8.0 FUTURE GROWTH

Growth in the Village of Taos Ski Valley has historically been slow and sporadic. Ultimately, growth is limited by the topography of the narrow valley and its steep mountain slopes. Both near term and long term increases in flow to the WWTP were considered from projected growth. The near-term plan includes the connection of hotels, commercial properties, and additional residential units in the Amizette area, downstream from the WWTP, as well as unsewered properties in the Village proper, plus some new commercial development. Longer term growth projections include expansion of existing commercial properties, new commercial development, and new residential development on existing vacant lots. Near and long-term development is expected to add an additional 0.047 and 0.068 MGD to the wastewater treatment plant, respectively. As a result, peak daily wastewater flows are projected to increase from the existing peak of 0.095 MGD to 0.200 MGD by the year 2020. Peak flows currently only occur during the winter ski season. Flows in the off-season average 0.060 MGD. **For all calculations in development of this TMDL, a plant design capacity of 0.200 MGD was used. Consequently, all flow calculations in this TMDL estimate treatment capacity in the future scenario, which accommodates projected growth through 2020.**

The Village of Taos Ski Valley has developed a phased plan for a community-wide sewer line extension project. The objective of this phased project is to convert all on-site septic systems in the community to the WWTF. The city council and public works department are incorporating this plan to help reduce nonpoint source pollution contributed by septic systems in Taos Ski Valley. If the Village succeeds in converting all septic systems to the wastewater treatment facility, then the portion of the total nitrogen load allocation that is associated with septic systems (e.g. 5.17 lbs/day) can become a WLA. Results for this future scenario, which include the WLA and maximum allowable effluent concentrations, are presented in Table 8-1 (see Appendix F for spreadsheets).

In addition, growth estimates by county are available from the New Mexico Bureau of Business and Economic Research. These estimates project growth to the year 2030. Growth estimates for Taos County project a 40% growth rate through 2030. **Since future projections indicate that nonpoint sources of nutrients will more than likely increase as Taos Ski Valley continues to grow and develop, two percent of the TMDL was set aside as a placeholder for unknown or future nutrient sources not already accounted for in the TMDL calculations.** However, because Taos County and Taos Valley Ski Basin have been growing rapidly over the last few decades, it is imperative that BMPs continue to be utilized and improved upon in this watershed.

Table 8-1. Seasonal Total Nitrogen Waste Load Allocations for the VTSV if 100% of the septic systems in Taos Ski Valley are converted to the WWTF (Phase V)

Parameter	Time Interval	Streamflow 4Q3[1] (mgd)	Proposed Effluent Volume[2] (mgd)	Seasonal WLA[3] (lbs/day)	Calculated Effluent Conc.[4] (mg/L)	Allowable 30-day Av. Conc.[5] (mg/L)	Allowable 7-day Av. Conc.[6] (mg/L)
Total Nitrogen	January	3.693	0.200	16.2	9.7	10	15
	February	3.693	0.200	16.2	9.7	10	15
	March	3.693	0.200	16.2	9.7	10	15
	April	3.693	0.200	16.2	9.7	10	15
	May	14.97	0.200	49.1	29.5	29	45
	June	14.97	0.200	49.1	29.5	29	45
	July	8.559	0.100	30.3	36.3	36	55
	August	8.559	0.100	30.3	36.3	36	55
	September	6.321	0.040	23.7	71.0	71	110
	October	6.321	0.040	23.7	71.0	71	110
	November	3.693	0.200	16.2	9.7	10	15
	December	3.693	0.200	16.2	9.7	10	15

1 The critical low flow condition in the Rio Hondo is the average low-flow that persists for four consecutive days once every three years, on average (4Q3). (Appendix C)

2 Effluent volume is the proposed design capacity and/or seasonal effluent volume of Twining WWTP (in mgd).

3 Seasonal waste load allocations (in lbs/day) allotted to Twining Water and Sanitation District. (Appendix F)

4 Maximum allowable effluent concentrations to be protective of the river within this assessment unit. (Appendix F)

5 The allowable 30-day average was determined by rounding the calculated effluent concentration.

6 The allowable 7-day average is defined as 1.5 times the allowable 30-day average.