



United States Department of the Interior



NATIONAL PARK SERVICE
GRAND CANYON NATIONAL PARK
P.O. BOX 129
GRAND CANYON, ARIZONA 86023-0129

IN REPLY REFER TO:

D18 (GRCA 8211)

FEB 25 2014

Richard Turner, AICP
Town Planner
Tusayan, Arizona 86023

Dear Mr. Turner:

The following summary comments are provided from Grand Canyon National Park regarding the Draft General Plan (2024) sent to us on February 20, 2014, and is currently open for public comment. Additional detailed comments will be included on a printed document and provided to the Planning and Zoning Commission by Martha Hahn, Chief of Science and Resource Management at the February 25, 2014 Public Hearing.

Vision -- The addition of a "Vision" for the General Plan is beneficial for providing the context for accomplishing the Goals and Objectives described. As written, the Vision is general in nature and is lacking a discussion on how the future desired condition of Tusayan (the Town) will be in harmony with the natural, cultural and social resources that may be affected by contrary goals of housing, business, and economic development. It is suggested that the General Plan's Vision include statements of desired conditions for all the attributes and elements addressed in the plan. These then set the stage for developing yearly work plans and overall strategies.

Goals/Objectives/Policies – It is noted that the implementation timeframes for Objectives are listed at the end of the document. The Objectives listed throughout the document would be more strategic and understandable if they contained such timeframes. Placing this important fact at the end of the document tends to deflate the value and intent of the actions needed for reaching the overall goals. It is also difficult to track.

Desired Growth/Development/Need for Housing/Availability of Water – The Goals and Objectives throughout the plan appear to be conflicted over the desire for growth, development, housing needs, and the availability of water. For instance, it is not clear if the desired level of development for new housing units is to replace existing units, add additional units, or a combination of both. Combined with this is the lack of assessment for support services and resource needs (water) to accommodate the desired level of development. It is also not clear to what degree the population of the Town needs to grow, what the basis is for such growth, and the support services and resources needed to accommodate the growth.

Another example is there is no discussion as to the Airport Expansion and how that affects the limited water supply. Even so, the amount of development proposed (or fully allotted) has not been constrained by such factors as a limited water supply. There is no acknowledgement as to:

- 1) The amount of water needed to support such development;
- 2) How the water will be developed and where it will come from; and
- 3) How the growing trend in changes to a dryer climate in the southwest will be detrimental to future supplies of water throughout the region.



Based on the plan’s estimate of commercial development (142.3 acres), multi-family dwellings (1874 units), single family dwellings (534 units), and dorms (300 units), the following chart identifies the water usage needs over the next ten years. The City of Flagstaff was used to calculate the usage rates because it currently has one of the lowest water usage rates per person for cities in Arizona due to its aggressive restrictions.

Water Usage Needs Based on Development numbers as identified in the Tusayan General Plan

| | Flagstaff Usage Rates | Core | Camper Village | Ten X | Kotzin Ranch | TOTALS |
|--------------------------------|------------------------------|-----------------------|-------------------------|--------------------------|---------------------------|---------------------------|
| Commercial Development (Acres) | 861 gpad* | 4,821 gpd (5.6 acres) | 13,087 gpd (15.2 acres) | 38,,228 gpd (44.4 acres) | 66,383 gpd (77.1 acres) | 122,520 gpd (142.3 acres) |
| Multi-Family Dwellings (units) | 173 gpd** | 7612 gpd (44 units) | 17,300 gpd (100 units) | 70,930 gpd (410 units) | 228,360 gpd (1,320 units) | 324,202 gpd (1874 units) |
| Single Family Dwellings | 212 gpd** | ? | ? | 113,208 gpd (534 units) | ? | 113,208 gpd (534 units) |
| Dorms | 160 gpd** | ? | ? | ? | ? | 48,000 gpd (300 units) |
| TOTALS | | 12,433 gpd | 30,387 gpd | 222,366 gpd | 294,743 gpd | 607,930 gpd |

*gallons per acre per day

**gallons per day

Currently the town of Tusayan’s rate of water usage is ~175 acre feet per year (AFY). It is important to note that based on the plan’s proposed development, water-usage needs would increase the Town’s water consumption to ~681 AFY by 2024. This far exceeds the 2050 North Central Arizona Water Supply Study, Report of Findings projection of 425 AFY (BOR 2006), and poses significant regional impact concerns and raises questions around the realistic nature of meeting and sustaining the planned development goals.

Strategies for Implementation – It would be most prudent for the General Plan to contain appropriate allocations or restrictions on all resource use (such as water) for the community. This would provide clear direction for managing toward these goals, rather than leaving it to some point in time when supply no longer can keep with the unrealistic demand. We offer such restrictions through “restricted water allocations” that the Town would manage and apply to current or future water users. This concept can be found within our detailed written comments and applied to the appropriate Goals and Objectives.

Growth – Lastly, several of the desires and associated Goals within the plan allude to an increase in the resident population of Tusayan, as well as visitation to both the Town and the park. We have stated several times throughout the comment process that the increase in residents and visitation will have tremendous negative (and possibly irretrievable) impacts on the park infrastructure and resources for which the park was established, including the fragile seeps and springs that represent some of the least altered water resources in the southwest.

Grand Canyon springs and seeps are extremely important ecologically to the park’s plants and animals, and nurture a high percentage of the park’s ecological diversity. These water resources are dependent on the R-aquifer. In a recently published study for the potential Airport water-well development, Montgomery and Associates validated previous studies that identify current and projected decreases of

flows to water sources within the Grand Canyon and Havasu Creek on the Havasupai Reservation due to water wells and extraction in Tusayan.

Thank you for the opportunity to comment and be a part of this important planning exercise. Please contact my office at (928) 638-7945, or Martha Hahn at (928) 638-7759, if you have further questions or require additional clarification.

Sincerely,

A handwritten signature in black ink that reads "David V. Uberuaga". The signature is written in a cursive style with a large, stylized initial 'D'.

David V. Uberuaga
Superintendent

