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September 29, 2026

Regional Manager  
Idaho Department of Water Resources  
900 N. Skyline Drive, Suite A  
Idaho Falls, ID 83402-1718

Re: Sam's Hollow Water Company – 2025 Annual Report

Dear Regional Manager:

Enclosed please find the 2025 annual report required by the approved mitigation plan for Sam's Hollow Water Company in Bear Lake. If you have any questions or need additional information, please do not hesitate to contact me.

Cordially,

Greg Sullivan, M.S., Engineer

Cc: Sam's Hollow Water Company  
Enc: Sam's Hollow Water Company-3 Final Reports  
Idaho Department of Water Resources Eastern Region-1 Final Report

2016 NORTH  
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# **2025 Annual Report on Water Use and Mitigation for the Sam's Hollow Water Company**

**Prepared for:**

**Sam's Hollow Water Company  
Bear Lake, Idaho**

**Project No. 370-01-2025  
September 29, 2026**

**For information concerning this report, contact  
Greg W. Sullivan, M.S., Engineer  
Charles G. Brockway, Ph.D., P.E.**



**2016 NORTH WASHINGTON, SUITE 4  
TWIN FALLS, IDAHO 83301**

## **2025 Annual Report on Water Use and Mitigation Sam's Hollow Water Company**

Brockway Engineering, PLLC  
September 29, 2026

### **Introduction**

The Water Management and Operations Plan for Mitigation (the "Plan") dated June 19, 2006 for Sam's Hollow Water Company requires an annual report of water use on residences and facilities in use during the year. The Water Management and Operation Plan for Mitigation was amended February 10, 2015 by Rocky Mountain Environmental Associates Inc. The reporting requirements are outlined in the Plan, which was submitted to the Idaho Department of Water Resources. The Plan requires the submittal of the number and type of facilities (residences, commercial, and other) utilizing ground water during the year, the estimated depletion to Bear Lake resulting from the occupancy of the facilities, irrigated acres taken out of production within the project, and the volume of mitigation water returned to Bear Lake through the mitigation facilities.

The mitigation facilities consist of a water deliveries from the end of the irrigation system to Fish Haven Creek and a mitigation pipeline which conveys water to Bear Lake. The 2015 amended Plan changed the method of returning water to Bear Lake by including the option to discharging a portion of irrigation water back into Fish Haven Creek allowing it to flow down the creek into Bear Lake. Water was also delivered to Bear Lake through a mitigation pipeline that collects water at the end of the irrigation system. Water delivered through the irrigation system, the Fish Haven Creek bypass pipe and the mitigation pipeline is to be measured before mitigation water returns to Bear Lake.

Sam's Hollow Water Company has shares in Fish Haven Water Users for delivery through three ditches from Fish Haven Creek to the project. In previous years, deliveries into the ditches were measured through calibrated flumes. Deliveries through the Upper Ditch, Ditch No 1 and Ditch No. 3 was the source of water for mitigation.

## Project Build-Out History

In 2006 there were no homes or water-using facilities in use on the Project. Project build out varies from year to year but has steadily increased. In 2011, the Club House was constructed in the Project area. Table 1 provides the year and number of residences constructed in the Project, type of wastewater treatment and if construction occurred within the current place of use of irrigation water rights.

The construction of four (4) houses was concluded in 2025. A portion of these homes were identified as being completed with construction in 2024. Three homes were constructed and connected to the Fish Haven Sewer District. The total number of residential households constructed in the project area is 116. Locations of the residences are shown on the attached map. A total of 26 residential homes and the clubhouse have been constructed inside of the irrigation place of use and qualify for mitigation acres.

**Table 1: Residence Units Constructed Information**

| Residence Units Constructed |                              |                           |             |                                |                  |
|-----------------------------|------------------------------|---------------------------|-------------|--------------------------------|------------------|
| Year                        | On-site Wastewater treatment | St Charles Sewer District | Condominium | Inside Irrigation Place of Use | Total Residences |
| 2006                        |                              |                           |             |                                | 0                |
| 2007                        | 4                            | 1                         |             |                                | 5                |
| 2008                        | 3                            | 5                         |             | 3                              | 13               |
| 2009                        | 1                            | 2                         |             |                                | 16               |
| 2010                        |                              | 6                         |             | 4                              | 22               |
| 2011                        |                              | 8                         |             | 3                              | 30               |
| 2012                        |                              | 1                         |             |                                | 31               |
| 2013                        |                              | 3                         |             |                                | 34               |
| 2014                        |                              | 8                         |             | 4                              | 42               |
| 2015                        |                              | 5                         |             | 1                              | 47               |
| 2016                        | 2                            | 4                         |             | 1                              | 53               |
| 2017                        |                              | 3                         |             |                                | 56               |
| 2018                        | 1                            | 4                         |             |                                | 61               |
| 2019                        | 1                            | 7                         |             | 1                              | 69               |
| 2020                        | 1                            | 6                         |             | 3                              | 76               |
| 2021                        | 1                            | 3                         |             |                                | 80               |
| 2022                        |                              | 3                         |             |                                | 83               |
| 2023                        |                              | 12                        |             | 2                              | 95               |
| 2024                        |                              | 18                        |             | 3                              | 113              |
| 2025                        |                              | 3                         |             | 1                              | 116              |
| Total                       | 14                           | 102                       |             | 26                             |                  |

## Irrigated Acres

Mitigation for water use on residential and commercial units requires that irrigated acres formerly supplied with surface water be dried up to compensate for consumptive use depletion of the development. The 8.5 acres have been removed from irrigation due to construction of roadways (note that other roads were in place prior to the approved mitigation plan and are not accounted for). The assumed area of house footprints, driveways, and other hardscape areas per residence is 4,000 ft<sup>2</sup>. The assumed area of turf, garden area and landscaping areas per residence is 5,000 ft<sup>2</sup> for a total displaced area of 9,000 ft<sup>2</sup> per residence. The approximate area removed from irrigation for the clubhouse, pool area and parking lot is 1.0 acres or 43,560 ft<sup>2</sup>. Based on procedures developed by Dr. Robert Hill and adopted in the Bear River Ground Water Management Plan, the consumptive depletion for grass pasture is 1.18 ac-ft/acre/year.

Table 2 provides the total accumulated mitigation from the construction of structures within the water right place of use from the start of the project until the end of the current reporting year of 2025.

**Table 2: Summary of Mitigation Provided by Construction through 2025.**

|            |    | ft <sup>2</sup> /structure | Acres | AFA  |
|------------|----|----------------------------|-------|------|
| Road Ways  |    |                            | 8.50  | 10.0 |
| Homes      | 26 | 9000                       | 5.37  | 6.3  |
| Condos     | 0  | 12000                      | 0.00  | 0.0  |
| Commercial | 1  | 43560                      | 1.00  | 1.2  |

Total Removed for Mitigation 14.87 Acres 17.5 AFA

## Estimated Project Depletion

The estimated consumptive depletion from residences and other facilities was determined using procedures developed by Dr. Robert Hill and adopted in the Bear River Ground Water Management Plan. For the Sam's Hollow system, the depletion values for potable water and irrigation of residences and commercial facilities were developed and included in the Plan for the project. Table 3 was developed to assist in estimating depletion each year based on the facilities build out. Table 3 shows the annual unit depletion and the number of units on line in 2025. The total estimated

depletion from the one hundred sixteen (116) units and club house on line in 2025 is 38.84 acre feet.

**Table 3. Depletion analysis for Sam's Hollow Water Company in 2025. All depletions are in acre-feet annually.**

**Entities with On-Site Sewage Disposal**

|                                           | <b>Unit Depletion</b> | <b>Occupied Units</b> | <b>Total Depletion</b> |
|-------------------------------------------|-----------------------|-----------------------|------------------------|
| <b>Domestic Potable Water - Homesites</b> | 0.03                  | 14                    | 0.42                   |
| <b>Irrigation - Homesites</b>             | 0.14                  | 14                    | 1.96                   |

**Entities with St. Charles Sewer District Service**

|                                           | <b>Unit Depletion</b> | <b>Occupied Units</b> | <b>Total Depletion</b> |
|-------------------------------------------|-----------------------|-----------------------|------------------------|
| <b>Domestic Potable Water - Homesites</b> | 0.19                  | 102                   | 19.38                  |
| <b>Irrigation - Homesites</b>             | 0.14                  | 102                   | 14.28                  |

|                                                                        |      |   |      |
|------------------------------------------------------------------------|------|---|------|
| <b>Domestic/Irrigating - Condominiums<br/>(Per Building = 4 units)</b> | 0.5  | 0 | 0.00 |
| <b>Irrigation - Condominiums</b>                                       | 0.14 | 0 | 0.00 |

|                                   |     |   |      |
|-----------------------------------|-----|---|------|
| <b>Potable Water - Commercial</b> | 2.8 | 1 | 2.80 |
|-----------------------------------|-----|---|------|

All Depletion Values are in Acre-Feet Annually

The annual depletion value is based on a rate of 40.2% occupancy

|                               |                  |
|-------------------------------|------------------|
| <b>Total Homesites</b>        | <b>116</b>       |
| <b>Total Condominiums</b>     | <b>0</b>         |
| <b>Total Commercial Sites</b> | <b>1</b>         |
| <b>Total Depletion</b>        | <b>38.84 afa</b> |

**Water Supply Available for Mitigation**

The 140.5 shares in Fish Haven Water Users owned by Sam's Hollow Water Company can be diverted through any of three ditches: the Upper North Ditch, Number 1 Ditch, and Number 3 Ditch. The flumes were installed by the Fish Haven Water Users Company with assistance from Sam's Hollow Water Company and are being monitored by Sam's Hollow Water Company.

Sam's Hollow Water Company had originally secured 140.5 shares of Fish Haven Water Users Company when this project was initiated. An additional 131.1 shares of Fish Haven Water Users Company was secured based on the 2015 updated mitigation plan. The total secured shares is 271.6 shares for 218.1 acre feet. Sam's Hollow Water Company is currently not irrigated any pasture or crop areas, which means the full 271.6 shares or 218.1 acre feet are available for use as mitigation return flow to Bear Lake.

## **Mitigation Water Returned to Bear Lake**

### **Mitigation Pipeline**

Water returned to Bear Lake via the mitigation pipeline was measured by the flow meter located just east of the Fish Haven Cemetery beginning in 2007. The mitigation pipeline at the end of Ditch 1 conveyed water from the retention pond, under the highway, and to Bear Lake in an 8-inch PVC pipe with a Siemens SITRANS FM electromagnetic water meter Type MAG 8000 installed in the pipeline. The meter had a totalizer and instantaneous discharge readout which read in gallons and gallons per minute. The meter was maintained by Sam's Hollow staff, and all or part of mitigation flows were recorded at this site until the meter stopped working in 2022.

### **Fish Haven Creek**

In the amended mitigation plan that was finalized in 2015, the method of returning mitigation water to Bear Lake was modified. Instead of all of the water being delivered to Bear Lake through the mitigation pipeline, water was to be measured and delivered through Fish Haven Creek.

In 2014, an instream water level measurement gaging site was installed in Fish Haven Creek about 100 yards upstream of the highway 89 crossing of the creek. This stream gaging site used a transducer (Onset U20L-04) to measure water levels in a stilling well (Photo 1). A second transducer was installed in the stilling well that measured only air pressure, which was used to correct/remove barometric pressure from the transducer in the water. Water flow measurements were collected with an electromagnetic flow meter at a cross section established at the gage site. The flow measurements were used to develop a rating curve with the corresponding water levels at the staff gauge attached to

the stilling well. The rating curve/equation was used to convert the water levels measured with the transducers to water flows (cubic feet per second).

The stilling well and transducers have typically been installed from beginning of the irrigation season (May 1) and left until the end of the season (September 30). However, during high run off years, e.g., 2017, then the stilling well was not installed until after high stream flows have passed so that debris doesn't damage the well. Water flows measurements have been made during low or base creek flows ( $< 20$  cfs) to develop the rating curve for times when mitigation flows would be delivered to Bear Lake.

In addition to the stream gaging site, a ramp flume was installed in the bypass pipe of the fish screen in Ditch 1 in 2009. Operation and measuring direction for the bypass pipe flume was designed by McMillen Engineering. This bypass pipe flume was described in the 2015 mitigation plan but was only operable for the years 2014 and 2015. Debris caught in the flume resulted in inaccurate readings with the measurement device. The bypass pipe and flume were removed and replaced with an open channel and direct-read flume in 2024 (Photos 2 and 3). The air pressure transducer at the stream gaging site is used to correct for barometric pressure with the water level transducer in the bypass channel flume.

In 2024, the estimated volume of mitigation water discharged into Bear Lake was 74.4 acre-feet at the stream gage. Water flows were greater than 20.0 cfs in the months of May and June. At the bypass flume, a volume of 5.93 acre feet was recorded after the install of the pressure transducer during August.

In 2025 the total acre feet discharged through Fish Haven Creek at the stream gaging site was 1,083 acre feet. There was 12.6 acre-feet of mitigation recorded flowing through the Ditch 1 bypass flume.



Photo 1: Looking upstream at the Fish Haven stream gaging site on July 31, 2026. The gaging site has been monitored annually since being established in 2014. The black pipe stilling well contains the water level and air transducers. The water measurement cross section is located immediately upstream of the stilling well. The water level pictured on the staff gauge is 1.00 feet, which corresponds to a flow of about 2.4 cfs.

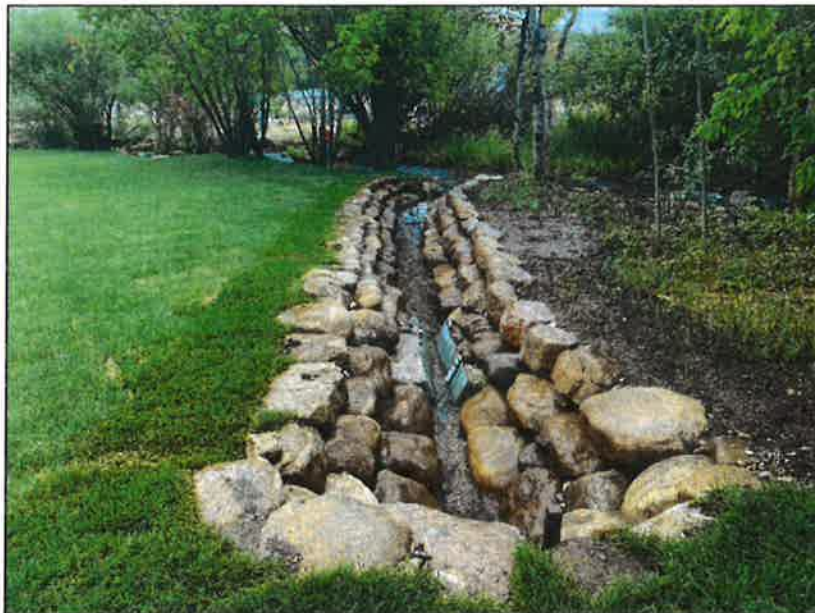


Photo 2: Looking downstream on the bypass channel from the fish screen on Ditch #1 with the confluence with Fish Haven Creek shown in the background. The direct read water measurement flume is located in the channel.



Photo 3. Looking across at the white plastic section of pipe that contains the water level monitoring transducer and the water flow gauge in the measurement flume in Ditch #1 on July 31, 2026. The water level is reading about 0.10 cfs on the plate with leakage that is coming in under the canal headgate.

At the conclusion of 2025, total recorded cumulative volume of water discharge into Bear Lake is 516.76 acre feet. This value does not include water delivered to Bear Lake from Fish Haven Creek during 2020, the ditches in 2021 or the pipeline in 2022. The cumulative volume required for mitigation from project development is 376.66 acre feet (See Figure 1).

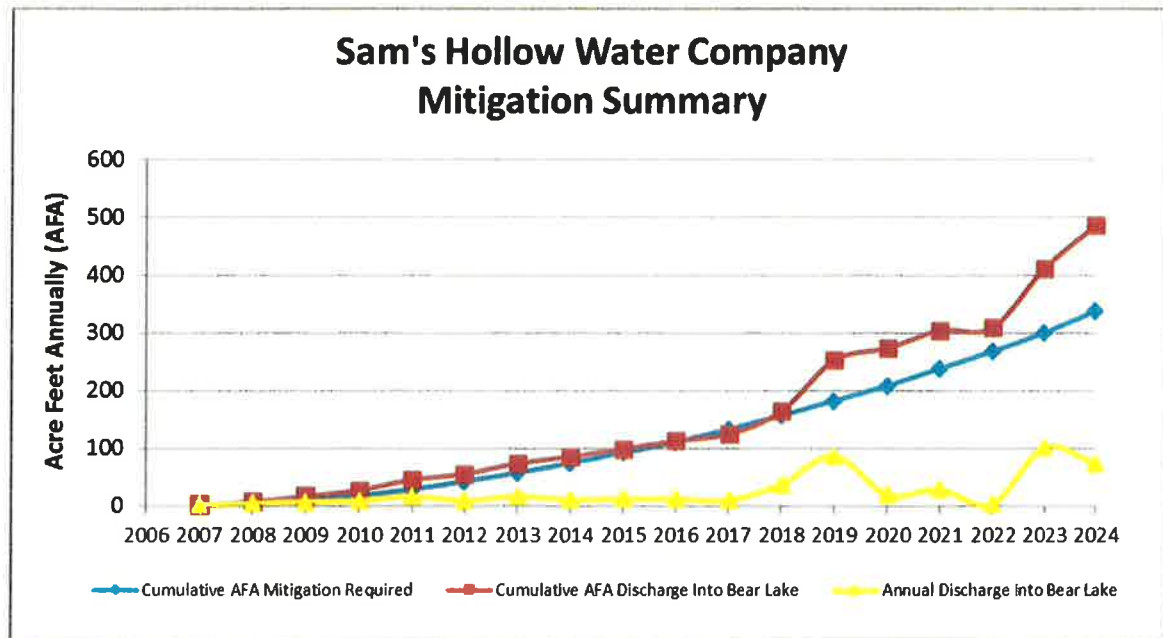


**Figure 1: Sam's Hollow Water Company Mitigation Summary**

### **Projection of 2026 Sufficiency of Mitigation Water**

Based on a projected build-out, the construction of 5 additional homes will be completed in 2026. The homes will be comprised of 4 residential homes outside of the irrigation area and 1 residential home within the water right place of use. Of the 5 additional homes, it is expected that there will be 1 additional residential homes with on-site sewage treatment. The total expected residential units online will be 121 units. The club house will continue to be utilized with no additional conversion of irrigated areas to commercial uses. The calculated depletion for residences and commercial uses under these assumptions will be 40.33 acre feet. It is estimated that the seasonal water availability for Sam's Hollow Water Company in 2026 will be adequate to provide mitigation water for the expected number of units on-line in 2026. Based on NRCS SNOTEL data for the Bear River Basin obtained on April 7, 2026 the Water Year-to-Date Precipitation was 101% of the average level. The runoff for Fish Haven Creek will be considered average based on the snow pack data. It is anticipated that water supply should be adequate for mitigation needs. Mitigation flow to Bear Lake from Ditch 1 will continue to be measured and recorded during the irrigation season. Total flow in Fish Haven Creek will continue to be measured by the current flume.



Development that has occurred at Sam's Hollow Water Company as of 2018



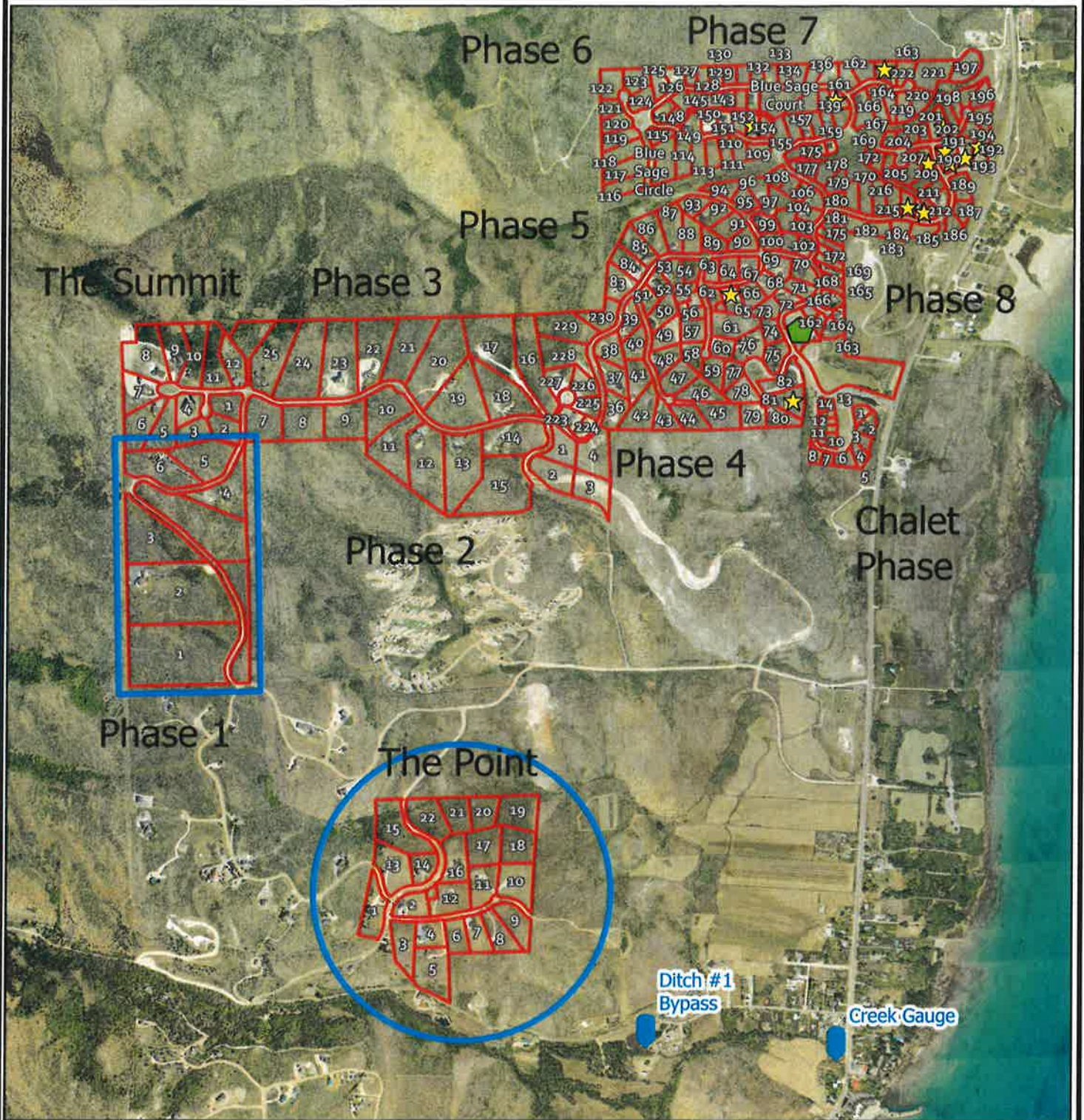
Development that has occurred at Sam's Hollow Water Company as of 2018



Development that has occurred at Sam's Hollow Water Company as of 2018



Development that has occurred at Sam's Hollow Water Company as of 2018



0 0.25 0.5 Miles

## **BEAR LAKE RESERVE**

LOT LOCATIONS  
NAIP 2025 AERIAL

### **Legend**

- ★ 2025 Homes Completed
- ▬ Clubhouse
- On-Site Septic
- Measurement Locations