treatment.

As required, stormwater quality standards during construction will conform to the requirements of the San Diego Regional Water Quality Control Board.

Therefore the project would not violate any water quality standards or waste discharge requirements.

No Impact.

b) *Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

Based on the Concept development plans, portable water will be supplied by a local water purveying agency and distributed through a pipe network within the site.

The project does not utilize well water source and therefore has no impact on the ground water supplies, ground water recharge, aquifer volume or groundwater table level.

No Impact.



- c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.*

The site is located in an urbanized area of the City. The site was previously graded and has several vintage farm houses and barns within the project site limits. Based on topographic survey of the site, there are no existing major drainages within the site. Therefore, the project does not require alteration of the course of any stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.

Based on the grading design concept of the project, the development does not substantially change the existing drainage pattern. Runoffs from the project site will remain draining to the existing storm drain system in Cedarbrook as before.

No Impact.

- d) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

As stated earlier, the project does not require alteration of the course of any stream or river, in a manner which would substantially alter the existing drainage pattern of the site. There are no off-site tributary area changes proposed for the project. For the on-site improvements, the impervious area will increase by 4% for the development over the undeveloped condition, based on preliminary drainage calculations.

There will be a minor increase in the amount of surface runoff from the increased impervious areas. The increased amount is minor due to the proposed use of Low Impact Development (LID) practices to offset the increase in impervious areas.

The on-site drainage system will be designed in accordance with the current City and County requirements on hydrology and hydraulic design of storm drain systems to accommodate all the runoffs generated by the site and would not result in flooding on- or off-site.

Hence there is no substantial increase in the rate or amount of surface runoff which would result in flooding on-or off-site.

No Impact.



- e) *Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?*

Currently, existing runoffs from the project site is being conveyed through a 36” to 60” diameter underground pipe storm drain system draining into Aliso Creek. This public drainage system conveys drainage from the project site, Cedarbrook and Park Avenue street flows, and the runoffs within the existing sports complex on the south side of Cedarbrook. This storm drain system ultimately discharges into Aliso Creek further south of the sports complex.

Based on preliminary review of the hydrology and hydraulics information of the existing storm drain system, there is sufficient capacity to handle the proposed flows for the proposed development. Therefore, the Project will not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems.

Potential runoff pollutants will be treated with BMPs in accordance with current requirements of the San Diego Regional Water Quality Control Board, Region 9.

No Impact.

- f) *Otherwise substantially degrade water quality?*

As stated earlier, potential runoff pollutants will be treated with BMPs in accordance with current requirements of the Regional Water Quality Control Board, therefore it is not anticipated that the project will substantially degrade water quality.

No Impact.

- g) *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

This site is not located within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

No Impact.



- h) *Place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

The Site is not located within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

No Impact.

- i) *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*

Aliso Viejo is not located within a dam or levee inundation area. Therefore, the Project will not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

No Impact.

- j) *Inundation by seiche, tsunami, or mudflow?*

The project site is within an urban area of Aliso Viejo community and is not located within an area that are subject to inundation by seiche, tsunami or mudflow.

No Impact.