REVISED FINDINGS:

COASTAL DEVELOPMENT PERMIT APPLICATION

Application number .......... A-3-SLO-01-018, Gonyer SFD

Applicant ..................... John Gonyer

Project location ............. 1770 Ogden Drive (West Lodge Hill area), Cambria, San Luis Obispo County (APN 023-161-042).

Project description .......... Construct a single-family residence with a 1,029 sq. ft. footprint and 1,744 sq. ft. of gross structural area.

Local approval: .............. San Luis Obispo County: Coastal Development Permit D990009P, Variance D000001V.

File documents ............... San Luis Obispo County Certified Local Coastal Program; Coastal Development Permit D990009P/Variance D000001V; Phase II Archaeological Testing at 1770 Ogden Drive in the Community of Cambria, San Luis Obispo County, California (Getchell, Barbie Stevenson and John E. Atwood: September 1999); Limited Soils Investigation and Foundation Recommendations (Mid-Coast Geotechnical, Inc.: January 14, 2000)

Commissioners on prevailing side: Dettloff, Hart, McCoy, Potter, Woolley & Wan.

Staff Note: The Coastal Commission approved this project after public hearing at the August 2001 meeting in Redondo Beach by a vote of 6 – 0 with three abstentions. In the course of that approval, the Commission modified the conditions of approval and findings relative to the maximum size of the structure allowed on the site. These changes are shown by this staff report using strikethroughs for deleted language and underlines for new language.

Synopsis of the Coastal Commission August 7, 2001 action: The applicant proposed to construct a two-story residence, approximately 1,744 square feet in size, with the garage at a level below the average natural grade and living space on two levels above the average natural grade. The subject site is a steep,
oversized double lot of approximately 5,557 square feet located at 1770 Ogden Drive, in the West Lodge Hill area in the community of Cambria, San Luis Obispo County.

The Commission determined that the proposed project, was inconsistent with the Local Coastal Program because it exceeded the allowable footprint and gross structural area. To maintain consistency with the LCP, the conditions of approval adopted by the Commission required the applicant to modify the project, and is submit revised plans that conform with the maximum footprint and gross structural area required by the LCP. In addition, the project was conditioned to comply with the Local Coastal Program requirements regarding drainage, the handling of polluted runoff, and archaeological resources.

**Staff Recommendation on Revised Findings**

Staff recommends that the Commission adopt the following revised findings in support of its August 7, 2001 approval with conditions of Coastal Development Permit A-3-SLO-01-018.

**Motion.** I move that the Commission adopt the revised findings in support of the Commission’s action on August 7, 2001 approving with conditions the development proposed under appeal number A-3-SLO-01-018 pursuant to the staff recommendation.

**Staff Recommendation of Adoption.** Staff recommends a YES vote. Passage of this motion will result in adoption of the following resolution, revised findings and conditions as set forth in this report. The motion requires a majority vote of the members from the prevailing side present at the August 7, 2001 hearing, with at least three of the prevailing members voting. Commissioners eligible to vote on the revised findings are Commissioners Dettloff, Hart, McCoy, Potter, Woolley & Wan. If the motion fails, the revised findings are postponed to a later meeting.

**Resolution.** The Commission hereby adopts the findings and conditions set forth below for approval with conditions of a coastal development permit for the proposed development on the grounds that the findings support the Commission’s decision made on August 7, 2001 and accurately reflect reasons for it.

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I. Staff Recommendation on CDP Application

The staff recommends that the Commission, after public hearing, approve a coastal development permit for the proposed development subject to the standard and special conditions below.

Motion. I move that the Commission approve Coastal Development Permit Number A-3-SLO-00-018 pursuant to the staff recommendation.

Staff Recommendation of Approval. Staff recommends a YES vote. Passage of this motion will result in approval of the coastal development permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.
Resolution to Approve a Coastal Development Permit. The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the provisions of the San Luis Obispo County certified Local Coastal Program. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. Conditions of Approval

A. Standard Conditions

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

B. Special Conditions

1. Scope of Permit. This coastal development permit authorizes the construction of a single family residence and attached garage with a total footprint not to exceed 1,031 square feet and a gross structural area not to exceed 1,746 square feet.

2. Conditions Imposed By Local Government. This action has no effect on conditions imposed by a local government pursuant to an authority other than the Coastal Act.
3. Revised Plans. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit two sets of revised plans to the Executive Director for review and approval. The revised plans shall show the following changes to the project:

(a) The footprint of the residence shall not exceed 4,034 square feet.

(b) The gross structural area of the residence shall not exceed 4,746 square feet.

4. Drainage and Polluted Runoff Control. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for the review and approval of the Executive Director, a drainage and polluted runoff control plan designed by a licensed engineer, subject to the requirements of CZLUO Sections 23.05.044 through 23.05.050, which minimizes the volume, velocity, and pollutant load of stormwater leaving the developed site during construction. The plan shall be reviewed and approved by the consulting engineering geologist to ensure the plan is in conformance with the geologists’ recommendations.

In addition the applicant shall be responsible for maintaining the proposed post construction drainage and filtration systems (i.e., cistern and vegetated drainage swales) so that they are functional throughout the life of the approved development. Such maintenance shall include the following: (1) the drainage and filtration system shall be inspected, cleaned and repaired prior to the onset of the storm season, no later than September 30th each year; and, (2) should any of the project’s surface or subsurface drainage/filtration structures fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system and restoration of the eroded area. Should repairs or restoration become necessary, prior to the commencement of such repair or restoration work, the applicant shall submit a repair and restoration plan to the Executive Director to determine if an amendment or new coastal development permit is required to authorize such work.

5. Archaeology. During ground disturbing activities, the applicant shall retain a qualified archaeologist, approved by the Executive Director, to monitor all earth disturbing activities, per the Phase II Archaeological Test report prepared by Barbie Stevenson Getchell and John E. Atwood (September 1999).

(a) If an area of cultural deposits is discovered during the course of the project:

(1) All construction shall cease and shall not recommence except as provided in subsection (b) hereof; and

(2) Within 90 days after the date of discovery of such deposits, the applicant shall provide evidence to the Executive Director of execution and recordation of a deed restriction, in a form and content acceptable to the Executive Director, stating that, in order to protect archaeological resources, development can only be undertaken consistent with the provisions of an archaeological plan prepared by a qualified individual and approved by the Executive Director.
This deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without an amendment to this coastal development permit approved by the Coastal Commission.

(b) An applicant seeking to recommence construction following discovery of the cultural deposits shall submit an archaeological plan for the review and approval of the Executive Director.

(1) If the Executive Director approves the archaeological plan and determines that the plan’s recommended changes to the propose development or mitigation measures are de minimis in nature and scope, construction may recommence after the Executive Director receives evidence of recordation of the deed restriction required above.

(2) If the Executive Director approves the archaeological plan but determines that the changes therein are not de minimis, construction may not recommence until after an amendment to this permit is approved by the Commission and the Executive Director receives evidence of recordation of the deed restriction required above.

III. Recommended Findings and Declarations

The Commission finds and declares as follows:

A. Project Description

1. Project Location and Description
The project is located at 1770 Ogden Drive in the community of Cambria, San Luis Obispo County. West Lodge Hill is an extensive residential area located within the terrestrial habitat, south of Highway One (Exhibit 1). The topography of the West Lodge Hill area is varied with numerous ridges and gullies, steep slopes, and nearly flat areas near the marine terrace. The majority of the lots in the area are very small, typically 25 feet by 70 feet, and therefore historic development has been relatively dense. However, it is common for present-day proposals to consolidate two or three lots to create larger sites more appropriate for development.

The project site is a steep, oversized double lot of approximately 5,557 square feet that slopes approximately 30% towards Ogden Drive (please see Exhibit 2 for project plans). The proposed residence consists of the garage almost entirely below the average natural grade and living space on two levels above the garage. The overall height of the proposed residence is nearly 28 feet, as measured from the average natural grade of the site.

B. Coastal Development Permit Determination
1. Site Development

a. LCP Site Development Standards

(i) Setbacks

North Coast Planning Area Standard – Community-wide

Setbacks – Residential Single and Multi-Family (Small Lot Tracts).

c. Double lots (50'): Front and rear setbacks shall total 25 feet with a minimum of 10 feet in the front and 10 feet in the rear unless adjusted pursuant to Coastal Zone Land Use Ordinance Section 23.04.108a(2). Side yards shall be a minimum of 5 feet; 10 feet on the street side of a corner lot.

e. Front setbacks may be adjusted pursuant to CZLUA Section 23.04.108a(2) for sloping lot adjustment.

CZLUA Section 23.04.108 – Front Setbacks:

a. Residential uses: All residential uses except for second-story dwellings over a commercial or office use are to have a minimum front setback of 25 feet, except as follows:

(2) Sloping lot adjustment: In any case where the elevation of the natural grade on a lot at a point 50 feet from the centerline of the adjacent street right-of-way is seven feet above or below the elevation of the centerline, required parking (including a private garage) may be located, at the discretion of the applicant, as close as five feet to the street property line, pursuant to Section 23.01.044 (Adjustment), provided that portions of the dwelling other than the garage are to be established at the setback otherwise required.

(ii) Height

North Coast Planning Area Standard – Residential Single Family

Height Limitations. The maximum height for all single-family structures is 28 feet, except as follows: [note: the project does not meet any of the listed exceptions]

(iii) Footprint and Gross Structural Area

Table G (Standards for Lodge Hill Lots)

<table>
<thead>
<tr>
<th>Type of Lot</th>
<th>Max Ht.</th>
<th>Footprint</th>
<th>Gross Structural Area</th>
</tr>
</thead>
</table>

California Coastal Commission
### Site Development Analysis

#### (i) Setbacks

The proposed development meets all applicable setback requirements, with the provision for a front setback (sloping lot) adjustment of five feet towards the front property line.

#### (ii) Height

The proposed height of the residence is 28 feet, as measured from average natural grade, consistent with the North Coast Planning Area standard for residential single family development.

#### (iii) Footprint and Gross Structural Area

The North Coast Area Plan includes specific building standards for lots within the Lodge Hill area (referred to in the LCP as Table G and attached as Exhibit 5). These standards establish setback, height, footprint, gross structural area and deck sizes of single family residences based on lot size, site topography and location, and whether or not trees exist on the site. Footnotes 1 and 2 of Table G (noted above) are used when the subject site is not a standard size.

The first step in assessing the project’s consistency with these site development standards is to determine the maximum footprint and gross structural area allowed on the site according to the size and slope of the subject lot and the standards established by Table G.

As previously described, the project site is on slopes of over 30%, and composed of two lots that are larger than the standard lots in lodge hill and total 5,557. Table G limits development on the more typical 3,500 square foot double lots with steep slopes to a maximum footprint of 650 square feet and a maximum GSA of 1,100 square feet. Development on a standard triple lot of 5,250 square feet and slopes over 30% is limited to a maximum footprint of 1,000 square feet and a maximum GSA of 1,600 square feet. In this case, the applicant’s double lot is approximately 5,557 square feet. In accordance with the standards!
with footnotes one and two of Table G, the maximum footprint and structural area can be increased in proportion to the amount of the lot that is greater or lesser than the standard double lot 5,250 square feet. Because the project site is 1.587 times larger (5,557 / 3,500) than 3,500 square feet, the allowable footprint and gross structural area for the project may be increased accordingly, as shown in the table below.

<table>
<thead>
<tr>
<th>Lot size</th>
<th>Allowable Footprint</th>
<th>Allowable GSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,500 sq. ft.</td>
<td>650 sq. ft.</td>
<td>1,100 sq. ft.</td>
</tr>
<tr>
<td>5,557 sq. ft.</td>
<td>(650 sq. ft. x 1.587) = 1,031 sq. ft.</td>
<td>(1,100 sq. ft. x 1.587) = 1,746 sq. ft.</td>
</tr>
</tbody>
</table>

In this case, footnote one of Table G applies to the applicant’s double lot of 5,557 square feet, which is 307 square feet larger than a standard triple lot of 5,250 square feet. In contrast to the County’s practice of calculating the bonus footprint and GSA according to the number of lots involved, and thereby using footnote 2 to determine the bonus, this calculation must be based on the size of the parcel. Footnote One specifically states “Building sites greater than 5,250 square feet may be permitted additional footprint and Gross Structural Area equal to the percent of the site that is greater than 5,250 square feet.” Accordingly, the applicant’s 5,557 square foot site is allowed to exceed maximum GSA and footprint standards by 5.8%.

Footnote One of Table G does not, however, provide a clear formula for applying this bonus, because it does not identify the baseline GSA and Footprint to which this bonus applies. In order to rationally implement Table G, lot size, rather than the number of parcels, must be used to determine the base GSA and footprint. It is the size of the project site, rather than the number of parcels involved, which best reflects the constraints to development that need to be considered during coastal development permit review. This approach also maintains consistency with the method of determining the allowable bonus for larger than standards lots, which, as discussed above, must be determined according to lot size rather than number of lots.

Accordingly, although the applicant’s 5,557 square foot site is technically a double lot, it appropriately falls into the triple lot category for determining the baseline to which the bonus applies because it exceeds the standard 5,250 square foot triple lot size. Therefore, the maximum footprint and GSA is calculated as follows:

<table>
<thead>
<tr>
<th>Lot size</th>
<th>Allowable Footprint</th>
<th>Allowable GSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,250 sq. ft.</td>
<td>1,000 sq. ft.</td>
<td>1,600 sq. ft.</td>
</tr>
<tr>
<td>5,557 sq. ft.</td>
<td>(1,000 sq. ft. x 1.06) = 1,060 sq. ft.</td>
<td>(1,600 sq. ft. x 1.06) = 1,696 sq. ft.</td>
</tr>
</tbody>
</table>

The formula proposed by the appellant also calculates the bonus in proportion with the area of the lot that exceeds the standard triple lot of 5,250 feet, but applies this bonus to the baseline footprint and GSA established for standard double lots of 3,500 square feet. The result of this approach would significantly
penalize the owners of large double lots by reducing allowable home sizes below what would be allowed on a smaller site comprised of three parcels. This runs counter to the intent of the standards: to encourage development on large parcels and minimize development on very small individual lots. To avoid future discrepancies such as these, the Commission suggests that the County clarify the application of Table G footnotes in future LCP updates.

The next step in assessing the project's conformance with site development standards is to calculate the proposed footprint and gross structural area to confirm that they do not exceed the above maximums.

According to the North Coast Area Plan, footprint and gross structural area are defined as follows:

Footprint – means the area of the lot covered by residential and accessory structures including any structural overhangs, expressed in square feet, and includes living area, garages and carports. It does not include open deck area, balconies or eaves.

Gross Structural Area – means all interior areas, expressed in square feet of floor area, within the volume of the structure. It includes living areas, storage, garages and carports. Gross structural area is measured to the exterior limit of the building walls. Gross structural area does not include open exterior decks or interior lofts added within the height limitation to gain additional square footage.

The above definitions are somewhat vague because they do not distinguish between storage areas and mechanical rooms, and whether, in general, uninhabitable spaces should be counted. Furthermore, the definition of gross structural area (GSA) does not provide guidance in calculating the structural area of stairways (i.e. whether or not a flight of stairs should be counted as gross structural area of the main floor as well as all upper floors).

A strict reading of these definitions necessitates that, contrary to the County's typical practice, mechanical storage areas and crawl spaces be included as part of the Gross Structural Area, as they add to the total volume and floor area of the interior structure. Similarly, the footprint of the stairway must be considered as part of the building's structural area. However, consistent with typical industry practice and the LCP definition which states that Gross Structural Area should be expressed in square feet of floor area, it is appropriate to calculate the footprint of the stairway only once in determining gross structural area. This is because the stairway serves a single function, and does not add to the floor area of upper stories (as compared to mechanical storage areas, which can have floor area above). This methodology is consistent with state regulations for calculating square footage as part of real estate appraisals, established to prevent the exaggeration of structural floor area (see Exhibit 4). Commission staff also used this methodology in recent condition compliance review of final plans for the Victorian Inn, a development in Cayucos approved on appeal to the Commission that raised similar concerns regarding the amount of allowable square footage (please see Exhibit 6).
Given this interpretation of gross structural area, the originally proposed residential structure has been calculated to have a gross structural area of approximately 1,841 square feet, about 100-145 square feet in excess of the maximum gross structural area allowed according to Table G. The differences between this calculation, and the calculation originally provided by the project architect stating a gross structural area of 1,744 square feet, are that architect had not included the mechanical crawl space or the width of the exterior walls.

In addition, the footprint of the originally proposed residence has been calculated at approximately 1,160 square feet, which exceeds by the maximum footprint allowed under Table G by 129-100 square feet. The difference between this calculation and that submitted with the original plans is that the previously submitted calculation had not counted structural overhangs/covered deck areas as required by the LCP.

To resolve these issues, the applicant has submitted revised plans, attached to the staff report as Exhibit 2. To bring the project into conformance with the LCP size limitations discussed above, these revised plans:

- Reduce the amount of structural overhangs so that previously covered deck areas are now open decks. Open deck areas are specifically excluded from the calculation of footprint and gross structural area by the LCP definitions. And,

- Eliminate the previously proposed third bedroom from the upper floor so that the square footage associated with this bedroom is now part of the loft. Lofts are also excluded from the calculation of Gross Structural Area as defined by the LCP.

With these changes, the project has a total footprint of 1,029 square feet and a total gross structural area of 1,704 square feet. While this has achieved consistency with the LCP's limitation on footprint, the revised plans still exceed the LCP maximum on Gross Structural Area. Thus, the conditions of revised project approval require the applicant to submit new plans that conform to the maximum 1,034,1,060 square foot footprint and 1,746,1,696 square feet of gross structural area established by the LCP.

C. Site Development Conclusion

The project, as revised by the applicant, is consistent with all applicable setback, and height, and design standards established by the San Luis Obispo County certified Local Coastal Program. However, as detailed above, the project exceeds the maximum Gross Structural Area allowed by the LCP. Special Condition 2 addresses this inconsistency by requiring revised plans that are within the maximum GSA and footprint allowed by the LCP.

2. Community Character

A. LCP Community Character Policy

Policy 6 for Visual and Scenic Resources: ...new development shall be designed and sited to
complement and be visually compatible with existing characteristics of the community which may include concerns for the scale of new structures, compatibility with unique or distinguished architectural historical style, or natural features that add to the overall attractiveness of the community.

B. Community Character Analysis

The subject of neighborhood scale and compatibility is very difficult to define in Lodge Hill because most neighborhoods have a variety of lot sizes and varying topography. However, residences built on steep, uphill sloping lots typically appear very tall from the street level, and residences constructed on downhill sloping lots are typically built on pilings. The houses within the West Lodge Hill area range in size from approximately 1,500 to 4,000 square feet. Photographs of the houses in the neighborhood of the proposed project are attached as Exhibit 3.

C. Community Character Conclusion

The proposed development does not exceed the maximum height limit for Lodge Hill, and is substantially consistent with other residences in the surrounding area, as seen in the photos of Exhibit 3. Thus, the project is consistent with Policy 6 for Visual and Scenic Resources and may be approved as conditioned.

3. Drainage and Erosion Control

A. LCP Drainage and Erosion Control Standards

CZLUO Section 23.05.044 – Drainage Plan Preparation and Content:

a. Basic drainage plan contents: Except where an engineered drainage plan is required, a drainage plan is to include the following information about the site:

(1) Flow lines of surface waters onto and off the site.

(2) Existing and finished contours at two-foot intervals or other topographic information approved by the County Engineer.

(3) Building pad, finished floor and street elevations, existing and proposed.

(4) Existing and proposed drainage channels including drainage swales, ditches and berms.

(5) Location and design of any proposed facilities for storage or for conveyance of runoff into indicated drainage channels, including sumps, basins, channels, culverts, ponds, storm drains, and drop inlets.

(6) Estimates of existing and increased runoff resulting from the proposed improvements.

(7) Proposed erosion and sedimentation control measures.
(8) Proposed flood-proofing measures where determined to be necessary by the County Engineer.

North Coast Area Plan – Single Family Residential (Lodge Hill) Standards

8. Site Development Standards. New development shall satisfy the following standards:

a. Erosion Control. In addition to other applicable requirements of the Coastal Zone Land Use Ordinance, the following shall also be met:

(1) All runoff from impervious surfaces such as roofs, driveways, walks, patios, decks, shall be collected and detained on-site, or passed on through an effective erosion control device or drainage system approved by the County Engineer.

(2) Permanent erosion control devices shall be installed prior to or concurrently with on-site grading activities.

(3) If grading is to occur between October 15 to April 15, a sedimentation and erosion control plan shall be submitted per Coastal Zone Land Use Ordinance Section 23.05.036.

(4) Grading, filling or site disturbance of existing soil and vegetation shall be limited to the minimum areas necessary.

(5) Stockpiles and other disturbed soil shall be protected from rain and erosion by plastic sheets or other covering.

(6) All areas disturbed by grading shall be revegetated with temporary or permanent erosion control devices in place.

(7) Impervious surfaces such as driveways and walkways shall be limited to the smallest functional size.

(8) Exterior decks shall be located to avoid trees. Solid exterior decks shall be limited to 10% of the permitted footprint, while decks of permeable construction (ie, open wood slats) shall be limited to 30% of permitted footprint.

B. Drainage and Erosion Control Analysis

The project is located on a site that is almost entirely on slopes in excess of 30 percent. As proposed, grading for the residence will involve cutting and removing approximately 250 cubic yards of soil, and total site disturbance will affect approximately 3,000 square feet of the parcel. A geotechnical report was prepared by Mid-Coast Geotechnical, Inc. on January 14, 2000, which states the following in terms of site drainage:

If a swale is required to collect the flow, the swale bottom should preferably be at least 4 feet from the footings or outside of the foundation wall backfill and sloped sufficiently to direct the runoff away from the building area and lot. All pad and roof drainage should be
collected and transferred away from the building and slopes in non-erosive devices. Proper drainage shall also be provided away from the building footings and from the lot during construction. This is especially important when construction takes place during the rainy season.

A drainage and polluted runoff control plan is required by Special Condition 4 to ensure that drainage will be effectively managed during construction.

With respect to post construction drainage control, the applicant proposes to direct runoff from the roof of the new residence to a 500 gallon cistern, that will allow roof debris to settle out from the runoff and will be cleaned on an annual basis. The outfall from this tank will be routed to a vegetated swale, which will allow for percolation and filtration before the runoff is discharged to the street. Similarly, runoff from the project driveway and paved areas will also be routed to vegetated swales. These drainage facilities have been designed to ensure that post construction drainage will not result in an amount or velocity of runoff beyond what currently occurs on the site, consistent with LCP requirements (drainage calculations attached as Exhibit 7).

C. Drainage and Erosion Control Conclusion

The proposed development includes drainage controls that ensure post-construction runoff will be managed to prevent erosion and water quality degradation, consistent with LCP requirements. However, additional measures to prevent erosion and sedimentation during construction is needed to comply with Section 23.05.044 of the Coastal Zone Land Use Ordinance, and are therefore required by Special Condition 4. With this condition, the project complies with all applicable LCP drainage and water quality protection provisions.

4. Archaeological Resources

A. LCP Archaeological Resources Policy

Policy 1 for Archaeology: Protection of Archaeological Resources. The county shall provide for the protection of both known and potential archaeological resources. All available measures, including purchase, tax relief, purchase of development rights, etc., shall be explored at the time of a development proposal to avoid development on important archaeological sites. Where these measures are not feasible and development will adversely affect identified archaeological or paleontological resources, adequate mitigation shall be required.

B. Archaeological Resources Analysis

An archaeological surface survey (Phase I) for the property was conducted, and a report prepared, by John Parker in 1996. The report identified that the lot contained surface indications of cultural resources; however, the materials were very sparse. In September 1999, a subsurface evaluation/data recovery (Phase II/III) was performed on the property (Pacific Archaeological Sciences Team). The
evaluation identified that there is a sparse distribution of cultural materials confined to the upper 20
centimeters of soil on the lot. Historic refuse was found at depths of 20-40 centimeters indicating that
the cultural materials were disturbed or redeposited.

C. Archaeological Resources Conclusion
Given the sparse density and limited range of cultural materials, and the disturbed nature of the deposits,
further mitigation would not yield significant new information and would not be justified. Since the
property is in close proximity to (up to three) significant cultural resource sites, there is the chance that
materials may be discovered during construction activities. Thus, Special Condition 4 requires the
applicant to retain a qualified archaeologist to monitor all ground disturbing activities and implement
mitigation measures, if any resources are found below the surface of the site. In addition, this condition
establishes procedures in the event that cultural resources are discovered during construction activities.
Therefore, as conditioned the project is consistent with the requirements of Policy 1 for Archaeology and may be approved.

5. Public Services

A. LCP Public Services Policies
As required by Public Works Policy 1, all new development must demonstrate that there is sufficient
water supply to serve the development:

Public Works Policy 1: Availability of Service Capacity
New development (including divisions of land) shall demonstrate that adequate public or
private service capacities are available to serve the proposed development. Priority shall
be given to infilling within existing subdivided areas. Prior to permitting all new
development, a finding shall be made that there are sufficient services to serve the proposed
development given the already outstanding commitment to existing lots within the urban
service line for which services will be needed consistent with the Resource Management
System where applicable...

This policy is implemented by CZLUO 23.04.430:

CZLUO Section 23.04.430 - Availability of Water Supply and Sewage Disposal
Services. A land use permit for new development that requires water or disposal of
sewage shall not be approved unless the applicable approval body determines that there
is adequate water and sewage disposal capacity available to serve the proposed
development, as provided by this section . . .

In addition these urban service policies, water supply for new development in Cambria must be
considered in light of LCP priorities for Agriculture and Visitor-serving development.
Agriculture Policy 7: Water Supplies
Water extractions consistent with habitat protection requirements shall give highest priority to preserving available supplies for existing or expanded agricultural uses. [THIS POLICY SHALL BE IMPLEMENTED AS A STANDARD.]

Recreational development and commercial visitor-serving facilities shall have priority over non-coastal dependent use, but not over agriculture or coastal dependent industry in accordance with PRC 30222. All uses shall be consistent with protection of significant coastal resources... [THIS POLICY SHALL BE IMPLEMENTED AS A STANDARD.]

Finally, The North Coast Area Plan component of the LCP contains a development standard for the Cambria Urban Area that requires:

Reservation of Service Capacity. To allow for continued growth of visitor-serving facilities, 20% of the water and sewer capacity shall be reserved for visitor-serving and commercial uses.

B. Analysis

1. History/Background

1977 Coastal Development Permit
The Coastal Commission has been concerned with the lack of water to support new development in Cambria since the adoption of the Coastal Act. As early as 1977, in a coastal permit to allow the Cambria Community Services District (CCSD) to begin drawing water from San Simeon Creek, the Commission expressed concern about overdrafting this groundwater basin. In that permit, the Commission limited the urban service areas for this new water supply and identified the maximum number of dwelling units that could be served as 3,8001. A condition of that 1977 coastal development permit stated that:

use of all District wells on Santa Rosa Creek shall be discontinued when water production from San Simeon Creek has been established. Any continued permitted use of the Santa Rosa Creek wells shall be limited to the supplementing of San Simeon Creek well production in years when the 1230 acre feet cannot be safely removed. Except in the emergency situations defined below, the withdrawal of water from Santa Rosa Creek shall not exceed 260 acre feet during the dry season which normally extends from July 1 through November 20 and shall not exceed 147 acre feet per month at any other time. At no time shall the

1 Application 132-18.
combined withdrawal from San Simeon Creek and Santa Rosa Creek exceed the 1230 acre feet annually. In addition, the following emergency situations shall be permitted: fire or any emergency use authorized by the State Water Resources Control Board or the State Health Department. Until the San Simeon Creek wells are functioning, no new water permits shall be permitted in the District.

LCP Certification
When the Land Use Plan of the County's LCP was certified in 1984, the concern remained that there was inadequate water to serve existing parcels within Cambria. The findings regarding Cambria stated that based on the land uses and intensities designated in the LUP for subdivided and unsubdivided land, 8,150 dwelling units could be developed; however, it was estimated that the community of Cambria had adequate water and sewage capacities to serve 5,200 dwelling units (in 1984). The findings continue to state:

Buildout of the existing subdivided parcels alone within the USL [Urban Services Line] would result in a number of dwelling units for which there inadequate sewer and water capacity. Clearly the community does not have adequate services to support the LUP proposed development within the USL without severely overcommitting its water supplies and sewage treatment facilities.

In anticipation of growth related resource demands, the County created the Resources Management System, which is intended primarily to indicate when and where service facilities (water supply, sewage disposal, roads, schools, and air quality) must be expanded or extended to meet population growth demands. The RMS is designed to be a growth management tool; however, it is oriented toward finding services to support development and does not factor impacts on natural systems into the search, nor does it propose limits on growth in recognition of the limits of the land's ability to supply water for new development.

The RMS uses three levels of alert (called Levels of Severity, or LOS) to identify potential and progressively more immediate resource deficiencies. The alert levels are meant to provide sufficient time for avoiding or correcting a shortage before a crisis develops. Level I is defined as the time when sufficient lead time exists either to expand the capacity of the resource or to decrease the rate at which the resource is being depleted. Level II identifies the crucial point at which some moderation of the rate of resource use must occur to prevent exceeding the resource capacity. Level III occurs when the demand for the resource equals or exceeds its supply.

The Resource Management System reports have consistently identified water supply as a serious concern in Cambria. In 1990, the RMS report recommended that the Board of Supervisors consider a development moratorium. The RMS outlines specific measures that must be implemented for each LOS if the Board formerly certifies the recommended level. However, the BOS has never certified any LOS for Cambria. Most recently, the RMS recommended a LOS III.
1998 North Coast Area Plan

More recently, the Commission evaluated available water supply for Cambria in its review of the County’s North Coast Area Plan update. After evaluating the availability of water in San Simeon and Santa Rosa Creek, the Commission found that existing development (1997) may be overdrafting these creeks, and adversely affecting wetlands and riparian habitats. Thus, the Commission adopted findings and a suggested modification that would require completion of three performance standards prior to January 1, 2001: completion of an instream flow management study for Santa Rosa and San Simeon Creek; completion of a water management strategy which includes water conservation, reuse of wastewater, alternative water supply, and potential off stream impoundments; and cooperation of the County and CCSD to place a lot reduction ballot measure before the Cambria electorate. If these standards were not performed by January 1, 2001, the modification required a moratorium on further withdrawals from San Simeon and Santa Rosa Creeks.

Although the County never accepted the modified amendment and is therefore not subject to the moratorium provision, the severity of the measures proposed reflects the gravity of the community’s future if development continues to be permitted at its existing rate. More important, since the 1998 Commission action, the water supply situation has been further constrained by MTBE contamination of Santa Rosa Creek.

2. Water Production Trends

Over the years, the Cambria Community Services District (CCSD) has investigated various potential additional water supplies, including importing water from Nacimiento Reservoir, building dams on coastal streams in the Cambria vicinity, and using treated effluent for groundwater recharge. All of these were rejected, due to environmental, financial, or engineering concerns. In 1993, the district began investigating the possibility of desalination of seawater. The CCSD applied for a permit in 1995 to construct a desalinization plant, which would supply 1,129 AFY water at full capacity. Although the County approved the permit as well as a subsequent permit for the construction of connecting pipe to San Simeon, to date the plant has not yet been built and the permits have expired. The CCSD is still pursuing a revised desalination plant proposal and has recently received grant funding toward that end.

The CCSD has been aggressively pursuing other water conservation measures, including requiring onsite cisterns for larger residential developments. Most recently, the CSD funded and completed a Baseline Water Supply Analysis that concludes that the District’s water supply is marginal to inadequate to provide 90% reliability (in one of ten years there may not be enough water for current customers). In addition, if the recent discovery of MTBE in groundwater near the District’s Santa Rosa wells prevents use of this source, the report concludes that the District’s supplies are inadequate.2

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2 As of this writing, an emergency well was being installed upstream of the contamination point to alleviate this situation.
The CCSD also has implemented an off-site retrofit program since 1990. The retrofit program requires new units to be constructed with low water use fixtures and provide low water-use plumbing fixtures in existing dwellings. Under this program over 500 hookups were added to the CCSD system and over 2,500 existing homes were retrofitted with low water use fixtures. While the retrofit program has been somewhat successful in reducing per capita demand, it has been less effective than originally envisioned, because it allows the payment of an “in-lieu” fee rather than an actual retrofit of older existing development; and because it was not designed to reduce the amount of water used to irrigate residential landscapes. Additionally, the program provides no long-term solutions for the continued disparity between water sources and ultimate buildout because the existing development available for retrofits will be exhausted long before buildout.

The Source of Water
The CCSD’s water is supplied from a total of six wells that tap the underflow of San Simeon and Santa Rosa Creeks. Most recently, however, the three wells along Santa Rosa Creek have become inoperable due to MTBE groundwater contamination. The CCSD is currently constructing an emergency well upstream of the contamination plume.

Santa Rosa Creek
Santa Rosa Creek winds through the town of Cambria, extending +13 miles from its headwaters in the Santa Lucia Mountains to the Pacific Ocean. The estimated safe yield of this creek is given in the North Coast Update (1998) as 2,260 acre feet per year (AFY) based on a 1994 preliminary study by the United States Geologic Survey. A review of this document does not, however, provide a definitive safe yield figure and although it includes information regarding existing water demand for agricultural and municipal uses, it does not factor in the water needs for the preservation of riparian and wetland habitats.

The CCSD has a permit from the State Water Resources Control Board to extract a maximum of 518 AFY from Santa Rosa Creek. Of this total, only 260 AFY can be extracted between May 1 and October 31. This summer limit has never been reached for two reasons; 1) in times of plentiful streamflow, the District prefers to use water from San Simeon Creek because it is of much better quality and requires less treatment, and; 2) in dry years, Santa Rosa Creek is incapable of supplying this amount of water. As an example, in the drought of 1976-77, less water than allocated by the State Water Resources Control Board could be withdrawn before the wells went dry. Overpumping during that period also caused significant subsidence, potentially damaging the ability of the aquifer to recharge.

Thus, in summary, while the Santa Rosa Creek safe yield of 2,260 AFY implies an adequate water supply to serve Cambria’s needs, a closer look reveals that the basis for that number is not well grounded, does not consider impacts on habitat values, does not factor in the ability of the aquifer to actually produce water during a drought nor the potentially damaging effects of attempting to do so on the aquifer structure. Since development uses water on a year round basis and, in fact, water use in Cambria is up by 40% during the summer months, it is imperative that the water supply is sufficient to meet urban needs during these months and during periods of drought. Likewise, the protection of riparian and wetland habitat depends on a reliable and sustainable water supply.
San Simeon Creek

San Simeon Creek, located two miles north of Cambria, is the preferred source of municipal water. This creek too has its headwaters in the Santa Lucia Range and flows westward for over nine miles to the Pacific Ocean. Safe yield for San Simeon Creek is estimated to be 900 acre-feet per year in the North Coast Update. Similar to the figure for Santa Rosa Creek, this estimate relies on the 1994 USGS report and is subject to the same flaws. Riparian agricultural users in the basin consume approximately 450 AF per year. The CCSD has a permit from the State Water Resources Control Board that allows the District to withdraw a maximum of 1,230 AF per year. Of this total, only 370 AF may be withdrawn during the dry period, which is defined as that time between the cessation of surface run-off at the Palmer Flats Gaging Station and October 31 each year. Typically this is a six or seven month period. The permit also requires the District to supply riparian users when municipal pumping lowers the aquifer to the point where riparian users pumps run dry (Board Order WR 88-14, October 1988).

Several uncertainties exist with respect to the reliable, long term amount of water which can be supplied by San Simeon Creek. The first issue is the soundness of the 900 AFY safe yield figure. It is unclear how this figure was determined and whether it was calculated to include a reservation of water for the preservation of riparian and wetland habitat. The changing water needs of senior, riparian users must also be addressed. These users have priority over appropriators such as CCSD and are thus entitled to be served before the District. They may also divert additional water if fallow, riparian fields are brought into production. Finally, the multiple disparities between estimated safe yield, State Water Board allocations and current production are also of concern. One apparent conflict is that even if one accepts an estimated safe yield of 900 AFY, the existing State Water Resources Control Board permit allows one of the users, the CCSD, to withdraw a maximum of 1,230 AFY; 330 acre-feet over safe yield, not including existing riparian withdrawals. Another concern is that with the exception of 1991 extractions, the combined riparian and the CCSD withdrawals have exceeded the estimated safe yield figure since 1980. In 1996, for example, the CCSD withdrew 717 AF and riparian users withdrew ±450 AF from San Simeon Creek, for a total of 1,167 AF; 267 AF in excess of the estimated safe yield of 900 AFY given in the plan.

Current Water Production

The Cambria Community Services District’s boundaries include most of the land within the urban boundary defined in the LUP, yet the District also serves approximately 300 to 500 acres outside the urban boundary.

A LCP Planning Area Standard for the Cambria urban area requires that 20% of the CCSD’s permitted water production capacity be reserved for visitor-serving and commercial uses. Based on a dry-season (May 1 through October 31) entitlement from both the San Simeon and Santa Rosa Creek basins of 630 AFY, this leaves 504 AFY for residential use during the dry season. The community’s average water consumption rate in 1997-98 was approximately 217 gallons per dwelling unit per day (0.24 AFY per dwelling unit). Applying this water consumption figure to the total dry season residential allocation of 504 acre-feet indicates that approximately 4,120 dwelling units could be served during the dry season.
By October 1999, 3,777 units had been developed in Cambria, and about 130 new residential units were in the plan approval and construction process.

The RMS system has recommended a LOS II or III for Cambria's water supply almost since LCP certification. Since 1990, the RMS has also recommended various conservation measures, including consideration of a moratorium on development. In recognition of the LOS III for 1999, the Board of Supervisors reduced the allowable growth rate in Cambria to 1% or approximately 37 units/year.

The County estimates a total of 11,701 units at build-out (pop. 26,327), meaning that only one-third (32%) of the development potential of Cambria has been realized.\(^3\) The thousands of vacant lots remaining in Cambria raise a variety of coastal resource planning issues. First and foremost is the challenge of reducing the build-out potential of the many small lots within the Urban Services Line. The County currently has a Transfer of Development Credit program in place in an effort to reduce the number of potential building sites in Cambria.

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\(^3\) This assumes full occupancy rate. At the current occupancy rate, buildout population would be 19,305. NCAP Update—Revised Buildout Estimates; Background Report September 1999.
Notwithstanding the efforts being made by the CSD, water production in Cambria continues to increase. As shown in the chart above, while the rate of increase since 1990 is not as great as previous years, water withdrawals from San Simeon and Santa Rosa Creeks nonetheless are still climbing. Based on data through 1998, the annual water demand for Cambria in 2000 was estimated at 800 AFY (Cambria Elementary School DEIR, 2001). This figure, however, does not account for water shortages during the dry season, or any of the outstanding commitments the CCSD has made to future development. For example, as of October 1999, there were about 130 new residential units (demanding an additional 31 AFY) in the plan approval and construction process. Currently, a waiting list representing over 700 residential units (expected demand of approximately 168 AFY) exists for people wishing to build within the CCSD service area. In addition, the proposed Cambria Elementary School, located outside of the USL, is expected to increase the overall water usage by more than 13 AF per year. The County projects the need for more than a doubling of current water production (approx. 1,500 AFY) in Cambria by 2020.

Thus, although the CCSD has an entitlement to a water supply that may be sufficient to support a modest amount of additional development in years when rainfall is average or better, it may not be adequate to meet even the existing demand in a year when precipitation is much below average (NCAP Project Description, 2000).

3. Consistency Analysis
Over three years have past since the Commission’s finding in the 1998 NCAP Update that aggressive action was needed to address the inadequate water supply for urban development in Cambria. In that action, the Commission recommended that the County’s LCP be modified to include a requirement that if certain performance standards to address habitat protection, development of a water management strategy, and buildout reduction in Cambria weren’t met by January 1, 2001, that no further development that would draw on Santa Rosa and San Simeon Creeks be allowed. These standards have yet to be met.

It should be acknowledged, though, that since 1998 the CCSD has made progress on a number of fronts to address both short and long-term water supply issues in Cambria. First and foremost, a Baseline Water Supply Analysis has been completed that provides a report on the capacities of Santa Rosa and San Simeon Creeks (see below). The CSD is also moving forward with the development of a Water Master Plan, including a build-out reduction analysis, to identify long run strategies for providing a reliable water supply to Cambria. Last year the CSD also adopted two updated ordinances (3-2000; 4-2000) establishing an emergency water conservation program and strengthening prohibitions against water waste. The CSD has also been pursuing a revised desalination plant proposal (the Commission’s previous coastal development permit approval for a plant has expired), and the Congress has authorized

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4 North Coast Area Plan Project Description, January 2000.
5 Taking into account the Cambria Area Plan Standard established by the Coastal Commission requiring 20% of water supply to be reserved for priority uses (e.g. non-residential), the County has estimated that the CCSD could serve a total of 4,120 dwelling units with its current water supply—only 35% of total buildout.
(but not yet appropriated) $10 million to begin the initial studies and environmental review. In terms of denying new water connections, though, the CCSD has stated that it is constrained under California Water Code sections 350-59 to first declare a water shortage emergency (based on "insufficient water for human consumption, sanitation, and fire protection") before adopting restrictions on water use. Under Water Code 356, such restrictions may include denial of new service connections. 6

Even a brief review of the current water situation and recent information makes it apparent that serious action must be taken immediately to assure that new development in Cambria is sustainable. As described in the Preliminary Report, a recent Baseline Water Supply Analysis conducted for the CCSD has concluded that the District's current water supplies are “marginal to inadequate to provide a 90 percent level of reliability” (in one of ten years there may not be enough water for current customers). 7 When all of the foreseeable water commitments of the CSD are considered, including pending construction permits, intent to serve letters previously issued, and the CSD's water waiting list, the report concludes that the water supply is “inadequate to provide either a 90 or 95 percent level of reliability.” This is consistent with the Commission's 1998 NCAP Update findings that the North Coast Area Plan, as proposed for amendment by the County, was inconsistent with the Coastal Act because it provided for continued urban development that could not be supported by existing water supplies. 8 Of particular note in that action was the emphasis on the potential for another drought similar to the 1975-77 period when the Santa Rosa Creek groundwater basin was damaged through subsidence and Cambria's population was much lower than it is now.

In terms of this coastal development permit analysis, the new water supply study also supports a finding that the standards of the certified LCP to assure sustainable new development are not being met. Specifically, Public Works Policy 1 requires that:

prior to permitting all new development, a finding shall be made that there are sufficient services to serve the proposed development given the already outstanding commitment to existing lots within the urban service line for which services will be needed ....

At face value, the conclusion that the existing water supply for Cambria is inadequate to provide either a 90 or 95 percent level of reliability for foreseeable water commitments does not meet this LCP requirement for sufficiency. Moreover, there is considerable uncertainty, and a variety of assumptions

6 Water Code 350 states:

The governing body of a distributor of a public water supply, whether publicly or privately owned and including a mutual water company, may declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

7 Baseline Water Supply Analysis, Cambria Community Services District, December 8, 2000, p. ES-1.

underlying the Baseline Supply study, that cast even more doubt on the sustainability of Cambria's current water supply.

First, the Baseline Water Supply analysis was based on 3,796 existing connections in December of 1999 (3,586 residential and 210 commercial). As of April, 2001, there are now 3891 connections (3,678 residential, 213 commercial), an increase of 2.5%. In addition, according to the CSD, there are an additional 150 outstanding will-serve commitment letters, including 45 with connection permits. Assuming these all result in new water connections, the total number of water connections in Cambria will have increased by 6.5% since the Baseline Water Supply Analysis. This also does not account for the 650 remaining CSD customers on the waiting list for a water connection.

Second, and critical to the County's and Commission's responsibilities to protect sensitive coastal habitats, the Baseline Water Supply Analysis does not address the question of whether there are sufficient in-stream flows to maintain and protect sensitive species and their habitats. The study states:

The District intends to evaluate the appropriate minimum groundwater levels to avoid adverse environmental impacts to downgradient habitats. Accordingly, it is recommended that the assumed minimum groundwater levels be reviewed when these evaluations have been completed.9

In addition, the California Department of Fish and Game has asserted that prior dry season pumping of the Santa Rosa creek wells has had negative impacts on habitats for sensitive species, including tidewater goby, red-legged frog, and steelhead trout.10 In more recent months, the U.S. Fish and Wildlife has initiated discussions with the CCSD about preparing a multi-species Habitat Conservation Plan for sensitive habitats of the North Coast, including steelhead and red-legged frog.

One of the NCAP performance standards adopted by the Commission in 1998, but not accepted by the County, was a requirement to conduct in-stream flow studies of both San Simeon and Santa Rosa creeks to assure that continued and future water withdrawals would not adversely impact sensitive riparian habitats. This modification adopted by the Commission mirrors an existing condition of the CCSD permit for water withdrawals from Santa Rosa Creek that required that instream flow study be initiated to determine necessary water levels to protect steelhead.11 As mentioned above, instream flow studies have not been completed for either Santa Rosa or San Simeon creek.

The CCSD has funded a study that examined steelhead and habitat trends in San Simeon Creek. Nonetheless, this study does not directly address the relationship between the pumping of San Simeon

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9 Id., 2-5.
10 Id., A-6.
11 CSD Water Diversion and Use Permit 20387, Condition 18.
Creek underflows and steelhead and other sensitive species habitats. The study, though, does show correlations between reduced base stream flows and sedimentation on one hand, and reduced relative abundances of juvenile steelhead on the other. The study is also a limited time series (six years), making it difficult to draw firm conclusions about the impact of CSD municipal withdrawals on instream habitats. Even so, the study concludes:

*The persistence of the San Simeon Creek steelhead population has become more tenuous, with the further deterioration of non-streamflow related aspects of habitat from sedimentation . . ., combined with reduced summer baseflow and likely increased streamflow diversion from well pumping by new streamside development in the heretofore perennial reaches.*

Again, this conclusion does not speak directly to the question of how Cambria’s urban water withdrawals may be impacting in-stream habitats. It also indicates that the habitat values of the coastal creeks in San Luis Obispo are impacted by multiple uses up and downstream. Nonetheless, until more systematic habitat and in-stream flow study is completed, it is difficult to conclude that the County’s approval of new development that relies on water withdrawals from San Simon and Santa Rosa creeks are consistent the certified LCP.

Third, the sustainability of the current Cambria water situation is also drawn into question when one considers that the certified LCP requires that 20% of Cambria’s water and sewer capacity be reserved for visitor-serving and commercial uses. In terms of actual water consumption, the CSD appears to be meeting this goal, due to the high level of water consumption per commercial connection compared to residential connections. Thus, of the approximate 800 acre-feet of water produced in 2000, less losses to the system, nearly 25% was delivered to non-residential (primarily visitor-serving) with 75% going to residential uses. However, in order to meet the 20% visitor-serving reservation standard in new development approvals, a finding would need to be made that the actual water available at the time of a residential permit approval is 25% higher than that normally required for a residential use. In other words, the conclusion of the Baseline Water Supply Analysis underestimates the actual water needed for urban sustainability in Cambria if one takes into account Coastal Act priority uses in the approval of new developments.

Fourth, to implement the Coastal Act priority for agriculture, the LCP also requires that water extractions, consistent with habitat protection, give highest priority to preserving available supplies for existing or expanded agricultural uses (Agriculture Policy 7). No systematic monitoring or data is available concerning agricultural production water needs or pumping in the Santa Rosa and San Simeon Creek Basins. Although State Water Resources Control Board water permits require the CSD to deliver water to upstream riparian users if their wells become unusable, it is unclear whether Agriculture will be

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11 *ibid.*, p. 36.
protected if withdrawals for urban uses continue, particularly during severe drought years. Moreover, the findings of the Baseline Water Supply study are based on an assumption that agricultural water use remains similar to historical volumes and patterns. As discussed by the Commission in its recent Periodic Review of the SLO County LCP, water use for agricultural land uses can vary and change quickly, depending on agricultural markets, weather, etc. When current and potential urban and agricultural water needs are combined, it is by no means clear that groundwater basins are being protected. In fact, as discussed by the Commission in 1998, there is some data that shows that past combined withdrawals have exceeded the supposed safe annual yield of San Simeon Creek.14

Fifth, also as discussed in the recent Periodic Review, the CCSD has also been responding to an MTBE emergency contamination situation near its Santa Rosa Creek wells, which has placed severe stress on its ability to meet Cambria's water needs. The District is currently unable to pump from its Santa Rosa wells due to the proximity of the MTBE plume. Although the CSD has drilled an emergency supply well further upstream, this well is not yet ready for use, and in any event will only provide an emergency water supply. The unavailability of the Santa Rosa Creek wells puts additional stress on San Simeon Creek. The Baseline Water Supply study concludes that without Santa Rosa Creek, the CSD's current water supplies are inadequate to meet current demands.15

Sixth, although visitor-serving uses are a priority use under the LCP, the potential for increases in visitor-serving water use through existing connections adds still more uncertainty to the conclusions about available supply. Current water demand in Cambria peaks in the summer months, due to both increased visitors in the commercial sector (restaurants and overnight accommodations), and increased residential landscape irrigation. It is unclear as to how future increases in visitors to Cambria may lead to actual increases in water pumpage from San Simeon and Santa Rosa Creeks, notwithstanding that no new connections may be added. This point has been made by many concerned about the State Park's effort to increase off-season visitation to Hearst Castle, which would no doubt place added demands on Cambria's infrastructure. In addition, many of Cambria's existing residences are not occupied by full-time residents but rather, serve as vacation rentals to weekend or summer visitors. There is some indication, though, that there is a trend away from vacation rentals, as more Cambria homeowners take up full-time residence. This, too, will mean an increase in actual water withdrawals without any real increase in water connections.16

Finally, it should be noted that the United Lot Owners of Cambria have submitted to the Commission an independent analysis of existing water information from Navigant that concludes that water supply in Cambria "can be managed to support an approximate 10 percent increase in use."17 Although every

14 North Coast Area Plan Update Findings, p. 47.
15 Baseline Water Supply Analysis, p. 3-4.
16 The County’s recent LCP amendment submittal states that there is no reliable survey data as to the exact number of vacation rentals in Cambria, although some data has been presented from the industry suggest at least 150 rentals producing 5000 days per year or approximately 33 days a year per unit.
17 See Correspondence from Navigant, 11/28/00, Exhibit x, p. x.
detailed comment of the Navigant review cannot be analyzed here, a few observations are needed. First, even if the Navigant study is correct in its 10 percent estimated buffer, there are currently 3891 connections and 800 outstanding commitments (150 will-serve letters and 650 on the waiting list). Thus, an increase of over 20% in supply would be needed to serve outstanding commitments, as required by Public Works Policy 1.

Second, the overall conclusion of this independent analysis relies heavily on a recently published U.S. Geological Survey analysis of Santa Rosa and San Simeon Creek groundwater basins. The USGS report presents a simulated water budget for the two creeks for the period April 1988 through March 1989. This budget shows that the net water flow into each basin is negative (-50 acre feet for Santa Rosa and -10 for San Simeon), meaning that more water is flowing out of the basin through withdrawals and creek seepage than is flowing back into the basin through rainfall, seepage, irrigation return-flows, etc. The USGS study is careful to point out that the water budget is simulated for a "dry year", and has a certain margin of error, and thus should not be interpreted as necessarily showing a long-term deficit or imbalance in the groundwater basins.

The Navigant review analyzes the USGS water budget analysis, but it does so by aggregating the data for the two creeks, and by substituting a 760 acre-foot municipal pumpage number for the 800 acre-foot number of actual pumpage in 1988. In aggregate, this analysis shows a total deficit of only 10 acre-feet. Factoring in error, the Navigant study asserts that "from a groundwater management standpoint, an increase in municipal pumpage of approximately ten percent is considered reasonable, and should have a minimal impact on the local hydrologic system." The USGS model, though, actually shows a deficit of 50 acre-feet for Santa Rosa Creek and 10 acre-feet for San Simeon Creek (60 acre-feet if aggregated). Moreover, the USGS model was simulated for a year when the CSD was withdrawing water from both creeks (250 afy from Santa Rosa and 550 afy from San Simeon). In more recent years, the CSD has been pumping mostly from San Simeon Creek, with recent production exceeding 700 afy from San Simeon Creek alone. Although this could be better for Santa Rosa Creek, it raises significant uncertainty for San Simeon Creek, particularly concerning the protection of in-stream habitats. In addition, the CSD again reached 800 afy of pumping in 2000. As discussed, although significant gains in efficiency of use have been made since 1988, aggregate water use has continued to rise with the steady increase in new connections.

The Navigant review cites other findings of the USGS report to support a more optimistic view of Cambria's water supply, including analyses that show the likelihood of consecutive "extremely dry years" to be very low (e.g. one every 430 years in San Simeon Creek basin). These citations, though, are selective and indeed, do not address the various factors discussed above that create additional uncertainty about the available supply. In particular, groundwater basin damage from excessive withdrawals can occur, as they did in 1976, in dry years that do not meet the USGS study definition of an

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extremely dry year (2 or more consecutive years with incomplete basing recharge). Nor do they directly address the Coastal Act policy requirements of protecting groundwater basins and sensitive habitats. Moreover, the USGS report itself draws overall conclusions that at best are neutral with respect to available supply and at worst, support the finding that there is inadequate water to support new development. These conclusions include the following:

- The most significant long-term trend in water levels has been a gradual increase in the amount of dry-season water-level decline in the San Simeon Basin. This change is the result of increases in municipal and agricultural pumping during the dry season (p. 98). [As shown in the Baseline Water Supply Analysis, since 1988 (the last data year of the USGS study), dry-season water levels in San Simeon Creek have continued to be drawn down to near sea-level. At these levels, damage to the groundwater basin and seawater intrusion become an issue, to say nothing of threats to instream habitats.]

- Municipal pumpage affects water levels throughout the San Simeon Basin (100).

- Simulations indicated that at 1988 agricultural and municipal pumping rates, water levels decline almost to the threshold at which some subsidence could occur in the Santa Rosa Basin even during dry seasons with a recurrence interval of only 5 years (101).

- Incomplete basin recharge was estimated at every 18 years for Santa Rosa and every 25 years for San Simeon. In light of the "considerable uncertainty" with these estimates, though, these recurrence levels are short enough to warrant consideration during water-supply planning (101).

- Simulated effects of a winter without streamflows showed wells in both basins going dry, subsidence in Santa Rosa, and seawater intrusion in San Simeon Creek basin (101).

Overall, the weight of the evidence, including analysis of water use trends and available information about safe-yields of the two creeks, still supports a finding that there is currently insufficient water supply to support new development served by the Cambria CSD, particularly given the uncertainty in weather patterns and critical shortages that may occur in dry years. Indeed, based on interpretation of the 127 year rainfall record for San Luis Obispo County, one local water expert has concluded that the current demand for water would have exceeded the carrying capacity of San Simeon Creek four times (see Exhibit 9). Although the Navigant review finds that from a "groundwater management standpoint" there is a 10% buffer in available supply, this finding appears to be based not only on aggregate data (as opposed to individual groundwater basin analysis), but also on assumptions about the error inherent in the available data. The Navigant review does not explain what is meant by a "groundwater management standpoint."
management standpoint," although presumably it means that additional water to support new
development could be squeezed out of the system through better management and conservation. Again,
the Navigant study does not address sensitive habitat concerns.

The uncertainty inherent in the water supply questions for Cambria, coupled with a focus on improving
management, underscores the importance of curbing new water extractions until the many questions can
be answered, and until meaningful management decisions are made. As previously mentioned, in
December of 2000, the Board of Supervisors adopted a 1% growth rate for 2001, and directed that a
Resource Capacity Study be completed for review by the Board in the Spring of 2001. The County has
suggested that further restrictions on new water connections await the completion of this RMS study.
Although the County has initiated the scoping for the study, is unclear when such a study would be
completed. More important, the burden of the uncertainty in the water supply must not be placed on
coastal resources. Rather, a precautionary approach should be taken until such time as better knowledge
is gained about both the capacity of San Simeon and Santa Rosa Creeks, including the needs of instream
habitats, and about additional water supplies (e.g. a desalination plant) that might support new
development. For example, without completion of instream flow studies and the newly-launched HCP
to address sensitive species, the capacity of San Simeon Creek to support new development cannot be
known. Fundamentally, this approach is necessary to meet the Coastal Act requirement that new
development be environmentally-sustainable. It cannot reasonably be concluded at this time that new
development in Cambria is currently sustainable.

Nonetheless, as recently discussed in the Commission’s Periodic Review of the SLO LCP,
notwithstanding the compelling evidence that there is inadequate water to supply new development in
Cambria, in order to provide reasonable notice to property owners in Cambria contemplating beginning
the development review process, or that may not yet have received basic land use approvals, it is
reasonable to allow the completion of the 1% percent growth rate for the remainder of 2001
(approximately 37 connections for the year). In addition, this approach allows the County additional
time to assess the issue, from a broader planning perspective, prior to taking more proactive action with
respect to single family home proposals. The Commission adopted the following recommendation in its
July, 2001 Periodic Review action:

Recommendation 2.13. Continue implementation of the 1% growth rate in Cambria until 1/1/02,
after which time coastal development permits for new development that would require a new
water connection or that would otherwise create additional water withdrawals from Santa Rosa
or San Simeon Creeks should not be approved unless the Board of Supervisors can make findings
that (1) water withdrawals are limited to assure protection of instream flows that support
sensitive species and habitats; (2) there is adequate water supply reserved for the Coastal Act
priority uses of agricultural production, and increased visitors and new visitor-serving
development; (3) a water management implementation plan is incorporated into the LCP,
including measures for water conservation, reuse of wastewater, alternative water supplies, etc.,
that will assure adequate water supply for the planned build-out of Cambria or that will
guarantee no net increase in water usage through new water connections (e.g. by actual
Clearly, the ability to provide adequate water to existing and future development in Cambria is a substantial unresolved issue. However, the approach taken by the Commission to address this issue to date has been a programmatic one, focused on addressing the problems and unresolved questions through comprehensive planning and resource management, rather than calling for an immediate halt to all new development. As reflected in the modification to the North Coast Update described above, the Commission established a date certain by which it expects these planning and resource monitoring efforts to result in specific changes to the management and allocation of Cambria’s limited water supply; we are now six months past that date. The Periodic Review recommendation is intended to focus the County on the necessary steps for approving new development after January 1, 2002. Until now, the Commission has been relying upon the CCSD’s existing allocation program, and the County Resource Management Program (which limits the amount of new residential development in the Cambria Urban area to 125 residences per year), to keep new water demands in check. For example, the Commission has not been appealing the residential development being approved by the County on a routine basis in Cambria’s Lodge Hill area. In this case, the applicant has received a will-serve letter from the CCSD, appropriately extended, and the approval of the development is otherwise consistent with the relevant development restrictions of the LCP. In addition, the County made no specific water supply findings in its issuance of the CDP. Although it is unclear whether future residential approvals will be consistent with the Public Service requirements of the LCP, in this case, it is appropriate to acknowledge the will-serve letter of the CCSD as evidence of adequate water for this project.

6. California Environmental Quality Act (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Coastal Commission’s review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. This staff report has discussed the relevant coastal resource issues with the proposal, is incorporated into this finding, and has recommended appropriate mitigations to address adverse impacts to said resources. Accordingly, the project is being approved subject to conditions which implement the mitigating actions required of the
Applicant by the Commission (see Special Conditions). As such, the Commission finds that only as modified and conditioned by this permit will the proposed project not have any significant adverse effects on the environment within the meaning of CEQA.
FRONT ELEVATION

COMPOSITION SHINGLES OVER 15 LB FEET

2x12 HEM-FIR VENICE RAFTER W/ 2x8 FIR SHINGLE STRIP

14/5 X-GROOVE 145 CEDAR SIDING OVER FVR. HOUSEWRAP

3/4" HIGH HANDRAIL

RETAINING WALL

© COPYRIGHT ZOOGARY MICHAEL SWAREG, ARCHITECT
RIGHT ELEVATION

1/8"=1'-0"
TOTAL UF GSA = 346 SF
TOTAL PROJECT GSA = 1704 SF
LOFT = 307 SF
1789 Ogden  • Across street on down-slope within 100'
• View from rear

1755 Ogden  • Across street on down-slope within 50'

1801 Ogden  • 200' up Ogden on down-slope

1786 Ogden  • Next door to Applicant

NOTE: Measurements have been provided by the Applicant
421 Ardath

- Street below Ogden

400 Ardath

- Within 100-150' of Applicant
- Corner of Randall and Ardath

416 Ardath

NOTE: Measurements have been provided by the Applicant
450 Ardath  • Within 100' of Applicant

500 Ardath

NOTE: Measurements have been provided by the Applicant
1783 Newhall  • Back of Applicant's lot

1783 Newhall

1755 Newhall  • Home in back of Applicant

NOTE: Measurements have been provided by the Applicant.
1783 Newhall • Within 75-100'

1801 Newhall • Within 100' of back of Applicant

608 Randall • Main house with detached garage
• Mother-in-law's quarters over garage

1795 Newhall • Within 75' of back of Applicant

NOTE: Measurements have been provided by the Applicant
1790 Ogden

- 50' away and same side of street from Applicant

NOTE: Measurements have been provided by the Applicant
1715 Ogden
- corner of Ogden and Randall on the downslope
- next door to 1735 Ogden within 50'
- looking up from Randall St.

1715 Ogden

1715 Ogden

Applicant's View

NOTE: Measurements have been provided by the Applicant.
**1735 Ogden**  
- Across street from Applicant on down-slope -  

**1745 Ogden**  
- Across street from Applicant on down-slope within 50' -

NOTE: Measurements have been provided by the Applicant
June 20, 2001

Dear John,

Our industry standard for measuring a home to determine the square footage is based on outside measurements. The exterior of the home from foundation corner to foundation corner is measured. If the property is a two story the second level is measured from corner to corner. The stairway in a two story home is only calculated 1 time. FHA has been so strict on this accounting that an appraiser can lose their FHA status if the stairway is calculated for both floors. The garage area, mechanic rooms, crawl space are not calculated as living area. These are separate areas and calculated under a category other than living area.

If I can be of further service, please feel free to contact me.

Sincerely,

[Signature]

California Real Estate Appraiser

John Gonyer
702 Main Street
Cambria, CA 93428
The standards of Table G do not apply to Tract 163, Tract 61, Cambria Pines Estates #1, and the two marine terrace blocks (Blocks 1 and 2, Tract 97) south of Lampton Street. Any parcel deemed by the county to be non-conforming because of its size is subject to standards of Table G.

Table G is used by first determining the number of legal subdivided lots that comprise the ownership (such as a single 25', double or triple configuration) and selecting the appropriate category. Then select the correct type of lot (such as Special Project Area 1, Forested, or Steep Lot) using the definitions in these standards. This will yield the maximum allowable height, footprint and gross structural area.

**TABLE G**

**STANDARDS FOR LODGE HILL LOTS**

A. **SINGLE LOT CATEGORY - 25' LOTS (1750 SQ.FT.)**

<table>
<thead>
<tr>
<th>TYPE OF LOT</th>
<th>MAX. HT.</th>
<th>FOOTPRINT</th>
<th>GROSS STRUCTURAL AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SPECIAL PROJECTS AREA 1 (Steep Canyon)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 0-25% slope</td>
<td>25'**</td>
<td>500 sq.ft.</td>
<td>900 sq.ft.</td>
</tr>
<tr>
<td>b. 25% plus</td>
<td>25'**</td>
<td>400 sq.ft.</td>
<td>600 sq.ft.</td>
</tr>
<tr>
<td>2. SPECIAL PROJECTS AREA 2 (Visible Hillside)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 0-25%</td>
<td>25'**</td>
<td>500 sq.ft.</td>
<td>900 sq.ft.</td>
</tr>
<tr>
<td>b. 25% plus</td>
<td>25'**</td>
<td>400 sq.ft.</td>
<td>700 sq.ft.</td>
</tr>
<tr>
<td>3. FORESTED</td>
<td>28’**</td>
<td>500 sq.ft.</td>
<td>900 sq.ft.</td>
</tr>
<tr>
<td>4. STEEP LOTS (30% plus)</td>
<td>28’**</td>
<td>400 sq.ft.</td>
<td>700 sq.ft.</td>
</tr>
<tr>
<td>5. MARINE TERRACE</td>
<td>22’</td>
<td>800 sq.ft.</td>
<td>1,000 sq.ft.</td>
</tr>
<tr>
<td>6. TYPICAL LOTS</td>
<td>28’**</td>
<td>600 sq.ft.</td>
<td>900 sq.ft.</td>
</tr>
</tbody>
</table>
## TABLE G
STANDARDS FOR LODGE HILL LOTS (Continued)

### B. DOUBLE LOT CATEGORY - 50' LOTS (3500 SQ.FT)

<table>
<thead>
<tr>
<th>TYPE OF LOT</th>
<th>MAX. HT.</th>
<th>FOOTPRINT</th>
<th>GROSS STRUCTURAL AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SPECIAL PROJECTS AREA 1 (Steep Canyon)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 0-25% slope</td>
<td>25''</td>
<td>750 sq.ft.</td>
<td>1,350 sq.ft.</td>
</tr>
<tr>
<td>b. 25% plus</td>
<td>25''</td>
<td>600 sq.ft.</td>
<td>1,000 sq.ft.</td>
</tr>
<tr>
<td>2. SPECIAL PROJECTS AREA 2 (Visible Hillside)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 0-25%</td>
<td>25''</td>
<td>800 sq.ft.</td>
<td>1,400 sq.ft.</td>
</tr>
<tr>
<td>b. 25% plus</td>
<td>25''</td>
<td>650 sq.ft.</td>
<td>1,100 sq.ft.</td>
</tr>
<tr>
<td>3. FORESTED</td>
<td>28'''</td>
<td>900 sq.ft.</td>
<td>1,800 sq.ft.</td>
</tr>
<tr>
<td>4. STEEP LOTS (30% plus)</td>
<td>28'''</td>
<td>650 sq.ft.</td>
<td>1,100 sq.ft.</td>
</tr>
<tr>
<td>5. MARINE TERRACE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 story, 1,600 sq.ft.</td>
<td>1 story, 1,600 sq.ft.</td>
<td>1,600 sq.ft.</td>
<td></td>
</tr>
<tr>
<td>2 story, 1,350 sq.ft.</td>
<td>2 story, 1,350 sq.ft.</td>
<td>2,000 sq.ft.</td>
<td></td>
</tr>
<tr>
<td>6. TYPICAL LOTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 story, 1,600 sq.ft.</td>
<td>1 story, 1,600 sq.ft.</td>
<td>1,600 sq.ft.</td>
<td></td>
</tr>
<tr>
<td>2 story, 1,000 sq.ft.</td>
<td>2 story, 1,000 sq.ft.</td>
<td>2,000 sq.ft.</td>
<td></td>
</tr>
</tbody>
</table>

### C. TRIPLE LOT CATEGORY - 75' LOTS (5250 SQ.FT.)

<table>
<thead>
<tr>
<th>TYPE OF LOT</th>
<th>MAX. HT.</th>
<th>FOOTPRINT</th>
<th>GROSS STRUCTURAL AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SPECIAL PROJECTS AREA 1 (Steep Canyon)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 0-25% slope</td>
<td>25''</td>
<td>1,000 sq.ft.</td>
<td>1,800 sq.ft.</td>
</tr>
<tr>
<td>b. 25% plus</td>
<td>25''</td>
<td>800 sq.ft.</td>
<td>1,400 sq.ft.</td>
</tr>
<tr>
<td>2. SPECIAL PROJECTS AREA 2 (Visible Hillside)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 0-25%</td>
<td>25''</td>
<td>1,100 sq.ft.</td>
<td>1,900 sq.ft.</td>
</tr>
<tr>
<td>b. 25% plus</td>
<td>25''</td>
<td>900 sq.ft.</td>
<td>1,500 sq.ft.</td>
</tr>
</tbody>
</table>
TABLE G
STANDARDS FOR LODGE HILL LOTS (Continued)

<table>
<thead>
<tr>
<th>TYPE OF LOT</th>
<th>MAX. HT.</th>
<th>MAX. FOOTPRINT</th>
<th>GROSS STRUCTURAL AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. FORESTED</td>
<td>28'**</td>
<td>1,200 sq.ft.</td>
<td>2,400 sq.ft.</td>
</tr>
<tr>
<td>4. STEEP LOTS (30% plus)</td>
<td>28'**</td>
<td>1,000 sq.ft.</td>
<td>1,600 sq.ft.</td>
</tr>
<tr>
<td>5. MARINE TERRACE</td>
<td>22'</td>
<td>1 story, 1,800 sq.ft.</td>
<td>1,800 sq.ft.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 story, 1,650 sq.ft.</td>
<td>2,450 sq.ft.</td>
</tr>
<tr>
<td>6. TYPICAL LOTS</td>
<td>28'**</td>
<td>1 story, 1,800 sq.ft.</td>
<td>1,800 sq.ft.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 story, 1,300 sq.ft.</td>
<td>2,600 sq.ft.</td>
</tr>
</tbody>
</table>

* 28' if the site is not visible from Highway 1
** 25' if visible from Highway One.

Table G Footnotes. Standards 1-3 below shall be used with Table G where interpreting lot sizes that do not conform exactly to base density or where a Footprint and Gross Structural Area bonus is requested.

1. Building sites greater than 5,250 square feet may be permitted additional Footprint and Gross Structural Area equal to the percent that the site is greater than 5,250 square feet.

2. Building sites 5,250 sq. ft. or less, the permitted maximum Footprint and GSA shall be adjusted as follows:
   a. Single lot category - if the building site is greater than 1,750 square feet, the Footprint and GSA may be increased by the percent that the lot area is greater than 1,750 square feet.
   b. Double lot category - if the lots are greater than 3,500 square feet, the Footprint and GSA may be increased by the percent that the lot is greater than 3,500 square feet.

Where the square footage of the building site is less than the base area (1,750 square feet for single lot, and 3,500 square feet for double lot category), the permitted Footprint and GSA shall be decreased accordingly.
3. **Footprint and GSA Bonus.** Where an applicant can clearly demonstrate that design and layout concessions have been made in order to save healthy trees, minimize site disruption, visual impact, minimize erosion, or selection of compatible building materials, and clearly goes beyond the basic requirements of these standards, the Planning Director by Minor Use Permit review may grant up to a 10% increase of Footprint and GSA as indicated on Table G.

The following definitions shall be used in the interpretation of Table G:

a. **Footprint** - means the area of the lot covered by residential and accessory structures including any structural overhangs, expressed in square feet, and includes living area, garages and carports. It does not include open deck area, balconies or eaves.

b. **Gross Structural Area** - means all interior areas, expressed in square feet of floor area, within the volume of the structure. It includes living areas, storage, garages and carports. Gross Structural Area is measured to the exterior limit of the building walls. Gross Structural Area does not include open exterior decks or interior lofts added within the height limitation to gain additional square footage.

c. **Slope** - to be determined by using one of the slope determination methods in Chapter 23.11 (Slope, Average) of the Coastal Zone Land Use Ordinance.

d. **Special Projects Areas** - refers to sensitive areas delineated on Figures 6 and 7. [Amended 1992, Ord. 2569]

e. **Forested Lot** - a lot containing one or more native Monterey Pine trees.

f. **Marine Terrace** - the area located between Marlborough Lane and Sherwood Drive.

g. **Steep Lot** - a lot with the average slope of 30% or greater.

h. **Typical Lot** - a lot that has an average slope less than 30%, contains no Monterey Pine trees, and is not located in the Marine Terrace or Special Projects Area.

12. **Sherwood Drive - Setback and Height Requirements.** The maximum height for structures between the ocean and Sherwood Drive shall be 15 feet as measured from the centerline of Sherwood Drive.
February 27, 2001

ADS Corporation
Attn: Richard Low
P.O. Box 1061
Cambria, CA 93428

Subject: Victorian Inn (A-3-SLO-99-060)

Dear Mr. Low,

In response to your questions, and in order to assist you in preparing revised final plans pursuant to Special Condition #4s (attached) of this coastal development permit, I am providing you with the following guidelines in calculating the building floor area for this project.

- Area occupied by the elevator shaft and stairways shall only be counted once, on the lowest floor, towards the building floor area.
- Any habitable space which extends more than one floor in height (i.e. "open to below" areas) shall be counted towards the building floor area on each floor, as vertical elements contribute to the overall mass of the structure.
- Covered walkways constitute any walkable area with a covering that adds to the perceived mass of the structure (i.e. an eave that extends more than 24 inches beyond the plane of the wall; overhead decks, awnings, or roof structures). The entire walkable area below the covering shall be counted; not just that portion, for example, beyond the 24-inch eave overhang.

Please note that all other conditions of this coastal development permit remain in effect, some of which address the architectural style (e.g. treatment of windows, materials, roof lines, etc.) of the structure. If you have further questions or concerns regarding this matter, please feel free to contact me at (831) 427-4863.

Sincerely,

Renee Brooke
Coastal Program Analyst
Central Coast District Office

Attachment

Cc: Rodney Miles, Applicant
    Terry Wahler, SLO County
    Ron Wilson, Appellant
    Bruce Gibson, CCAC Land Use Committee
To: Steve Monowitz, Coastal Commission staff  
From: Gary Swauger  
Re: Drainage Calcs for John Gonyer Residence 1770 Ogden Drive, Cambria

I had a meeting and phone call with Tim Tomlinson of County Engineering to discuss drainage issues for this project. Tim provided me with the SLOCO Standards used for designing drainage facilities:

Runoff coefficients

<table>
<thead>
<tr>
<th>Category</th>
<th>Coefficient (C)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings and paved areas</td>
<td>0.90</td>
<td>Standard design value</td>
</tr>
<tr>
<td>Light vegetation</td>
<td>0.35</td>
<td>Standard design value</td>
</tr>
<tr>
<td>Moderate vegetation</td>
<td>0.30</td>
<td>Standard design value</td>
</tr>
<tr>
<td>Dense vegetation</td>
<td>0.25</td>
<td>Standard design value</td>
</tr>
</tbody>
</table>

Duration of storm for this area

- Ogden Drive, Lodge Hill Cambria: 10 minutes

Rainfall rate

- Cambria 2 year storm: 1.6 inches per hour (standard residential design value)
- Cambria 10 year storm: 2.6 inches per hour (standard commercial design value)
- Cambria 25 year storm: 3.0 inches per hour
- Cambria 50 year storm: 3.4 inches per hour
- Cambria 100 year storm: 3.7 inches per hour

From these values, I calculated the amount of runoff generated in a 25 year storm with a 10 minute duration for the existing site and the proposed project. To convert the units from inches per hour to feet per minute, I divided the 3 by 12 and divided the 10 by 60 to come up with a factor of 0.04166 which I rounded to 0.042. I used the runoff coefficient to calculate the total volume of water for the storm in cubic feet (cf) and then calculated the flow in cubic feet per second (cfs).

<table>
<thead>
<tr>
<th>Category</th>
<th>Existing (sf)</th>
<th>Proposed (sf)</th>
<th>Existing (cf)</th>
<th>Proposed (cf)</th>
<th>Existing (cfs)</th>
<th>Proposed (cfs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building (0.9)x(0.042)</td>
<td>0 sf</td>
<td>1258 sf</td>
<td>0 cf</td>
<td>48 cf</td>
<td>0.08 cfs</td>
<td>0.04 cfs</td>
</tr>
<tr>
<td>Paving/Walks (0.9)x(0.042)</td>
<td>0 sf</td>
<td>705 sf</td>
<td>0 cf</td>
<td>27 cf</td>
<td>0.04 cfs</td>
<td>0.02 cfs</td>
</tr>
<tr>
<td>Landscaping (0.35)x(0.042)</td>
<td>5552 sf</td>
<td>3589 sf</td>
<td>82 cf</td>
<td>53 cf</td>
<td>0.14 cfs</td>
<td>0.09 cfs</td>
</tr>
<tr>
<td>Totals</td>
<td>82 cf</td>
<td>128 cf</td>
<td>0.14 cfs</td>
<td>0.21 cfs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To not increase drainage flow in a 25 year storm, must not exceed 82 cf discharge in 10 minutes. Best way to achieve this is to collect building roof water in a cistern. Roof water will not contain impurities other than some aggregates from the roof shingles. Over-sizing the storage tank by 1/3 with the discharge point 6" above the tank bottom will allow for settlement and retention of any roof debris which can be removed at annual cleanings.
March 13, 2001

John Gonyer
PO Box 421
Cambria, CA 93428

Subject: Time Extension, "Intent to Serve" Letter
Single-Family Residential
APN: 023.161.042

Dear John,

Enclosed is verification that your request for extension of your "Intent to Serve" letter or the above referenced project has been APPROVED.

Your "Intent to Serve" letter is now valid through October 1, 2001.

If you have any questions please do not hesitate to contact this office at 927-6223.

Sincerely,
CAMBRIA COMMUNITY SERVICES DISTRICT

Joyce Hannum
Senior Clerical Assistant

enc.
Subject: INTENT TO PROVIDE WATER AND SEWER SERVICE for SINGLE FAMILY RESIDENTIAL Project under the Water Conservation and Retrofit Program

Dear Applicant,

Pursuant to provisions of District Ordinances No. 2-95, 1-98 and 2-99 the above referenced parcel has been approved for a water and sewer capacity allocation in the amount of One Equivalent Dwelling Unit (1 EDU) for your Single Family Residential Project. On that basis, this letter serves as notification of this District's present intention to provide water and sewer service to the above referenced parcel.

This is also to inform you that the District's issuance to you of this "Intent to Serve" letter and subsequent issuance to you of water and sewer connection permits shall be subject to current and future rules, regulations, resolutions and ordinances of the Cambria Community Services District. This "Intent to Serve" letter may be revoked as a result of conditions imposed upon the District by a court or governmental agency of higher authority, or by a change in availability of resources, or by a change in ordinances, resolutions, rules or regulations adopted by the Board of Directors for the protection of the health, safety and welfare of the District. The Board of Directors of the District reserves the right to revoke this "Intent to Serve" letter at any time. PLEASE NOTE: THE BOARD OF DIRECTORS WILL CONDUCT A MID-YEAR REVIEW OF THE RETROFIT PROGRAM IN AUGUST, AT WHICH TIME IT MAY CONSIDER AMENDING THIS PROGRAM TO PLACE RESTRICTIONS ON THE ISSUANCE OF PERMITS.

Consistent with the above limitations, the District requires that the applicant comply with Ordinance 1-98. Specific attention should be paid to Sections C-4 and 5 (page A-2) which require certain actions to be completed within strict time limits. Water usage under this program will be monitored and in the event a 2 to 1 savings is not achieved, the District may require additional action on your part prior to issuing a water and sewer connection.

Please be advised that the CCSD requires water conserving plumbing in all newly constructed residential and commercial buildings. A copy of these requirements is attached for your information and should be forwarded to your architect or contractor.

A-3-SLO-01-018
Exhibit 8, P. 2
Subject to earlier revocation for the reasons stated above, this "Intent to Serve" letter is valid for 18 months from date of issue. However, it is subject to consideration for a six-month extension. Application for such extension shall be subject to a non-refundable fee in the amount of $200 and shall be submitted to the District office 30 days prior to expiration. The General Manager has full discretion to approve or disapprove the requested extension, and if granted it shall be subject to any conditions which may be imposed.

During the period that this "Intent to Serve" letter is valid (see date below), you must obtain water and sewer permits for the project by submitting signed application forms, and an approved County Building Permit, together with payment of any balance due on water and sewer connection fees. A water & sewer connection permit will then be issued to you. Failure to complete any of the requirements of this "Intent to Serve" letter within the prescribed time restraints may result in revocation of this "Intent to Serve" letter, forfeiture of fees and your project will be returned to the waiting list.

If you have any questions concerning this matter, please call this office for assistance.

Sincerely,
CAMBRIA COMMUNITY SERVICES DISTRICT

Kenneth C. Topping
General Manager

KCT/jfs

Enc Request for Allocation Form
Agent Authorization Form
New Construction Requirements
Helpful Phone Numbers

---

**IMPORTANT DEADLINES:**

- Submit Retrofits or Pay "In Lieu" Fee (17 points)................. 05/31/99
- Complete Retrofits (if applicable) and Apply to County for Allocation ............... 06/30/99
  (County will need a copy of this "Intent" letter to process your building permit.  
  Please be sure to provide a copy to your builder if he/she will be handling your permit process)
- Apply to District for"Intent Letter" extension (if needed)............... 09/01/00

OR
- Submit County Building Permit to District before "Intent Letter" expires ...... 10/01/00

---

A-3-S10-01-018
Exhibit 8, p. 3
John Gonyer  
P.O. Box 421  
Cambria, CA. 93428  
18 June, 2001

Dear John,

I have been involved in design / development in San Luis Obispo County over the last twenty-three years and have found the square footage calculation criteria to be relatively consistent over that time.

Gross structural area typically includes the footprint of the structure and all habitable spaces above. Areas that serve a single function on two levels like stairways or elevators are only counted once. Areas that fall under the category of utility space such as understory platforms for water and space heaters are typically excluded since they are not habitable areas. Some times these appliances are located on the exterior of a residence and are left exposed. It has been generally viewed as an asset to the neighborhood to enclose these appliances for appearances sake but, to my knowledge, is not considered in the floor area.

Decks on the exterior are specifically addressed in the LUP relevant to their permeability. The LUP states that "Gross Structural Area does not include open exterior decks or interior lofts added within the height limitation to gain additional square footage".

I am surprised to hear that the Coastal Commission is considering holding you to a different standard than what is common to everyone else in the County. My experience with the Commission in the past has been fair and even handed and I hope that they will review this criteria for your project in the same way.

Sincerely,

Bruce Beery  
Beery & Associates
May 8, 2001

California Coastal Commission
Central Coast Area Office
Renee Brooke
725 Front Street, Suite 300
Santa Cruz, CA 95060

Subject: A-3-SLO-01-018 Gonyer D990009/P/D000001V

Dear Ms. Brooke:

County staff has reviewed the plans for the Gonyer project and has found the proposed footprint and gross structural area (GSA) to be in conformance with the Lodge Hill Standards. The project is conditioned to submit revised plans to reduce the GSA by approximately 74 square feet. The applicant has submitted revised building permit plans, county staff has calculated the proposed GSA to be 1,746 sq ft in compliance with the standards and meeting the condition of approval.

The subject site is in receipt of a "will Serve" letter from the Cambria Community Services District (see attached copy).

Please contact me at (805) 781-5606 should you have additional questions or need additional information.

Karen Nall
Planner III

Karen Nall
To: California Coastal Commission Staff and Members

Subject: San Luis Obispo County North Coast Update - Water Resources

Dear Commissioners,

I would like to relate to you some significant facts and issues relative to your review of subject General Plan Update. Of specific concern to me is projected status of the water resource availability, current utilization and potential future supply vs. demand as presented in the FEIR and other documents before you. By way of introduction to my expertise in water resource evaluation I have attached a resume for your consideration (see attachment 1).

The availability of water from the underflow of these coastal streams as presented in Table 5.3-1 (see attachment 2) of the FEIR is grossly overstated. The reason for this is, while published in the San Luis Obispo County Master Plan Update of March 1986, the actual evaluations by the Department of Water Resources (DWR) were from their first survey of the area published as Bulletin 18, San Luis Obispo County Investigation, May 1958. Since 1958 considerable data, geohydrology, demand vs. yield, and water law and environmental observations have been added to the information on these streams. This has been ignored in the FEIR. A general lack of valid documented water resource information in this county has been recognized by the technical staff of all the county water purveyors and other concerned members of the county's water community making up the County Water Advisory Committee. This has now resulted in a contract to commence a long overdue detailed evaluation of the County's water resources, demands and deficiencies for inclusion in the General Plan.

It is very important to recognize that the yield to riparian and appropriative water use from these coastal streams is limited by the length of the "dry season", defined as May through October in the current water rights decisions. These permits describe the function of these streams as diversions of underflow by wells, with surface water diversions prohibited for protection of the fishery and other instream values. These permits protect riparian and instream uses from appropriative export demands.

The most documented model of a functioning coastal stream is provided by San Simeon Creek (see FEIR pg. 5.3-5, attachment 2). Yes, the Cambria Community Services District (CCSD) permit allows 1230 acre-feet to be exported out of the basin, but by permit only 370 acre-feet of this can be pumped in the "dry season", as it has been determined by the courts that riparians are damaged when exports exceeded this limit. Furthermore when riparian wells fail, the CCSD is mandated to deliver water from their down stream wells to the well heads of the up stream riparians. During the moderately dry year sequence of '90 and '91 the CCSD could only divert 205 and 226 acre-feet respectively in May through October (see attachment 3). The shortfall in current normal demand came from pumping Santa Rosa Creek wells and the institution of rationing. This avoided riparian damage claims; however water was delivered to a well head in the lower basin.
Except in successive very dry years such as '75-'76 - '76-77 a live stream is present during the "wet season" (November through April). Thus far, however, no way has been found to divert to off-stream storage, winter runoff stream flow without endangerment of the steelhead fishery. This is because of the short duration of individual high flow runoff events on these very steep watersheds. The cost is very high for pumping stream flow peaks to off-stream dam storage because of the need for high capacity pumps and facilities for removal of very high-silt loads. Even if winter underflow were pumped to storage, dry season recharge can't be accomplished without a high percentage loss to underflow out of the extraction area, and without summer recharge, water treatment facilities are needed to treat the stored water before it enters the CCSD distribution system. So, while CCSD's permit gives them 1230 acre-feet annually, it may not be accessible to them because of economic and environmental constraints.

The CCSD "dry season" appropriation is also controlled by the status of the ocean-front lagoon by both sea water intrusion and riparian and aquatic habitat impacts. When the CCSD started exporting from the lower San Simeon Creek basin and before their waste water spray field (located between the lagoon and well field) became fully operational, the first below normal runoff year ('80-'81) and a very hot July resulted in the lagoon drying up for the first time in memory. Subsequently, when the waste water mound was established below the well field, there developed a reverse gradient, causing flow of waste toward the production wells. A protest action resulted in their NPDES waste discharge permit being conditioned with controls on their diversion rate when this occurred. (In Santa Rosa Creek their appropriation was conditioned by shut down of pumped diversion when a critical water level elevation was reached in a well just above the lagoon.) The amount of active storage in the alluvium of these long narrow basins is very small. This is apparent from rapid well recovery during the onset of the wet season (see attachment 3) and has also been confirmed by computer model studies using the well level and extraction historical data. Limited storage results in rapid dry season gradient shifts from in-basin and export water use. This has and will in the future cause significant sea water intrusion at the mouth of these streams in dry years and drought. Both Santa Rosa and Pico creeks have had intrusion events.

The water year 1996 - 1997 was not a dry year on the watersheds; however rainfall ended early. From May 1 to October 31 just under 360 acre-feet were pumped by the CCSD from their wells in San Simeon Creek (see attachment 3). To meet demand in the late "dry season" just under 95 acre-feet were pumped from their Santa Rosa wells as the water level in their San Simeon well field was falling rapidly (see attachment 3). Thus, even with the water restrictions that were initiated in September and during what was not a drought year, the CCSD's dry season demand for 359 acre-feet nearly equaled their San Simeon appropriation limit of 370 acre-feet.

The "dry season" riparian use must also be considered. The State Water Resources Control Board has determined the agricultural "duty of water" is 2.5 acre-feet/ac for this coastal area, or roughly 250 acre-feet for the land now in production in the San Simeon basin. However, current cropping - vegetables on drip-tape irrigation - consumes less than half this or about 125 acre-feet in dry season irrigation - (Not the 293 net acre-feet stated on page 5.3-5 of the FEIR, see attachment 2). Were it not for current low water use by agriculture the CCSD would not have been able to export the dry season pumpage from the San Simeon they did in 1996 - 1997.

Thus the total current operational "dry season safe yield" from San Simeon basin is in the vicinity of 500 acre-feet (a minimum of 130 for agriculture and at a maximum 370 for CCSD). But here the lagoon's water balance is protected by the recharge of roughly 200 acre-feet treated waste water. This will not be the case for the projected appropriations from the other North Coast basins (i.e. waste water irrigation on the proposed Hearst golf course). As interpreted for the San Simeon case, when a live stream exists through to the lagoon, the capacity of these basins to supply wet season demand is no problem, for demand will be at or near seasonal minimums with
recharge balancing the rate export water is pumped. In the wet or winter 6-months only 40% of
the annual demand is pumped and no irrigation on agricultural fields occurs. It is the other 60%
of the demand, expressed during the "dry season" summer 6-months that is at its limit at present
for the CCSD service area. San Simeon basin is at its carrying capacity. This has as yet not
been determined for the other undeveloped basins and is very much dependent on how each
stream's watershed performs in maintaining the stream's summer base flow as well as the
performance of the basin alluvium relative to the point of extraction.

The export of water during the dry season has shortened the period between seasons where
there will be a shortfall in supply adequate to meet current demand from San Simeon Creek.
Demand induced "droughts" are now part of the water resource history of the CCSD. Attachment
4 is the longest and probably most accurate record of precipitation in the county. Based on the
severity of the CCSD's water shortfall experience since its formation in the early 1970's I have
classed these dry year sequences as to magnitude and frequency. Class I - Multiple Dry Year
Droughts where the District would have to limit each household to survival levels such as in '75-
'76 and '76-'77 have occurred four times in the 127 year record. There have been eleven Class
II - Single Low Rainfall Years where severe rationing would be needed, and six years of Class III
- where significant precipitation ceased early in the wet season and some water use restrictions
would have been required. The last 127 year record would predict for CCSD that the demand for
present development has brought its current water resource beyond carrying capacity four times,
and to the point of major public personal and economic discomfort eleven times, and to limited
rationing six times. This history should tell us that this is not good water planning.

What are the implications to the North Coast of the above water resource responses? Where
can "new" water be found? Will it be affordable or will the socioeconomic structure of the area
be forever changed? How will coastal public trust, environmental and habitat values be affected
by water development and/or continued local over extension of the current resource?
The answers to these questions are beyond the scope of this paper but do indicate the need for a
review of the County's Local Coastal Plan if for no other reason than to treat the current water
resource deficiency problems and their potential solutions.

Possible directions and developments are apparent from a library of studies on the local water
resource solutions, none of which were reviewed in the FEIR. In ascending order of cost, for
Cambria the least costly "new water" would be from CCSD condemnation of underflow now used
by agriculture, next the reclamation and reuse of waste water traded for agriculture's underflow,
then importation and treatment of surface water from Nacimiento Lake, desalination of brackish
groundwater at the lagoons, dams on the streams, then sea water desal. The impacts of all are
monumental relative to coastal values and Coastal Act policies.

Of major significance is the fact that the County's administration of our Local Coastal Plan
ignores completely the status of the local water resource in permitting new development. A
Resource Management System exists as part of the County General Plan but is ignored in the
permitting process. The CCSD service area has been at a recommended but not certified Alert
Level III for distribution capability for the last 10 years and staff has not brought this limiting
criteria to either the Planning Commission nor the Board of Supervisors during development
hearings. Water development capital costs have been linked to future growth and with the
escalating operation costs in large part to paid by current users. This defeats attempts to
generate sustainable communities along our coast.
RESUME

WILLIAM C. BIANCHI

BUSINESS ADDRESS: 4375 San Simeon Creek Road
Cambria, CA 93428
(805) 927-5006


PROFESSIONAL HISTORY: 1979 to present, Consultant on Ground-Water and Artificial Recharge Systems; 1966-1979, Supervisory Soil Scientist and Research Leader, Agricultural Research Service (ARS) USDA Fresno, CA; 1956-1959, Research Soil Physicist, Assistant Professor, University of Nevada, Reno; 1953-1956, Graduate Research Assistant, UC Davis, Davis, CA; 1951-1953, Rancher, Cambria, CA.

EDUCATION: B.S. Irrigation Science, UC Davis (with honors), 1952; Ph.D., Soil Science, UC Davis, Davis, CA 1958.

CURRENT PROFESSIONAL SOCIETY MEMBERSHIP: Soil Science Society of America, American Association for the Advancement of Science, Sigma Xi, Soil Conservation Society of America.

PUBLICATIONS: Over 40 publications and reports on research into water movement in soils, soil reclamation, drainage, and in particular, ground water and techniques for its artificial recharge.


SPECIAL AWARDS: Certificate of Merit USDA-ARS, 1963 (for inventing first soil moisture tension transducer); awarded American Water Works Association's 'Best Paper,' Resources Division, 1974; many invitational presentations, i.e., Salt River Project, Phoenix, Arizona, "Symposium on Ground-Water Recharge", Nov., 1978.

OTHER CONSULTING ACTIVITIES: Had major responsibility in siting, design and operations of City of Fresno's Leaky Acres recharge facility; F.A.O. Consultant on reuse of waste water through recharge by the City of Tripoli, Libya; Instructor at Corps of Engineer's training sessions on land treatment of waste water; served as USDA member of Interagency Advisory Committee for current Recommended Methods for Water-Data Acquisition; Rockwell International, Hanford, Washington, Wastewater Recharge Design; Law Engineering for Metcalf and Eddy, City of Houston, Texas, Master Water Plan - Ground-Water Recharge.

INSTRUCTIONAL EXPERIENCE: Taught upper division Soil Physics; Univ. of Nevada, Reno, Nevada, 1956-59; Guest Lecturer, Agric. Engineering, California Polytechnic University, San Luis Obispo, CA, Winter Quarter, 1953; presented papers at annual meetings of scientific societies and State and Federally sponsored public meetings; organized and/or participated in public, private industry and University sponsored workshops on ground water and soil physics research; prepared and presented oral reports to Board of Directors and staff engineers of agencies applying our research results.
WILLIAM C. BIANCHI, PhD
RESUME ADDENDUM
EXPANDED STATEMENT OF QUALIFICATIONS AS EXPERT WITNESS

PERTAINING TO BACKGROUND IN:
HYDROLOGY, GEOHYDROLOGY, URBAN AND AGRICULTURAL GROUND WATER AND
WATER-QUALITY MANAGEMENT, AGRICULTURAL WATER USE AND DRAINAGE, SOIL
RECLAMATION, ARTIFICIAL RECHARGE AND GROUND-WATER BASIN MANAGEMENT.

EDUCATION: Under-graduate work was in the U. C. Davis Department of
Irrigation Science, newly established by Dr. Frank J. Veithmeyer,
which evolved into the current Water Science and Engineering
Department. The Staff at that time included Veithmeyer, Hagan,
Doneen, Luthin, Henderson, Burgy, Scott, et. al.

Graduate work was in Soil Physics. My thesis was on the derivation
and laboratory verification of mathematical equations to describe
vapor transfer across soil and solution surfaces. Paralleling this
theoretical work was field work involving the assessment of magnitude
of losses of liquid fertilizer lost from irrigation sprinkler
applications and hydrologic investigations on the separation of tide
and evapotranspiration wave forms in the daily fluctuations of water
tables under alfalfa in the San Joaquin Delta. (1)(2). The graduate
Doctoral program set up by the Irrigation Science Department required
formal course advancement into graduate level mathematics and physics
and a resident attendance at Berkeley where all the upper-division
courses in Soil Science were taken in two semesters.

RESEARCH CAREER: At the University of Nevada (Reno) Agricultural
Experiment Station any and all research was by financial necessity
done in cooperation with all Federal (USGS, USDA-ARS, USBR, BLM, and
SCS) and State agencies having direct interest in the projects. Since
the oldest USBR project (Newlands), and many of the other irrigated
areas in the State, were experiencing major drainage and salinization
problems, my work involved definition of the geohydrology, measurement
of the flow parameters defining ground-water movement for engineering
drainage systems, and the assessment of soil-salinity damage and
reclamation processes needed to restore productivity. This work
required a full understanding of water and salt movements through a
variety of alluvial geologic regimes and attendant ground-water flow
systems. (3)(5)(11).

In 1959 at Fresno, the USDA Agricultural Research Service established
a Field Station for research into methods to artificially (as opposed
to naturally) recharge the over-drafted Southern San Joaquin Valley.
The research was in major part financed by the California State
Department of Water Resources as conjunctive use was a feature of the
California Water Plan. The initial period of this work concentrated
on the potential for recharge into the alluvial fans of the west side
of the valley below the alignment of the aqueduct, but east side
locations on the Tule River Irrigation District were also involved.
The Westside research produced the first projections (8) on the scale
of the agricultural drainage problem that was to occur in the
Westlands Irrigation District and the definition of the hydrologic

Exhibit 10, p. 5
water-quality parameters that were to be its cause. (6)(7)(12)(14)(19)(25). Although the nature of the interactive fan and lacustrian depositional systems precluded successful recharge of State Project water, the Westside area proved to be an excellent field-scale laboratory for testing theoretical mathematical descriptions of the dynamics of ground-water mound formation and dissipation beneath water-spreading areas. (16)(20)(21)(31). The final document for the Department of Water Resources cooperative effort on recharge was the publication, "Ground-Water Recharge Hydrology" (24) which still stands as a summary of the progress and as a technical guide on artificial recharge in California. This publication has been reprinted at least once by the Department of Water Resources since 1970. During this period I had the opportunity to attend and graduate from DWR's Ground-Water School.

Paralleling the work done in studying unsaturated flow in recharge was work on the upward flow above a shallow watertable as related to plant use. These studies were aided with my own invention of a transducer (12) to allow continuous recording of transient pressures of less than atmospheric important to tracking unsaturated moisture in transit. (22)(23). The results of the research has led to inclusion of the use of water by deep-rooted crops in crop-water use determinations to improve irrigation efficiency.

The Eastside recharge research continued with the development of a Cooperative project on the recharge of Kings River water into the expanding ground-water depression under the City of Fresno. The Research and Development done in cooperation with the City of Fresno, Fresno Irrigation District, led to construction of the Leaky Acres Project, now a major contributor to the water balance and quality maintenance of the local urban ground-water supply. Leaky Acres adds in excess of 15,000 ac ft/yr of high quality water to the area's ground-water reservoir. (26)(27)(29)(32)(33)(35)(38). The summary paper (27) coming out of the Leaky Acre Project won the Resources Division of the American Waterworks Association 'Paper-of-the-Year' award in 1974. Continuing work on improving the performance of the project led to techniques for injection through wells that by-passed layers limiting vertical water movement. (34)(38).

The representative of the American Society of Civil Engineers to the Internal Commission of Irrigation and Drainage invited me to write a paper for the Commission, "Artificial Ground-Water Recharge - State of the Art." (36).

CONSULTING: I have consulted with the United Nations Food and Agricultural Organization on a project in Libya involving water supply and the recharge of tertiary waste water for the City of Tripoli; with Rockwell International on the design and construction of expanded recharge facilities at the Hanford, Washington nuclear processing operation after the existing facilities became clogged; with developing the Recharge Appendix with Law Engineering of Houston, Texas for the Houston Master-Water Plan for 1986. Houston now is in a major overdraft status; subsidence control is the main objective.

Exhibit (0), p. 6
Qualified as expert witness before the State Board on the San Simeon Creek that resulted in Order WR 88-14 and Permit 17287 for Appropriation by the Cambria Community Services District and later a Declaration of Full Appropriation during the dry season. This was a landmark decision in that it requires the down downstream pumper to provide water to upstream wellheads when supply there is limited.

Was a member of the “Blue Ribbon” panel of experts reviewing the proposed Ward Valley low-level waste site appointed by the Governor in 1991 to review the consultant findings as to its safety.

Was a consultant and testified to the National Academy of Sciences Review Panel on the proposed Ward Valley Low-level Radioactive Waste Site. Testified as a member of the US Geological Service team (July and August 1994 at Needles, California). This work resulted in Chapter V, “Water Movement in the Vadose Zone” in Ward Valley – Proposed Low-level Waste Site, Howard Wilshire et.al. September, 1994. The impact of this effort illustrated the potential for groundwater entry of waste components and resulted in the re-sampling of the vadose zone for bomb tritium that is now currently in process.

Currently am involved in reviewing the safety of high level waste transport through the County from Diablo Canyon – presentation –“ Local Transportation of Spent Nuclear Fuel”, Bianchi et.al. International High-Level Radioactive Waste Management Conference May 1998.