Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address:

HILL TOP COLONY INC
% DAVID D WIPF
STOCKETT, MT 59480
909 SPRING CREEK RD

2. Type of action:

Groundwater Application for Beneficial Water Use Permit 41QJ 30119816

3. Water source name:

Groundwater, Madison Aquifer

4. Location affected by project:

The place of use is generally located in the E2 of Section 16 and the NE of Section 21, T19N, R5E.

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The Applicant proposes to divert groundwater, by means of two public water supply wells (PWS-1, 920 feet below ground surface (bgs) and PWS-2, 890 feet bgs) from January 1 to December 31 at 243 GPM up to 160.2 AF, from two points located in the S2SENE of Section 21, T19N, R5E, Cascade County. The proposed appropriation is for domestic, stock, lawn & garden, industrial, and irrigation purposes. Two storage reservoirs are also included in this proposed appropriation. Reservoir 1, located in the S2SENE of Section 21, T19N, R5E, will have a surface area of 0.92 acres and a capacity of 5.52 AF. Reservoir 1 will store water for a 6.3-acre garden. Reservoir 2, located in the NWSESE of Section 16, T19N, R5E, will have a surface area of 1.43-acres and a capacity of 11.44 AF. Reservoir 2 will store water for 40-acres of alfalfa pivot irrigation. The period of use for the domestic, stock, and industrial uses is January 1 to December 31. The lawn & garden and irrigation uses have period of use of April 15 to October 15. The place of use is generally located in the E2 of Section 16 and the NE of Section 21, T19N, R5E. The entire diverted volume will be consumed from the source aquifer.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment: (include agencies with overlapping jurisdiction)

Montana Department of Fish, Wildlife, & Parks (DFWP)
Montana Department of Environmental Quality (DEQ)
Montana Natural Heritage Program Species of Concern Report
U.S. Fish and Wildlife Service National (USFWS) Wetlands Inventory
United States Department of Agriculture (USDA)
National Resource Conservation Service (NRCS) Web Soil Survey

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity **-** *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The following surface water will be depleted year-round by the proposed groundwater use: 1) Giant Springs, MT. 2) Missouri River from the Big Bend area to Morony Dam, MT. Neither source is listed as a chronically or periodically dewatered source. The Applicant plans to prevent adverse effect to senior water users by mitigating hydraulically connected surface water depletions by replacing the total amount of water diverted with contract water purchased from the United States Bureau of Reclamation. The contract water will be released from Canyon Ferry Reservoir to mitigate depletions to the reach of the Missouri River where depletions from the proposed appropriation will occur.

Determination: No significant impact

Water quality **-** *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

The Missouri River around the Giant Springs area has been assessed for beneficial use by Montana Department of Environmental Quality (DEQ). The Missouri River is identified buy DEQ as fully supporting agriculture and primary contact recreation and not fully supporting drinking water and aquatic life. It is not anticipated that the Applicant's proposed pumping will have any negative water quality impacts on Giant Springs or the Missouri River.

Determination: No significant impact

Groundwater **-** *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

The Applicant proposes to divert groundwater, by means of two public water supply wells. The two wells are completed in the Mission Canyon Limestone member of the Madison Group. The two wells were constructed by a Montana licensed well driller. Groundwater flux through the zone based on regional aquifer parameters selected by Department hydrogeologists is modeled to be 16,295 AF per year, and therefore the flux exceeds demands by 8,405 AF (16,295 AF – 7,890 AF = 8,405 AF). The Applicant proposes to divert 243 GPM up to 160.2 AF from the Madison Aquifer. No know water quality impacts are expected to occur.

Determination: No significant impact

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The Applicant's proposed water distribution system has been designed by a professional engineering consultant. Water diverted from the PWS wells for domestic, lawn, industrial and stock use will be conveyed to the Plumbers Shop where water will be stored in six 1000-gallon plastic storage tanks. From the Plumber's Shop, water will be conveyed through water mains and service lines to the place of use. Water diverted for garden and alfalfa pivot irrigation will be diverted to storage reservoirs and then piped to the place of use. No projected impacts to channels, flows, barriers, riparian areas, dams, or wells are expected to occur.

Determination: No significant impact

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species **-** *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The Montana National Heritage Program website was reviewed to determine if there are any "threatened" or "endangered" fish, wildlife, plants or aquatic species that could potentially be impacted by this project. One species, ***Calidris canutus Scolopacidae*** (Red Knot Sandpiper), is listed as threatened. "Species of Special Concern" were also included in this search. According to the Montana National Heritage Program, 16 animal species of concern and 10 plant species of concern are located in Township 19N Range 5E, Township 19N Range 3E / Township 20N Range 3E, and Township 21N Range 4E. The proposed project is not expected to negatively impact any of the species of concern listed below.

Animal species include:	**Plant species include:**
• ***Lasiurus cinereus Vespertilionidae*** *Hoary Bat* • ***Ardea herodias Ardeidae*** *Great Blue Heron* • ***Catharus fuscescens Turdidae*** *Veery Thrushes* • ***Dryocopus pileatus Picidae*** *Pileated Woodpecker* • ***Numenius americanus Scolopacidae*** *Long-billed Curlew Sandpipers* • ***Apalone spinifera Trionychidae*** *Spiny Softshell Turtles* • ***Anaxyrus cognatus Bufonidae*** *Great Plains Toad* • ***Anthus spragueii Motacillidae*** *Sprague's Pipit* • ***Athene cunicularia Strigidae*** *Burrowing Owl* • ***Botaurus lentiginosus Ardeidae*** *American Bittern* • ***Buteo regalis Accipitridae*** *Ferruginous Hawk* • ***Calcarius ornatus Calcariidae*** *Chestnut-collared Longspur* • ***Phrynosoma hernandesi*** *Greater Short-horned Lizard* • ***Oncorhynchus clarkii lewisi Salmonidae*** *Westslope Cutthroat Trout* • ***Haliaeetus leucocephalus Accipitridae*** *Bald Eagle* • ***Lanius ludovicianus Laniidae*** *Loggerhead Shrike*	• ***Bacopa rotundifolia Plantaginaceae*** *Roundleaf Water-hyssop* • ***Mimulus floribundus Phrymaceae*** *Floriferous Monkeyflower* • ***Psilocarphus brevissimus Asteraceae*** *Dwarf woolly-heads Aster* • ***Triodanis leptocarpa Campanulaceae*** *Slim-pod Venus'-looking-glass Bellflower* • ***Carex sychnocephala Cyperaceae*** *Many-headed Sedge* • ***Najas guadalupensis Najadaceae*** *Guadalupe Water-nymph* • ***Centunculus minimus Myrsinaceae*** Chaffweed • ***Mimulus ringens Phrymaceae*** Square-stem Monkeyflower • ***Impatiens aurella Balsaminaceae*** Pale-yellow Jewel-weed • ***Physaria ludoviciana Brassicaceae*** Silver Bladderpod

Determination: No significant impact

Wetlands **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

No wetlands were identified within the project area

Determination: No significant impact

Ponds **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

No ponds exist within the project area

Determination: No significant impact

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

According to NRCS Web Soil Survey, the soil within the project area are a mix of Absarokee clay loam (4-8 percent slope) and Ipano-Castner complex (4-15 percent slope). Soil in this area are well drained, with moderately high abilities to transmit water. Salinity properties of these soils are listed as non-saline to very slightly saline. The stability of the soil profile and moisture content will not be significantly altered. No degradation of soil quality shall occur.

Determination: No significant impact

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Any impacts to existing vegetation will be within the range of current disturbances due to current land use practices. Noxious weeds are not expected to be established or spread due to the proposed project.

Determination: No significant impact

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

No deterioration of air quality or adverse air quality impacts from increased air pollutants are not expected due to this project. No air pollutants were identified as resulting from the applicants proposed use.

Determination: No significant impact

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

The proposed place of use is on private land - NA-project not located on State or Federal Lands.

Determination: No significant impact

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

No additional impacts to land, water, or energy have been identified and no further impacts are anticipated.

Determination: No significant impact

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

This project is not located in an area with any known locally adopted environmental plans or goals.

Determination: No significant impact

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The proposed project will not inhibit, alter or impair access to present recreational opportunities in the area. The project is not expected to create any significant pollution, noise, or traffic congestion in the area that may alter the quality of recreational opportunities. The proposed place of use and diversion do not exist on land designated as wilderness

Determination: No significant impact

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

The proposed project creates no significant negative impact on human health.

Determination: No significant impact

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
Yes___ No__X_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: No significant impact

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* None identified

(b) *Local and state tax base and tax revenues?* None identified

(c) *Existing land uses?* None identified

(d) *Quantity and distribution of employment?* None identified

(e) *Distribution and density of population and housing?* None identified

(f) *Demands for government services?* None identified

(g) *Industrial and commercial activity?* None identified

(h) *Utilities?* None identified

(i) *Transportation?* None identified

(j) *Safety?* None identified

(k) *Other appropriate social and economic circumstances?* None identified

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts None identified

Cumulative Impacts None identified

3. *Describe any mitigation/stipulation measures:*

The Applicant will be required to mitigate hydraulically connected surface water depletions by replacing the total amount of water diverted with contract water purchased from the United States Bureau of Reclamation. The contract water will be released from Canyon Ferry Reservoir MT to mitigate depletions to the reach of the Missouri River where depletions from the proposed appropriation will occur.

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

The only alternative to the proposed action would be the no action alternative. The no action alternative would be to not authorize Groundwater Application for Beneficial Water Use Permit 41QJ 30119816.

PART III. Conclusion

1. Preferred Alternative

Issue Groundwater Application for Beneficial Water Use Permit 41QJ 30119816, if the applicant proves the criteria in 85-2-311 MCA are met.

2 Comments and Responses

None

3. *Finding:*

*Yes___ No_**X**__ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

Name of person(s) responsible for preparation of EA:

Name: Troy Lechman
Title: New Appropriations Specialist
Date: 07/29/2019