

Carey Certo

From: Rob Charles
Sent: Monday, June 12, 2023 9:49 AM
To: Robert Maul
Cc: Steve Wall
Subject: FW: MacKay review

Robert, the rezone can go through with conditions.

- 1) We will be evaluating the STEP system under a separate project to determine capacity. At this time there doesn't appear to be anything that would hold up the rezone on the sewer side.
- 2) On the water side, there is a deficiency on moving water to this zone from other zones in the city. The rezone won't be held up, but there will be conditions placed on individual developments limiting buildout of the sites until the deficiencies are corrected by the city, or in partnership with the developer(s).

Thanks

Rob Charles, PE
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From: Matt Huang <MHuang@carollo.com>
Sent: Monday, June 12, 2023 7:18 AM
To: Rob Charles <RCharles@cityofcamas.us>
Cc: Natalie Reilly <nreilly@carollo.com>
Subject: RE: MacKay review

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Rob,
Here is our analysis of Mackay's memo. Please let me know if you would like this on an official letterhead, or if you have any questions.

Sewer:

1. We agree with the overall conclusion that the rezone will not result in a major difference in flow than the current zoning designations.
2. At this point, we are unable to comment on the capacity of the STEP system until the STEP modeling is complete, which is currently being completed under a different project.
 - a. Recommendation: The capacity of the STEP system with this zoning change should be evaluated with a hydraulic model once the model is completed.

Water:

1. It is not necessarily reasonable to assume that the wet industrial users 0.5 mgd block of flow be allocated to the area for rezone. The City has other parcels in the system with either with current or future land use categorized as industrial.
2. The water demand calculation seems reasonable if 18 households per acre for MFR is still accurate. If the housing density assumptions since the 2015 Clark County Buildable Lands Report have increased, the water demands for the rezoned parcels may increase as well (Note: the 2021 Buildable Lands Report states that commercial land and industrial land retain the existing employment density assumptions).
3. Supply Analysis:
 - a. Table 8.5 MDD Ability to Pump Analysis (from the WSPU) shows that by 2025, there is a 325 gpm deficiency in the "Existing MDD Ability to Pump" category. The deficiency increases to 3,245 gpm in 2035. The "Existing MDD Ability to Pump" category compares the "Ability to Pump" (summarized in Table 8.4: Maximum Day Demand Ability to Pump Summary) with the MDD projections+ Fire Flow Replenishment requirement.
 - b. Table 8.7: ADD Ability to Pump Analysis (from the WSPU) shows that by 2035, there is a 350 gpm deficiency in the "Existing ADD Ability to Pump" category. The "Existing MDD Ability to Pump" This category compares the "Ability to Pump" (summarized in Table 8.6: Annul Ability to Pump Summary) with the ADD projections.
 - c. Increasing the system demands due to the rezone increases the deficiencies due to the added demands and may affect when the deficiency occurs.
4. Pumping Analysis:
 - a. Under current conditions, there is insufficient pumping capacity from the 343 zone to the 455 zone. The increase in demands from this rezoning will exacerbate the deficiency. Pump station capacity expansion will be needed from the 343 zone to the 455 zone to serve this development, both in the WSPU and with the rezoned demand. It was the intention to have constructed the Forest Home PS expansion by now, but since this project has been stalled, there needs to be an alternate way to move water from the 343 zone to the 455 zone before this rezone can be accommodated.
 - b. There is sufficient capacity to convey flows from the 455 zone to the 852 zone for the additional demands once the Lower Prune Hill PS (currently under construction) is complete.
5. Storage Analysis
 - a. There is sufficient storage capacity in the 852 zone for this development before and after the land use rezone.

Regards,
Matt

Matthew Huang, PE*

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From: Rob Charles <RCharles@cityofcamas.us>

Sent: Thursday, June 8, 2023 1:59 PM

To: Matt Huang <MHuang@carollo.com>

Subject: FW: MacKay review

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Matt, let me know where you are on the analysis of Mackay's memo.

Thanks

Rob Charles, PE

Utilities Manager

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From: Robert Maul <RMaul@cityofcamas.us>

Sent: Thursday, June 8, 2023 1:04 PM

To: Rob Charles <RCharles@cityofcamas.us>

Subject: MacKay review

Hi Rob.

Can you please check with our consultant on their peer review of the Olson/Mackay Sposito utility memo for the annual review? I have to put an agenda item together for PC next week and this is critical. Thanks!

R

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