Hello,

As a Petaluma resident and professional geomorphologist and hydrologist who has spent the past two decades working on multi-benefit watershed management approaches throughout California, I feel compelled to submit thoughts on the SID Commons Development before the upcoming City Council Meeting.

The issue at hand is the proposed development of 14.5 acres of floodplain along the Petaluma River just upstream of the Lynch Creek confluence (Parcel 09). Parcel 09 runs along one of the most amazing reaches of the Petaluma River, described in the Petaluma River Enhancement Plan as beautiful, wild, scenic, and recommended for preservation. The deep pools and heritage oak forest riparian habitat is teeming with birds and native wildlife and the Casa Grande Anglers Club has worked hard to restore this area for 39 years. The project proposes to build a 205-unit apartment complex that would require bulldozing the river banks, converting the river into a “terraced compacted flood control channel” that will shunt run-off from the development into the river as fast as possible, and removing much of the riparian and aquatic habitat that currently exists.

There are many issues with this proposed development that I feel need to be considered by the City Council.

- First, the high quality habitat that exists at the parcel is currently very rare along the river today. Historically, the mainstem Petaluma River and its tributaries had broad riparian forests that provided habitat for native wildlife, stabilized creek banks, shaded the channel during the summer months, and provided large wood for steelhead habitat (see Petaluma Valley Historical Hydrology and Ecology Study for more detail). Today, much of that habitat is gone but the floodplain along the reach under consideration for development is one of the few areas along the river where there is still high quality habitat. This is exactly the type of riparian area we need to protect and enhance! Hundreds of thousands of federal and state dollars are being spent in the watershed to develop plans to protect and restore lost riparian and aquatic habitat. Impacting this area's habitat would run counter to many federal and state efforts.

- Second, as our climate continues to change, the floodplain area proposed for development will only become more important for both the people and local wildlife. Recent climate modeling for the North Bay suggests that whether we get a wetter future (i.e., average annual rainfall amount goes up) or a drier future (i.e., average annual rainfall amount goes down), we will most likely be getting more extreme precipitation events, which translates into more extreme watershed flooding events (the Cal Adapt online climate tools can provide more information). This means that flood events that are now considered rare and do considerable damage when they do happen (e.g., the 10-year flood event) will occur more often in the future. Floodplains along the Petaluma River will be essential for storing those future floodwaters, thereby decreasing the potential for flood damage downstream in and around downtown Petaluma. **We therefore need to protect our floodplain areas now so they can protect us in the future.** Additionally, all regional climate forecasts predict that the summertime air temperature in and around Petaluma will be much higher by the end of the century (see the Cal...
Adapt online climate tools. To protect aquatic habitat and support rare and threatened aquatic species in the watershed, including steelhead, we will need mature riparian forests to shade the river channel and help keep the water cool in summer. Without mature riparian forests like the one at the parcel slated for development, future summertime water temperatures will get too high and aquatic species won't stand a chance.

Thank you for your consideration of these comments. I am happy to provide more detail or answer any of your questions. Please just let me know.

Best,
Scott Dusterhoff