May 6, 2008
County Board of Supervisors
County Government Center

**Subject: EIR Recommendations and Goals for a Sustainable Los Osos Waste Water Project (LOWWP)**

Honorable Board:

Your Board has made sustainability a chief goal of the Los Osos Wastewater Project, as stated in the projects' mission statement. You have endorsed the "Building Principles of Smart Growth" in June 2005 emphasizing the 3E's of sustainable development: "economics, the environment, and social equity … to create sustainable growth" ("Smart Growth Criteria for Development Projects," SLO County Planning & Building, September 2006).

We commend the project team and the Board of Supervisors for recognizing the reality that declining resources and other environmental pressures require that sustainability is the new development paradigm. In fact, sustainable development is not a choice but a necessity in the 21st century.

To be achieved, sustainability must be intrinsic to the project. Therefore, we are submitting EIR scoping recommendations and goals to the Project Team and EIR Consultants (see attached).

By supporting these recommendations and goals, you will continue in a very positive direction, helping to create a project that can be a model for sustainable development for our county, state, and country.

We look forward to partnering with your Board and the County Project Team as the County takes a leadership role in 21st Century sustainable development.

Respectfully,

Galen Ricard Elaine Watson
Karen Venditti Lawson Schaller
Keith Wimer Judy Vick
Mary Fullwood Piper Reilly
Chuck Cesena Leon Goldin
Martha Goldin Fred Dellagatta
and, the Executive Committee of the
San Luis Bay Chapter of the Surfrider Foundation

Attachment: Letter to the County LOWWP Team, Attachment #1 (EIR Scoping Recommendation Detail), and, Attachment #2 (Sustainable Development Criteria/Guidelines).

Los Osos Wastewater Project (LOWWP) Team May 6, 2008
C/O County Public Works Department
County Government Center
San Luis Obispo County

**Subject: EIR Recommendations and Goals for a Sustainable LOWWP**

Project Team:

We appreciate your decision early in the LOWWP process to make sustainability a chief goal with the following commitment stated in the project's mission statement:

> "To evaluate and develop a wastewater treatment system for Los Osos, in cooperation with the community water purveyors, to solve the Level III water resource shortage and groundwater pollution, in an environmentally sustainable and cost effective manner, while respecting community preferences and promoting participatory government, and addressing individual affordability challenges to the greatest extent possible."

We commend your team and the Board of Supervisors for recognizing the reality that declining resources and other environmental pressures—locally, statewide, nationally, and worldwide—require that sustainability is the new development paradigm—and we congratulate you for taking a proactive, leadership role to ensure that present and future residents of our county enjoy a healthy environment and thriving economy.

The US Environmental Protection Agency Office of Research and Development has stated, "achieving sustainable environmental outcomes must be a long-term national environmental goal" ("Sustainability Research Strategy," October 2007), and the California State Water Resources Control Board has declared sustainability a "core" value, defining it as "balancing environmental, economic and social factors in an equitable manner to maintain and protect the water resources needs of the present generation without compromising the ability of future generations to meet their own water resources needs" (SWRCB Meeting, Division of Financial Assistance, January 2005). In June 2006, the Board of Supervisors endorsed "Building Principles of Smart Growth," adopting sustainable development principles, which balance "economics, the environment, and social equity (the three E's) to create sustainable growth" ("Smart Growth Criteria for Development Projects," SLO County Planning & Building, September 2006).

We encourage the Board to continue in this direction, emphasizing the 3E's of sustainable development, Economy, Environment, and Equity, often referred to as the "Triple Bottom Line." Consistent with this approach, we urge the Project Team to apply the criteria for sustainable development we've compiled, along with the American Planning Association (APA) guidelines for wastewater infrastructure (see Attachment #2). To maximize project outcomes, we suggest that Brandman Associates and the Project Team develop a sustainability matrix for evaluating and optimizing benefits to the environment, the economy, and the people.

We also believe that the following must be part of the EIR process for the LOWWP to be a sustainable project. We understand that some of the alternative analyses and principles listed were already named in the Notice of Preparation, but we want to reinforce their importance.

Recommended alternatives for review in the EIR

1. A review of water conservation alternatives within the discussion of Water Supply Alternatives and other pertinent areas, including an analysis of conservation at various levels of reduction, up to a 30% reduction in current use, for their beneficial impacts on water resources, energy use, sustainability, etc. (Note that the current per capita indoor use for Los Osos is estimated to be about 67 gpd, whereas greater use of water saving appliances and devices can reduce water use to under 50 gallons per day—see Attachment #1, Item 1 for additional justification for the 30% target.)
2. A detailed analysis of project alternatives' contribution to the generation of greenhouse gasses, which factor in the goals of AB 32 (e.g., to reduce and eliminate a project's carbon footprint and to promote sustainable energy technologies) and a review of renewable clean energy alternatives (solar and wind) to power various project alternatives.

3. A review of project alternatives for their potential impacts on archeological sites, with the emphasis on which technologies and construction methods best honor the traditions and customs of the cultural groups likely affected (e.g., the Chumash).
4. An analysis of how the project will support an integrated water/wastewater plan for the Los Osos Valley Basin—aimed at the long-term sustainability of water resources—which integrates storm-water runoff control; groundwater balance, protection, and restoration; surface water and habitat protection and restoration; and projected future impacts from global warming and rising sea levels.
5. An analysis of treatment-collection-reuse project configurations, with a focus on how the components can be most effectively combined in a system to achieve the greatest environmental, economic, and social benefits.
6. A review of disposal/reuse/recycling alternatives—with the focus on short- and long-term resource sustainability, life-cycle costs, and impacts to sensitive habitat when septic systems no longer contribute to subsurface flows and aquifer recharge (including a review of purple pipe systems for on-site and urban reuse, constructed wetlands, on-site and community storm water retention/percolation strategies, a community owned ag project, and ag reuse/exchange.
7. A review questioning the viability of the Broderson site disposal alternative with the same focus as #6 above.
8. A detailed review of the feasibility of project alternatives, based in part on a detailed review of community affordability data generated as part of the EIR process or parallel to the EIR process.
9. A review of nature-based treatment systems and systems using bio-mimicry, including greenhouse technologies as well as surface- and subsurface constructed wetlands, e.g., systems by Todd Ecological and Lombardo and Associates.
10. A review of beneficial uses of recycled water and solids—with an analysis of beneficial impacts on energy use, carbon footprint, etc.—e.g., application to community- or privately-owned redwood, switch grass, or algae cultivation for carbon sequestering, resale, and/or bio-diesel production.
11. A long-term analysis considering global warming and sea-level rise impacts, taking a precautionary approach, with a review of options best suited for future adaptability, e.g., the purchase of land/water rights out of the basin or trading water for future water rights.
12. A review of STEP/STEG collection system alternatives, including cluster systems with 2-12 homes per tank and tanks located in public utility easements; also a system with the STEG (gravity) component of STEP/STEG system included in the estimates (i.e., to show truer system costs and impacts).
13. A review of a decentralized alternative with 2-6 treatment sites within the Prohibition Zone, using nature-based treatment systems and systems using bio-mimicry, with the facilities designed for multiple uses, e.g., landscaped and developed as open-space, parks, and/or eco-tourist destinations (see # 9 above).
14. A review of an on-site system alternative operated under a centralized, on-site maintenance program.
15. A review of a phased approach to project implementation, in which a first phase would include a decentralized system serving homes near the bay and in high ground-water areas, with on-site system enhancements and a maintenance program, followed by a later phase in which more homes would be connected to a community system as needed (e.g., if water quality improvements do not occur).
16. A review of a conventional gravity collection alternative—and a combined conventional gravity-low pressure alternative—for potential impacts to the environment, stemming from I/I, exfiltration, sewer overflows, grinder pumps and vault installation, fusion welding gravity pipes, enhanced maintenance to reduce the potential for I/I, etc.,—in addition to the potential for illegal discharge and fines.

Additionally, we wish to highlight the following goals and objectives the project and EIR should work to achieve:

1. A key objective that the project will be sustainable—producing win-win-win solutions for the environment, people, and economy.
2. A goal or objective to strive for a zero or negative carbon footprint for the project.
3. Reduce water use by at least 25% (easily achievable with available technologies, according to authorities).
4. Relative affordability for ratepayers.

We look forward to partnering with your Board and the County Project Team to create a truly sustainable LOWWP that will be a showcase for sustainable development in the county, state, and country. Thank you for integrating these essential elements into the LOWWP EIR.

(See Attachments #1 & #2 for scoping recommendation detail and sustainable development criteria and guidelines.)

*Attachment #1*

# Sustainable Development Scoping Recommendations for the LOWWP EIR: Additional Detail

1. A review of water conservation alternatives within the discussion of Water Supply Alternatives and other pertinent areas, including an analysis of conservation at various levels of reduction, up to a 30% reduction in current use, for their beneficial impacts on water resources, energy use, sustainability, etc. (Note that the current indoor per capita use for Los Osos is estimated to be about 67 gpd, whereas greater use of water saving appliances and devices can reduce water use to under 50 gallons per day.)
    - Drs. Asano and Tchobanoglous (et al) in *Water Reuse*, 2006, and Dr. Peter Gleick, (et al) in *Waste Not, Want Not*, 2003, indicate that about a 30% reduction can be achieved with the use of available technologies.
    - It will curb the advancement of seawater intrusion of the lower aquifer (if pumping is configured appropriately) and will help balance both aquifers while ensuring adequate freshwater supplies to sensitive ecosystems (e.g., the estuary and Sweet Springs Nature Preserve).
    - It will reduce the volume of wastewater, thus reducing the amount of treatment and pumping of wastewater, and, therefore, should lower the cost of the LOWWP.
    - It will reduce the need to pump potable water, to treat it, and to heat it, thus reducing overall community energy costs and related impacts.
    - The program may be designable as a self-sustaining and profitable program, offsetting substantial project costs and creating secondary benefits, such as jobs and an economic boost to the community.
    - Water conservation may make a water exporting program possible, when combined with a reuse/recycling program, to generate added revenues or secure future water rights.
    - Water conservation is recognizant of a realistic value of a finite resource, water, by maximizing efficiency of its use. Virtually all experts on sustainability say that conservation should be taken as a first step in protecting resources.
    - It will promote sustainable technologies and green businesses in the areas (e.g. with the purchase and use of water-saving devices).

2. A detailed analysis of project alternatives' contribution to the generation of greenhouse gasses, which factor in the goals of AB 32 (e.g., to reduce and eliminate a project's carbon footprint and to promote sustainable energy technologies) and a review of renewable clean energy alternatives (solar and wind) to power various project alternatives.
    - Different alternatives will lend themselves to solar and wind power better than others.
    - Designing the system for solar and wind power will better enable the use of these sources in the future.
    - It will position the LOWWP and community to take advantage of future energy cost/availability trajectories.
    - These sources of energy produce no emissions or harmful toxins that enter the environment.
    - This is consistent with a sustainable development emphasis on staying within the earth's current solar income (i.e., not using sources of energy extracted from the ground).
    - AB 32 states that its intent, in part, is to drive the development of sustainable energy technologies.

3. A review of project alternatives for their potential impacts on archeological sites, with the emphasis on which technologies and construction methods best honor the traditions and customs of the cultural groups likely affected (e.g., the Chumash).
    - Directional boring may be more acceptable than open trench pipe installation methods for some affected groups.
    - Some technologies and methods may allow greater flexibility in how sites are preserved and protected.

4. An analysis of how the project will support an integrated water/wastewater plan for the Los Osos Valley Basin—aimed at the long-term sustainability of water resources—which integrates storm-water runoff control; groundwater balance, protection, and restoration; surface water and habitat protection and restoration; and projected future impacts from global warming and rising sea levels.
    - This will provide for the most cost- and environmentally-effective approach to ensure the long-term health of the Los Osos Valley Basin.
    - Experts (e.g., the USEPA and Drs. Asano and Tchobanoglous) agree that an integrated, whole-systems approach is the most effective way to achieve sustainability.
    - Experts also indicate that a whole-systems approach allows for solution multipliers (e.g., solving storm water runoff, water, and wastewater issues with cost-effective, integrated systems).
    - A whole-systems approach also better enables win-win-win solutions for the environment, people, and economy, according to experts (e.g., K. Hargroves and M. H. Smith, in *Natural Advantage of Nations*, 2006).

5. An analysis of treatment-collection-reuse project configurations, with a focus on how the components can be most effectively combined in a system to achieve the greatest environmental, economic, and social benefits.
    - Substantial cost savings can be achieved by integrating technologies designed to complement each other.
    - Some wastewater system companies (e.g., Orenco and Lombardo Associates) have developed complete systems, which have treatment components specifically designed to complement and augment the overall performance and efficiency of the system.
    - Design costs can be reduced if systems are designed and bid in packages because some companies will likely do the engineering/design for free; thus alleviating the need for the County Project Team or hired consultants to do a partial design.
    - Experts (e.g., the USEPA and Drs. Asano and Tchobanoglous) agree that an integrated, whole-systems approach is the most effective way to achieve sustainability.
    - Experts also point out that up to 80% of a system's energy use is locked into the system by its design; therefore, the best time to reduce a project's energy use is before it is built by carefully considering how all factors interact in an integrated system (K. Hargroves and M. H. Smith, in *Natural Advantage of Nations*, 2006).

6. A review of disposal/reuse/recycling alternatives—with the focus on short- and long-term resource sustainability, life-cycle costs, and impacts to sensitive habitat when septic systems no longer contribute to aquifer recharge (including a review of purple pipe systems for on-site and urban reuse, constructed wetlands, on-site and community storm water retention/percolation strategies, a community owned ag project, and ag exchange).
    - The alternatives listed above could be integrated to accomplish multiple purposes: recharge, disposal, reuse/recycling, stormwater control, enhanced project aesthetics, added tertiary treatment of reuse water—e.g., if a purple pipe system were combined with a wetlands, which also helped control stormwater, provided added tertiary treatment, and recharged ground water.
    - A purple pipe system accomplishes the three-fold purpose of water reuse (i.e., conservation), water disposal, and water quality enhancement (the latter by allowing the natural ground percolation of recycled water to further cleanse and disinfect the water before it reaches the ground water).
    - A purple pipe system to homes maintains current, known levels of aquifer recharge and subsurface water flows to sensitive ecosystems, etc., reducing the guesswork and risk of environmental harm—i.e., this system takes a precautionary approach to the prevention of environmental harm.
    - As pointed out by Carollo Engineers in the "Decentralized TM," a purple pipe system could be connected to the existing septic leach field systems on individual properties, if necessary, to deal with seasonal variations in flows, or seasonable variations in flows could go to a wetland.
    - Current laws support the use and grant funding for projects that prioritize the use of recycled water.
    - Constructed above-ground and/or subsurface wetlands can provide multiple benefits: enhanced/additional habitat, control storm water run off, project aesthetics, and passive recreation.

7. A review questioning the viability of the Broderson site disposal alternative—with the focus on short- and long-term resource sustainability, life-cycle costs, and impacts to sensitive habitat when septic systems no longer contribute to aquifer recharge.
    - Experts disagree on the ability of the Broderson site to safely and effectively handle the approximately 450,000 gpd to 800,000 gpd of disposal/recharge planned for this site, without the water surfacing or causing liquefaction of soil down site.
    - The adequacy of the Broderson site to fully recharge the upper aquifer is also questionable. Approximately, 500 AFY of water dispensed to leach fields at the Broderson site (recommended in the *Fine Screening Report*) does not compensate for the approximately 1200 AFY of water dispensed to leach fields, which will be eliminated with the removal of septic systems.
    - Inadequate recharge of the upper aquifer will negatively impact that aquifer (a source of drinking water); it will negatively impact the lower aquifer (since the upper aquifer is the main source of recharge to the lower aquifer), causing greater seawater intrusion; and it will negatively impact sensitive ecosystems (e.g., the estuary and Sweet Springs Nature Preserve) by reducing subsurface water flows.
    - The adequacy of the Broderson site to ensure recharge of the lower aquifer is very limited (e.g., .22 mitigation factor per Carollo Engineers in the *Fine Screening Report*).
    - The water quality standards set by the Central Coast Water Quality Control Board and the Department of Health Services may be more stringent than for the last project, requiring more costly, higher levels of treatment, in part, because the Broderson site is designed to recharge the upper and lower aquifers—two sources of drinking water.
    - The effectiveness of the Broderson site for removing trace elements (emerging contaminants) and improving the upper aquifer water quality are questionable because the vadose zone at Broderson may be compromised with heavy, constant use.
    - The energy requirements to pump water up to the Broderson site will be very high.

8. A detailed review of the feasibility of project alternatives, based in part on a detailed review of community affordability data generated as part of the EIR process or parallel to the EIR process.
    - The successful 218 vote did not reflect homeowners' ability to pay; and, as yet, a thorough affordability study has not been done.
    - Win-win-win solutions are more likely when all systems, including social systems, are well understood.
    - Project impacts may change community demographics (e.g., a consideration for AB 32, etc.).

9. A review of nature-based treatment systems and systems using bio-mimicry, including greenhouse technologies as well as surface- and subsurface constructed wetlands, e.g., systems by Todd Ecological and Lombardo and Associates.
    - These are recognized by most advocates of sustainability to be model systems for sustainable development and a trend for the future, relying on low-energy, nature-based systems and bio-mimicry—and treating wastewater as food for microorganisms and plants.
    - These systems potentially can treat all the wastewater for the Prohibition Zone on a relatively small footprint.
    - They can potentially reduce energy costs below those of other systems.
    - They can produce multiple benefits: treat wastewater, recharge the aquifers, control storm run-off, save energy, enhance habitat, improve project aesthetics, provide passive recreation, and produce income, e.g., through sales of koi and decorative plants, along with eco-tourism.
    - Todd systems were well-received by the community at a presentation in February, and may have a better chance than other systems of being accepted by the community, even if they are located within the urban reserve line.

10. A review of beneficial uses of recycled water and solids—with an analysis of beneficial impacts on energy use, carbon footprint, etc.—e.g., application to community- or privately-owner redwood, switch grass, or algae cultivation for carbon sequestering, resale, and/or bio-diesel production.

- These options would provide opportunities for reducing the carbon footprint of the project (e.g., through carbon sequestering), along with opportunities for revenues to offset the cost of the project.
- These options create win-win-win possibilities by 1) lowering the overall cost of the project (social/economic benefits), 2) creating opportunities for revenues and jobs (social/economic benefits), and 3) naturally and effectively recycling and treating wastewater, while also improving air quality (environmental benefits).
- These options may create greater community involvement and pride in the project.

11. A long-term analysis considering global warming and sea-level rise impacts, taking a precautionary approach, with a review of options best suited for future adaptability, e.g., land purchase out of basin or trading water for future water rights.
    - This is needed to determine project sustainability.
    - Predictions indicate that global warming and sea level rises will likely impact coastal aquifers and the state water project (Delta) water supplies (i.e., water availability, quality, and costs).
    - Predictions indicate that global warming will affect rainfall patterns, frequency, severity, and the length of the seasons, which will in turn affect water use, water needs, and water quality.

12. A review of STEP/STEG collection system alternatives, including cluster systems with 2-12 homes per tank and tanks located in public utility easements; also a system with the STEG (gravity) component of STEP/STEG system estimated (i.e., to show truer system costs and impacts).
    - The LOWWP review process so far has not reviewed either a STEP/STEG alternative with small clusters (and tanks placed in public rights of way), or a STEP/STEG system for which the number of STEP vs. STEG units are estimated.
    - These alternatives potentially greatly affect costs, environmental impacts, and community acceptance of the STEP/STEG system.

13. A review of a decentralized alternative with 2-6 treatment sites within the Prohibition Zone, using nature-based treatment systems and systems using bio-mimicry, with the facilities designed for multiple uses, e.g., landscaped and developed as open-space, parks, and/or eco-tourist destinations (see #9 above).
    - The LOWWP Technical Memorandum on decentralized treatment identified several drawbacks to a decentralized proposal, all of which could be minimized by a system with this description.
    - A decentralized integrated system may be the least expensive when all benefits are considered long-term (e.g., water recycling potential, water disposal, reduced pumping costs).
    - The Coastal Commission may more readily approve a decentralized system that protects and restores habitat (i.e., ESHA) within the URL.
    - A decentralized system with a Todd Ecological treatment system or landscaped constructed wetlands, serving multiple purposes, may be the most acceptable to the community.

14. A review of an on-site system alternative, operated under a centralized, on-site maintenance program.
    - The latest enhanced on-site systems are recognized by experts to treat wastewater to levels equivalent to centralized systems.
    - Experts recognize that in many situations on-site systems provide the most cost-effective solution for treating wastewater because they do not require pumping wastewater off site, and they conserve water by allowing reuse on site. (Also see #15 and "APA Guidelines", Attachment #2.)
    - Use of on-site systems may reduce total system costs, reduce energy due to reduced pumping, maintain recharge of the upper aquifer, and avoid the potential significant environmental impacts associated with a community-wide collection system (e.g., construction and maintenance impacts, as well as overflows resulting from I/I and/or mechanical failures).

15. A review of a phased approach to project implementation, in which a first phase would include a decentralized system serving homes near the bay and in high ground-water areas, with on-site system enhancements and a maintenance program, followed by a later phase in which more homes would be connected to a community system as needed (e.g., if water quality improvements do not occur).

- Eliminating on-site septic systems in contact with high ground water, and/or septic systems which have the potential to contaminate the bay (i.e., leach to the estuary due to their proximity)—in addition to upgrading remaining systems with supplemental treatment options and ensuring their effectiveness with a centralized management/maintenance program—may provide more rapid water quality improvements than the current LOWWP viable project alternatives with recharge at Broderson. (Note that testing and monitoring could identify potentially problematic systems and track water quality improvements.)
- A phased approach avoids over sizing the system and/or locating it in a manner that induces growth, while it provides for continuous improvement and adaptability (consistent with sustainable development criteria—see Attachment #2). (Also see #14 above.)

16. A review of a conventional gravity collection alternative—and a combined conventional gravity-low pressure alternative—for potential impacts to the environment, stemming from I/I, exfiltration, sewer overflows, grinder pumps and vault installation, fusion welding gravity pipes, enhanced maintenance to reduce the potential for I/I, etc.—in addition to the potential for illegal discharge and fines.
    - The LOWWP review process so far has not reviewed the combined conventional gravity-low pressure system despite its being the option chosen for the last project, and despite its being recommended by Carollo Engineers (project consultants) for this project. So far, only a 100% conventional gravity system and a 100% low pressure system, have been reviewed. The combined option may have different costs, environmental impacts, and community acceptability than either the 100% conventional or low pressure system. (Note that the last project required that 600 homes have grinder pumps and vaults installed on-site at considerable homeowner costs.)
    - The environmental impacts of having grinder pump systems by the bay needs to be evaluated.
    - The *Fine Screening Report* and many other sources point out that conventional gravity systems have greater potential to leak than sealed systems (e.g., STEP/STEG), especially over time, causing serious overflows or seeps of raw sewage into the surrounding environment.
    - The *Fine Screening Report* and other authorities state that conventional gravity systems can not achieve the same low levels of I/I as sealed systems (e.g., STEP/STEG) unless they're also sealed with fusion welding, at considerable added cost. The LOWWP process has not evaluated the fusion welding option.
    - The *Fine Screening Report* states that a special maintenance program will improve the performance of a conventional gravity system, but that the program has extra costs. The LOWWP process has not evaluated this maintenance option.
    - Regulations and regulatory fines in response to pollution of ground and surface waters are becoming more frequent and severe, while conventional gravity sewers are increasingly recognized as the source of ground and surface water pollution, in addition to beach closures.

Additional goals and objectives the project and EIR should work to achieve:

1. A key objective that the project will be sustainable—producing win-win-win solutions for the environment, economy, and people.
    - This will help ensure that the project takes a long-term, whole systems approach, considering interactions between local and more distance systems, e.g., how upper and lower aquifers interact, how they interact with local wetlands and the estuary, and how the project interacts with the local, regional, state, and world economy and community.
    - It will help ensure the project emphasizes conservation, natural energy-saving processes, renewable energy sources, and takes a precautionary approach to environmental protection.
    - It will help ensure the LOWWP finds win-win-win solutions that exceed expectations and create solution multipliers for the environment, economy, and community—e.g., improve water quality, in addition to balancing the aquifers, stopping seawater intrusion, protecting and restoring habitat, providing open space, reducing energy use/offsetting carbon, and boosting the local and regional economies—at a price considered affordable by the citizens who pay for it.
    - This is consistent with the accepted paradigm for development in the 21st Century and consistent with adopted policies of the SLO Board of Supervisors (e.g., "Building Principles of Smart Growth") and the *Mission Statement* of the LOWWP.
    - It will help ensure the project does not do greater harm, in the short or long term, to affected systems.

2. Include a goal or objective to strive for a zero or negative carbon footprint for the project.
    - This will set an achievable goal for a wastewater project since wastewater can be used for beneficial purposes, e.g., to generate energy and grow crops that sequester carbon.
    - This will set a high bar for public development in the State, making SLO County a trend setter for Green Development, and it will help drive the marketability of sustainable technologies and processes, one of the stated goals of AB 32.
    - It recognizes that AB 32 goals are aggressive and reaching those goals will take proactive efforts and initiative on the part of public entities.
    - Costs impacts on the community will change demographics (e.g., a consideration for AB 32, etc.).

3. Reduce water use by at least 25% (see EIR Recommendation #1 above).

4. Relative affordability for ratepayers (see EIR Recommendation #8 above).

## CRITERIA FOR SUSTAINABLE DEVELOPMENT

*Development which:*

1. Uses conservation as a first step in resource protection, including strategies for more efficient resource use and recycling.
2. Seeks low-impact, small-scale, natural, and energy-efficient solutions, using renewable, clean energy sources, i.e., solar and wind.
3. Applies an integrated, whole-systems, long-term approach, which seeks multiple solutions and win-win-win outcomes for the environment, people, and economy.
4. Promotes and applies innovative technologies and governmental regulations that support sustainable growth.
5. Takes a precautionary approach to the prevention of environmental damage, which includes building adaptability, continuous-improvement opportunities, and response capacity into systems, without creating designs that invite resource overuse or ecosystem degradation in the future.
6. Strives for closed-loop systems and cradle to cradle designs, which rely on current solar income, add no toxins to the environment, maximize reclamation and beneficial reuse of waste, and have zero, or restorative, net effects on carbon production, resources, and eco-systems.

## AMERICAN PLANNING ASSOCIATION (APA) GUIDELINES FOR WASTEWATER TREATMENT

(presented in "Sustainable development of wastewater infrastructure," by Glen T. Daigger, Dave Burack, and Vincent Rubino, *Clearwaters*, Fall 2001, Volume 31, Number 3)

1. Reduced dependence upon fossil fuels, extracted underground metals, minerals by promoting:
    - Facilities that employ renewable energy sources, or reduce use of fossil fuel for their operations and transport needs

2. Reduced dependence upon chemicals and synthetic substances, by promoting:
    - Treatment facilities that remove or destroy pathogens without creating chemically contaminated by-products
    - Design approaches and regulatory systems that focus on pollution prevention, reuse and recycling

3. Reduction of activities that encroach upon nature, through:
    - Promotion of innovative sewage and septic treatment that discharges effluent meeting or exceeding federal drinking water standards while minimizing or eliminating the use of chemicals (example: greenhouse sewage treatment facilities)
    - Recognition of the "cradle to grave" costs of waste generation and disposal
    - Promotion of and removal of regulatory barriers to composting and graywater reuse systems

4. Meeting human needs fairly and efficiently by:
    - Cleaning, conserving, and reusing wastewater at the site, neighborhood or community level, reducing the need for large, expensive collection systems and regional processing facilities