



BOARD OF COMMISSIONERS

BOARD OF COUNTY COMMISSIONERS MEETING

3:00 PM, MONDAY, APRIL 17, 2023

Allen Room - Deschutes Services Bldg - 1300 NW Wall St – Bend
(541) 388-6570 | www.deschutes.org

AGENDA

MEETING FORMAT: In accordance with Oregon state law, this meeting is open to the public and can be accessed and attended in person or remotely, with the exception of any executive session.

Members of the public may view the meeting in real time via YouTube using this link: <http://bit.ly/3mmlnzy>. To view the meeting via Zoom, see below.

Citizen Input: The public may comment on any topic that is not on the current agenda. Alternatively, comments may be submitted on any topic at any time by emailing citizeninput@deschutes.org or leaving a voice message at 541-385-1734.

When in-person comment from the public is allowed at the meeting, public comment will also be allowed via computer, phone or other virtual means.

Zoom Meeting Information: This meeting may be accessed via Zoom using a phone or computer.

- To join the meeting from a computer, copy and paste this link: bit.ly/3h3oqdD.
- To join by phone, call 253-215-8782 and enter webinar ID # 899 4635 9970 followed by the passcode 013510.
- If joining by a browser, use the raise hand icon to indicate you would like to provide public comment, if and when allowed. If using a phone, press *6 to indicate you would like to speak and *9 to unmute yourself when you are called on.



Deschutes County encourages persons with disabilities to participate in all programs and activities. This event/location is accessible to people with disabilities. If you need accommodations to make participation possible, call (541) 388-6572 or email brenda.fritsvold@deschutes.org.

CALL TO ORDER

CITIZEN INPUT: Citizen Input may be provided as comment on any topic that is not on the agenda.

Note: In addition to the option of providing in-person comments at the meeting, citizen input comments may be emailed to citizeninput@deschutes.org or you may leave a brief voicemail at 541.385.1734.

AGENDA ITEMS

1. **3:00 PM** [Document No. 2023-382, rendering the Board's decision on the Thornburgh Destination Resort's 2022 Fish & Wildlife Mitigation Plan Modification Approval](#)
2. **3:10 PM** Healthy Schools Program Update

OTHER ITEMS

These can be any items not included on the agenda that the Commissioners wish to discuss as part of the meeting, pursuant to ORS 192.640.

EXECUTIVE SESSION

At any time during the meeting, an executive session could be called to address issues relating to ORS 192.660(2)(e), real property negotiations; ORS 192.660(2)(h), litigation; ORS 192.660(2)(d), labor negotiations; ORS 192.660(2)(b), personnel issues; or other executive session categories.

Executive sessions are closed to the public; however, with few exceptions and under specific guidelines, are open to the media.

3. Executive Session under ORS 192.660 (2) (e) Real Property Negotiations

ADJOURN



BOARD OF COMMISSIONERS

AGENDA REQUEST & STAFF REPORT

MEETING DATE: April 17, 2023

SUBJECT: Document No. 2023-382, rendering the Board’s decision on the Thornburgh Destination Resort’s 2022 Fish & Wildlife Mitigation Plan Modification Approval

RECOMMENDED MOTIONS:

Motion to approve Board Signature of Document No. 2023-382, rendering the Board’s decision on file/appeal nos. 247-22-000678-MC, 984-A, and 247-23-000003-A.

BACKGROUND AND POLICY IMPLICATIONS:

In August 2022, the developer of the Thornburgh Resort (“Applicant”) applied for a Modification request to replace the Resort’s 2008 Fish & Wildlife Mitigation Plan (FWMP) with a new FWMP (“2022 FWMP”). A Hearings Officer denied the Applicant’s request; subsequently, two appeals of the Hearings Officer’s decision were received. The Board of County Commissioners (“Board”) agreed to hear the appeals and held a *de novo* appeal hearing on February 1, 2023.

On March 29, 2023, the Board conducted deliberations and voted 2-1 to approve the Applicant’s Modification request. Additionally, the Board affirmed the Applicant’s appeal (Appeal no. 247-22-000984-A) and denied the appeal filed by Annunziata Gould (Appeal no. 247-23-000003-A). Based on the Board’s deliberations, County staff developed a draft decision for the Board’s consideration.

The 150th day on which the County must take final action on this review is April 17, 2023. For this reason, staff is requesting the Board sign the decision at the meeting.

BUDGET IMPACTS:

None.

ATTENDANCE:

- Caroline House, Senior Planner
- Anthony Raguine, Principal Planner
- Legal Counsel

REVIEWED

LEGAL COUNSEL

For Recording Stamp Only

DECISION OF THE DESCHUTES COUNTY BOARD OF COUNTY COMMISSIONERS

FILE NUMBERS: 247-22-000678-MC, 247-22-000984-A, 247-23-000003-A

SUBJECT PROPERTY: The entirety of the Thornburgh Destination Resort located at:

Address	Deschutes Co. Assessor Map & Tax Lot Number
11800 Eagle Crest Blvd, Redmond, OR 97756	15-12-00, TL 5000
11810 Eagle Crest Blvd, Redmond, OR 97756	15-12-00, TL 5001
11820 Eagle Crest Blvd, Redmond, OR 97756	15-12-00, TL 5002
67205 Cline Falls Rd, Redmond, OR 97756	15-12-00, TL 7700
67705 Cline Falls Rd, Redmond, OR 97756	15-12-00, TL 7701
67555 Cline Falls Rd, Redmond, OR 97756	15-12-00, TL 7800
67525 Cline Falls Rd, Redmond, OR 97756	15-12-00, TL 7801*
67545 Cline Falls Rd, Redmond, OR 97756	15-12-00, TL 7900
67400 Barr Rd, Redmond, OR 97756	15-12-00, TL 8000**

* A portion of this tax lot is not included in the FMP.

** Portions of this tax lot are not included in the FMP.

OWNERS/

APPLICANTS: Central Land & Cattle Company, LLC, Kameron DeLashmutt, Pinnacle Utilities, LLC (collectively "Applicant")

APPLICANT'S

ATTORNEYS: J. Kenneth Katzaroff – Schwabe Williamson & Wyatt
Liz Fancher – Attorney at Law

STAFF CONTACT: Caroline House, Senior Planner – Deschutes County

RECORD: The official record was maintained by Deschutes County and accessible online through a project-specific website at: <https://www.deschutes.org/cd/page/247-22-000678-mc-thornburgh-destination-resort-modification-cmpfmpfwmp>

PROPOSAL: Applicant seeks to modify a discrete aspect of its final master plan (“FMP”) approval, namely the mitigation measures found in its 2008 Fish and Wildlife Mitigation Plan (“FWMP”). Applicant also seeks to modify FMP conditions to reflect that change and ensure compliance with the new 2022 FWMP. The proposal is referred to as the “Application.”

I. APPLICABLE CRITERIA

- Deschutes County Code (“DCC”)
 - Title 18, Deschutes County Zoning Ordinance:
 - Chapter 18.113, Destination Resorts Zone
 - Title 22, Deschutes County Development Procedures Ordinance:
 - Chapter 22.04, Introduction & Definitions
 - Chapter 22.08, General Provisions
 - Chapter 22.20, Review of Land Use Action Procedures
 - Chapter 22.28, Land Use Action Decisions
 - Chapter 22.36, Limitation on Approvals

II. BASIC FINDINGS

As described below (see Resort Land Use History), the Thornburgh Destination Resort (“Thornburgh” or the “Resort”) has been litigated for nearly 20 years. During that time period, the Board of County Commissioners (“Board”) has heard numerous appeals related to the Resort. The current Application seeks to modify a discrete supporting document to the Resort’s FMP. However, multiple parties have raised additional issues that are either outside of the scope of the Application, are not relevant approval criteria, have already been decided in prior proceedings and are binding, or otherwise do not provide a basis for denial of the Application. These arguments are addressed in detail in **Exhibit A**, which is expressly adopted as part of this decision and is meant to supplement the findings herein.

When referenced and unless otherwise noted the “Staff Report” refers to the Staff Report issued by Caroline House on October 17, 2022, in advance of the public hearing before the Hearings Officer.

A. Lot of Record

The Subject Property has been verified as a legal lot(s) of record in previous land use decisions including the Board’s 2006 decision approving the Resort’s CMP.

B. Location and Site Description

The Thornburgh Destination Resort (“Thornburgh” or “Resort”) is comprised of, generally, a large tract of land +/- 1,970 acres in size and includes several tax lots as identified above. The Subject Property is approximately 3 miles west-southwest of the City of Redmond. The Subject Property includes variable topography, native vegetation, rock outcroppings and ridge tops. At this time, the Subject Property is largely undeveloped land. However, the Applicant has started construction of access roads, other infrastructure improvements (i.e., community water system, community sewer system, etc.), and a golf course pursuant to final land use approvals. In addition, the Applicant has applied for and been granted building permits for utility facilities with additional permits pending. The southeastern corner of the subject property is bisected by Cline Falls Road and Barr Road bisects the southwest corner of the Resort tract.

C. Resort Land Use History

The hearings officer adequately captured the prior land use history related to the Resort. Since the hearings officer made his decision, two additional decisions were denied review by the Supreme Court of Oregon.

Gould v. Deschutes County, __ Or LUBA __ (LUBA No. 2022-013, June 1, 2022), *aff’d* 322 Or App 11 (2022) (“*Gould OLU*”), *rev den*, __ Or __ (S069882).

Gould v. Deschutes County, __ Or LUBA __ (LUBA No. 2022-011), *aff’d without op*, 322 Or App 383, *rev den*, __ Or __ (S069813).

D. Public Agency Comments

The Staff Report contained a summary of public agency comments submitted into the record as of the date of that Staff Report. Additional comments from the Oregon Department of Fish & Wildlife (“ODFW”) were received during the appeal hearing before the Board and are addressed under relevant findings and in Exhibit A.

E. Public Comments, Testimony, and Record Submissions

As with any Thornburgh application, robust public participation occurred throughout the review of the Application. Among other participating parties, the Confederated Tribes of the

Warm Springs Reservation (“Tribe”)¹ presented testimony and evidence on the application. Relevant testimony is addressed under relevant findings and in Exhibit A.

F. Review Period and Procedure

The hearings officer detailed the proceeding before him. Both Thornburgh and Appellant Gould appealed his decision, and the Board accepted *de novo* review. After a hearing on February 1, 2023 before the Board, the open record period was left open for 14-days until February 15, 2023. Following a joint request of the Applicant and the Tribe, the open record period was extended until March 1, 2023. A rebuttal period was allowed consistent with the original record procedure for seven days until March 8, 2023 with final legal argument due on March 15, 2023. The Board issued an order updating these time periods.

After the Board’s deliberations and vote on March 29, 2023, the Applicant agreed in writing to extend the clock to April 17, 2023. Accounting for all waived time agreed to by the Applicant, the County’s 150-day clock is set to expire on April 17, 2023.

G. Summary of Application

The Applicant seeks to replace the 2008 FWMP document with an updated 2022 FWMP.² A copy of the proposed 2022 FWMP in its final form is attached as **Exhibit B**.³ The Board understands that this is the final document and has imposed a condition of approval that requires compliance with this document. The 2022 FWMP relies on Condition 39 of the FMP (TSID mitigation project) to achieve compliance with the no net loss/degradation standard of DCC 18.113.070(D)⁴ for Whychus Creek. The Whychus Creek supplement to the 2008 FWMP is not modified by the 2022 FWMP.

The Applicant, in response to concerns expressed in the hearings officer’s decision, also asked the Board to modify FMP Condition 38 and to impose a new FMP Condition 40 to clarify what constitutes compliance with the 2022 FWMP.

¹ The Confederated Tribes of the Warm Springs Reservation refer to themselves as the “Tribe” and so we do the same.

² The 2008 FWMP is comprised of two documents, the April 21, 2008 Fish and Wildlife Mitigation Plan Addendum Relating to Potential Impacts of Ground Water Withdrawals on Fish Habitat and the August 11, 2008 letter from attorney Martha Pagel committing to take certain actions related to Whychus Creek.

³ During the Board’s deliberations on March 29, 2023, Commissioner DeBone identified typographical errors to be corrected on pages 9, 20 and 21. The revised **Exhibit B**, which includes those minor revisions identified on the record, is attached hereto.

⁴ All references to “no net loss” refer to the legal standard of DCC 18.113.070(D) and include degradation of the resource.

Current FMP Condition 38: “[Thornburgh] shall abide by the April 2008 Wildlife Mitigation Plan, the August 2008 Supplement, and all agreements with the BLM and ODFW for management of offsite mitigation efforts. Consistent with the plan, [Thornburgh] shall submit an annual report to the county detailing mitigation activities that have occurred over the previous year. The mitigation measures include removal of existing wells on the subject property, and coordination with ODFW to model stream temperatures in Whychus Creek.”

Proposed Revised FMP Condition 38: “Thornburgh shall abide by the April 2008 Wildlife Mitigation Plan (excluding the April 21, 2008 FWMP addendum to that plan and its addenda)(“Terrestrial WMP”), and all agreements with the BLM and ODFW for management of offsite mitigation efforts required by the Terrestrial WMP. Consistent with the plan, Thornburgh shall submit an annual report to the county detailing mitigation activities that have occurred over the previous year.”

Proposed NEW FMP Condition 40: Thornburgh shall comply with the 2022 Fish and Wildlife Mitigation Plan, including its compliance and reporting mechanisms found in Section II of that plan.

H. Standard of Review – Substantial Evidence

Before addressing specific applicable criteria, the Board notes that the standard it must review the evidence under is the “substantial evidence” standard. Substantial evidence is evidence a reasonable person would rely on in drawing inferences and reaching a decision. *City of Portland v. Bureau of Labor & Indus.*, 298 Or 104, 119, 690 P2d 475 (1984). Substantial evidence includes, but is not limited to: staff reports/statements by staff, expert testimony addressing relevant issues, and technical reports. *See, e.g. Scott v. City of Portland*, 17 Or LUBA 197, 202 (1988); *Oberdorfer v. Harney County*, 64 OR LUBA 47, 50-51 (2011); *Boucot v. City of Corvallis*, 64 Or LUBA 131, 138-39 (2011). Bare assertions are not substantial evidence, and LUBA will affirm a county’s decision where opponents cite to no evidence in the record to support their assertions. *See Comden v. Coos County*, 56 Or LUBA 214, 228 (2008). Additionally, when it comes to technical questions something more than lay testimony is necessary to rebut an expert’s testimony, and ‘mere statement of a party’s attorney does not provide the required evidentiary foundation necessary to support conclusions regarding such technical questions. *See, e.g., Oregon Coast Alliance v. City of Brookings*, 72 Or LUBA 222, 232-33 (2015).

In many instances, as have been discussed in Exhibit A or below, project opponents and commentators have chosen not to provide technical evidence and, instead, simply critique matters of statewide water policy or the conclusions of Thornburgh’s technical evidence. The Board is bound to make its decision based upon evidence in the record and if the Board determines that the Applicant’s evidence is more persuasive and credible than opponents’ evidence in showing compliance with applicable law, the Board must approve an application.

The technical expertise provided by Thornburgh’s team is vast. We agree with the hearings officer that Thornburgh’s technical evidence was prepared by credentialed experts who provided an extreme level of analysis and detail. Additionally, Thornburgh’s team of experts includes a hydrogeologist with significant experience working in analyzing waterways in the Deschutes Basin and hydrologists who have completed water quality studies of the Deschutes River for private and governmental clients, including the Tribe.. The Board finds that Appellant Gould’s experts are less credible and not nearly as comprehensive or experienced. For example, Appellant Gould’s attorneys (Ms. Bragar and Mr. Anuta) are not technical experts. And, while Mr. Lambie may be a CWRE and engineer, he is not a fish biologist, nor does he have any wildlife or habitat-related credentials. The opposite is true for Thornburgh’s slate of experts, which include PH.ds in biology with special certifications in fisheries. See Table 2: Comparison of Experts. We find that the resumes included related to the Thornburgh’s experts are persuasive as to their subject matter and technical expertise.

Similarly, most arguments or issues raised by ODFW and the Tribe related to the 2022 FWMP meeting the no net loss standard do not present biological or habitat related argument; they raise issues related to statewide water policy. This is addressed further below and in Exhibit A.

Table 2: Comparison of Expert Testimony				
Subject	Thornburgh Expert Testimony	ODFW Expert Testimony	Gould’s Expert Testimony	Tribes Expert Testimony
Water Quality and Modeling	Dr. Kellie Vache, Ph.D, Water Resource Engineering. Has over 20 yrs experience, has modeled the Lower, Middle and Upper Deschutes and Lower Crooked Rivers and authored 60 scientific journals, articles, or books.	ODFW provided no expert testimony on water in any respect.	Mr. Lambie provided memo from E-Pur that dealt with elements of the GSFlow modeling.	The Tribes provided no expert testimony on water in any respect.
	Mr. Joe Eilers, Master of Science in Water Quality Management w/over 40 years of experience. A hydrologist who has authored 40 scientific journals and completed modeling on the Lower, Middle and Upper Deschutes River			
	Dr. Pradeep Mugunthan, Ph. D, Civil & Environmental Engineering with 20 yrs of experience. He is an expert at modeling groundwater-surface water interactions and modeling the effects of flow and water quality changes on aquatic habitat. He has authored 14 scientific papers, journals or publications.			

Water Rights & Mitigation Program	Mr. Jim Newton , Certified Water Rights Examiner, Registered Geologist, Registered Engineer. Over 20 years of experience with groundwater and related elements in the Deschutes Basin.	ODFW provided no expert testimony on water rights or the OWRD mitigation rules.	Mr. John Lambie , Certified Water Rights Examiner, Registered Geologist.	The Tribes provided no expert testimony on water rights or the OWRD mitigation rules.
Fish and Fish Habitat	Dr. Lucius Caldwell , Ph. D. Biological Sciences, and Certified Fisheries Professional w/13 yrs of experience regarding the instream flow and fish habitat disciplines, and has designed, led, or participated in dozens of studies and projects focusing on Pacific salmonids. Mr. Joe Eilers , in addition to his expertise on water quality listed above Mr. Eilers is a Certified Fisheries Biologist, and a Certified Lake Manager.	Mr. Gerald George , ODFW District Fish Biologist. Unaware of any specific education but have assumed Mr. George has such for fish.	NONE	NONE
Junipers	Dr. Tim Deboodt , Ph. D. Natural Resource Manager for Crook County. Formerly with OSU Extension service. Leading expert on Juniper trees and the relation to surface and ground water resources.	NONE	NONE	NONE

III. FINDINGS & CONCLUSIONS

Where relevant, the Board specifically incorporates and adopts additional findings found in Exhibit A hereto.

All parties appear to agree that the most relevant criterion related to the Application is found at DCC 18.113.070(D) which provides that in order to approve a destination resort substantial evidence must be provided that “any negative impact on fish and wildlife resources will be completely mitigated so that there is no net loss or net degradation of the resource.” This is referred to as the “No Net Loss Standard.” It is undisputed that the 2008 FWMP met that standard.⁵

Because the No Net Loss Standard is the most relevant to this Application, we address it first.

⁵ The 2008 FWMP only dealt with mitigation related to water habitat and was not intended to address terrestrial habitat. Terrestrial habitat is addressed through a separate plan that is not disturbed by the current Application.

A. DCC 18.113.070 Approval Criteria

In order to approve a destination resort, the Planning Director or Hearings Body shall find from substantial evidence in the record that:

...

D. Any negative impact on fish and wildlife resources will be completely mitigated so that there is no net loss or net degradation of the resource.

For all of the reasons described below and in Exhibit A, the Board finds that the Application meets the No Net Loss Standard.

Thornburgh provided a substantial amount of technical analysis and reports that we find persuasive. Of note, included in the technical analysis was a comprehensive summary of the impacts on fish habitat by Lucius Caldwell, PhD, FP-C, who concluded: *“In conclusion, the findings presented above indicate that the combination of planned groundwater pumping at Thornburgh Resort, and the associated mitigation planned to offset this pumping as described in the 2022 Fish and Wildlife Mitigation Plan (NCI 2008; Newton 2022), appear to be a net benefit for both fish habitat quantity and quality at all sites evaluated and would result in no net loss of fish habitat quantity or quality.”* The Board finds that statement is, while not determinative in the outcome of this case, relevant and persuasive. While Appellant Gould, ODFW, the Tribe, and others raised concerns regarding conformance with this standard, the Board finds the Applicant’s experts provided more persuasive evidence and testimony. For these reasons, the Board finds this criterion will be met.

1. Interpreting the Scope of the No Net Loss Provision

The Court of Appeals has previously interpreted the scope of the No Net Loss Standard. *See Gould v. Deschutes County*, 233 Or App 623, 633 (2010). That decision found that the standard “may be satisfied by a plan that will completely mitigate any impact on the habitat that supports fish and wildlife, without showing that each individual species will be maintained or replaced on a one-to-one basis.”

As it relates to that standard, the 2008 FWMP was found to meet the No Net Loss Standard despite showing temperature increases in certain stretches of the Deschutes River of up to an increase of 0.1 degree C, with an average increase in temperature of 0.07-degree C⁶. Here, the evidence provided by Thornburgh through vast quantities of technical data, modeling, and reports, shows that Thornburgh’s 2022 FWMP increases flows and decreases temperature, an average of (0.01 degree C), which improves fisheries habitat quality and

⁶ Thornburgh’s 2022 FWMP results in reduced temperatures versus increased temperatures in the 2008 plan that were found to meet the No Net Loss Standard.

quantity.⁷ Extensive technical analysis was completed on the Deschutes River, the Crooked River and Whychus Creek, that included: i) complete modeling of surface water flows resulting from changes to groundwater discharge in the 2022 FWMP using the USGS GSFlow model, ii) detailed analysis of the thermal impacts resulting from the changes in flow using the QUAL2Kw model, iii) analysis of changes in flow and temperature, employing both GSFlow and QUAL2Kw in 7 specific spring locations requested by ODFW, iv) further detailed thermal modeling of specific locations around springs in Whychus Creek, v) an analysis of the effects on fish habitat in each of 3 water ways, followed by a Comprehensive Summary of the 2022 FWMP as it pertains to fish habitat. In addition to his conclusions on the entire plan quoted above, Dr. Caldwell assessed the individual streams reaching the following conclusions on each of the following streams:

Deschutes River: *“Overall, the combined effects of planned groundwater pumping and mitigation appear to be a net benefit for both habitat quantity and quality within the Deschutes River, throughout the vast majority of the irrigation season.”*

Crooked River: *“Overall, the combined effects of planned groundwater pumping and mitigation appear to vary seasonally within the Crooked River. During the spring and fall, a net impact is expected for fish habitat quantity and a net benefit for fish habitat quality. During the summer, a net benefit is expected for fish habitat quantity and a net impact for fish habitat quality.”*

Whychus Creek: *“Overall, the combined effects of planned groundwater pumping and mitigation appear to be a net benefit for both fish habitat quantity and quality within Whychus Creek, throughout the vast majority of the irrigation season.”*

Little Deschutes River: *Overall, the effects of planned groundwater pumping and mitigation appear to be one of a habitat quantity benefit throughout the irrigation season, and variable, very small impacts or benefits to habitat quality that vary throughout the irrigation season.*

Dr. Caldwell’s report was submitted during the open record period. There was no response in the rebuttal period provided by a biologist related to habitat impacts to rebut his report. No party provided persuasive evidence to rebut his findings.

⁷ The modeled negative impacts are so small as to be immeasurable and of no biological significance and are far less than the 0.1 degree increase that was previously determined to meet the standard when it approved the 2008 FWMP.

According to the science and technical reports, there is generally no scientific or biological significance in the impacts⁸ under the 2022 FWMP and, as a whole, the plan provides benefits to habitat for fish and aquatic species. Given this context, we find that the 2022 FWMP plan meets the No Net Loss Standard.

Nothing in the No Net Loss Standard or our previous application of it requires that Thornburgh receive “approval” from ODFW. In fact, as recently as 2018, this Board declined to impose additional mitigation requirements proposed by ODFW related to other destination resorts. While FMP Condition 38 adopted in 2008 requires Thornburgh to abide by all agreements with the BLM and ODFW for management of offsite mitigation efforts, ODFW advised the County’s hearings officer that there are no such agreements regarding the 2008 FWMP and the BLM agreement is an MOU that also does not relate to the 2008 FWMP. The Board agrees with the hearings officer that ODFW’s comments are relevant, but we find that the evidence provided by the Applicant is more persuasive in establishing that the No Net Loss Standard is met. Likewise, the Tribe’s comments were considered but Tribe approval of the 2022 FWMP is not required.

a) Drought and Outside Impacts

Many of the arguments and issues related to Thornburgh’s 2022 FWMP are related to drought and regional well decline. Opponents assert that these are relevant issues and should lead to denial. We disagree. The No Net Loss Standard requires a resort to mitigate its own impacts, not the cumulative impacts of drought or other basin-wide water policy and management issues. The No Net Loss/degradation test is limited to addressing potential negative impacts of resort development. Impacts to habitat caused by other persons or environmental conditions are not attributable to Thornburgh’s use of water or the impacts of Thornburgh’s use.

Thornburgh has quantified its impacts on water quality and quantity and the locations where these impacts will occur. It has studied waterway conditions in a typical year, and it has also provided expert evidence that shows the benefits of mitigation are enhanced during periods of drought. This approach properly accounts for issues of drought and the low flow conditions opponents argue make the results of Thornburgh’s expert analysis of aquatic habitat unreliable.

Opponents, ODFW, and the Tribe have also raised issues that pending litigation regarding flow requirements and the Habitat Conservation Plan (“HCP”) related to the Spotted Frog may lead to additional constraints on live flows. These issues are outside of the scope of the Thornburgh’s impacts and Thornburgh is not required to mitigate for them. Thornburgh

⁸ Substantial evidence shows that virtually all flow and temperature changes, while mostly beneficial, are too small to measure with equipment currently available. Even ODFW notes that impacts to the Crooked River, for example, are “noise.”

must mitigate for its impacts, alone. Further, Thornburgh’s plan relies primarily upon groundwater water sources, and its technical analysis shows that the 2022 FWMP will result in increased surface flows which are beneficial to fish and wildlife. Thornburgh has also provided expert testimony that its plan will not result in negative impacts to the spotted frog, which we find persuasive.

b) Regional Well Decline

A large amount of testimony was received regarding regional well declines. This issue has no bearing on whether Thornburgh mitigates its own water use to ensure no net loss or degradation of habitat. Furthermore, the 2022 FWMP requires a significant reduction in the amount of groundwater that may be pumped by the Resort.

2. No Net Loss Standard does not Prescribe Methods; Water Policy Issues

Appellant Gould, ODFW, the Tribe, and others all assert that the only way to meet the No Net Loss Standard is through “legally protected” instream water – and more particularly, that legal protection can only occur by providing an instream transfer. We do not agree. OWRD has established mitigation rules for the Deschutes Basin which include several different methods of providing legally protected flows. *See e.g.*, OAR 690-505-0605; OAR 690-505-0610. Additionally, other actions may also achieve compliance with the No Net Loss test, as demonstrated by ODFW’s approval of the Eagle Crest mitigation plan that involves the acquisition and nonuse of Swalley Irrigation District water rights and pumping of some of the rights in a different, more environmentally beneficial location. In reality, the arguments made by opponents relate primarily to issues related to water policy and management, an issue outside of our control and under the sole discretion of OWRD.

Here, many of the issues raised are related to OWRD requirements and have little to nothing to do with Thornburgh. For example, ODFW argues that ORS 537.270 does not assure water is actually available. However, that statute specifically provides to the contrary. In particular, ODFW takes issue with the “reliability” of certain water rights included in the 2022 FWMP. ODFW asserts that unless Thornburgh can show that the water right has been used to its full extent for 8 of the past 10 years, then any benefit it provides under the 2022 FWMP should not accrue or should be substantially discounted (to 20% of the water right) because the water is already remaining in stream instead of being used. That position is devoid of merit. Testimony to this record makes it clear that no “new” water rights are being created in the Deschutes Basin; all water use must already be certificated or mitigated for by retiring existing rights. This means that if Thornburgh does not use the water rights, it is reasonable to assume they will be sold and used by someone else.⁹ They do not just remain in stream.

⁹ Multiple parties testified that the Tree Farm water right acquired by Thornburgh underwent competitive bidding processes, with multiple buyers vying for the water right, and so that right could have been used by others.

Moreover, Oregon water law only requires use to the full appropriation once every five years. ODFW's subjective discounting of water rights is not consistent with the law. There is no factual basis for applying a discount to any water rights and no actual relationship to the efficacy of the proposed mitigation.

Opponents, ODFW, and the Tribe claim on one hand that groundwater discharge is important to them to protect fisheries habitat, but when presented with the 2022 FWMP that is focused on the direct restoration of groundwater to replace reduced groundwater discharge, they question the "transfer strategy" and how it provides benefits. Several comments claimed it was complex, or too difficult to understand, but this is due to the fact the issues are ones that must be addressed by qualified experts. Thornburgh stated that the 2022 FWMP is based on simple, well-established principles that provide in-kind mitigation, largely increasing cool groundwater discharge to replace the loss of the same, and, replacing the groundwater discharges in-proximity to where the impacts would occur, and doing so in advance of when any pumping occurs. We concur with the Applicant and find the Applicant's technical analysis to be persuasive.

Thornburgh provided expert testimony from its CWRE, as well as expert technical analysis in the form of temperature and flow information that transferring the proposed water (following the 2022 FWMP) would result in additional flows and cooling temperatures, generally. There was scant technical rebuttal to Thornburgh's expert testimony. Ms. Gould's consultant, Mr. Lambie submitted technical reports including flow information on the Crooked River, also derived from the USGS GSFlow model; the same model relied upon by Thornburgh's expert. Mr. Lambie's technical information confirmed what Thornburgh's experts stated, that there was a reduction in flow, although slight on the Crooked River. Mr. Lambie provided no opposing data pertaining to the changes in flow in any other reach, which are largely areas Thornburgh's expert analysis showed increased flow. Although ODFW challenged Thornburgh's analysis in a submission dated March 1, 2023, Thornburgh responded to ODFW, stating that its submission was based on erroneous information in time for ODFW to rebut Thornburgh's analysis. The Board finds that, without further rebuttal from ODFW, there was no accurate technical analysis of the thermal impacts or expert testimony provided on such by any commenting party. And, as noted above, there was no rebuttal or expert testimony disputing Dr. Caldwell's summary of the effects on fish habitat. We find this information to be persuasive.

We note that some commentators criticize water law and OWRD on one hand and rely on it in others.¹⁰ For example, in ODFW's March 1st letter, it takes issue with OWRD's water management and existing water law. At the same time, it claims that a single method of mitigation allowed by the Deschutes Basin Groundwater Program—instream water

¹⁰ Although we only specifically address ODFW's comments here, many other commenters argued that the only method of mitigation that is efficacious is instream water rights that are transferred to a governmental entity. That is not the law.

transfers—is the only acceptable form of mitigation and that it must be discounted by 20% in certain circumstances. This sort of consultation and comment is unhelpful as it implies a bias to only specific measures and rejection of all others without addressing the overall technical or scientific impacts of other measures that also provide habitat benefits. As discussed above, Thornburgh pointed out that many of the factual assertions that underlay ODFW’s March 1st letter were incorrect and it sent its comments to ODFW directly before the rebuttal period closed. ODFW did not respond or correct its assertions that led to its recommendation. The Board’s concludes that Thornburgh’s evidence and testimony is more reliable and credible than that of ODFW.

Nothing in our No Net Loss Standard prescribes any specific method to meet it. Thornburgh has prescribed measures in its 2022 FWMP which result in meeting the No Net Loss Standard for aquatic habitat alone, as testified to by multiple technical experts of various disciplines.

The 2022 FWMP describes that Thornburgh, who already owns approximately 1,211 acre-foot of water rights, intends to use those rights in a variety of ways to grant it the right to pump water at the Resort, each of which their experts claim will provide similar benefits. The different methods of use include:

- a) Transferring the water rights from their existing points of appropriation to wells at the Thornburgh Resort,
- b) Transferring the surface water rights to instream water rights, and
- c) Cancelling the water right in-lieu of mitigation.

Opponents, ODFW, and the Tribe claim that (b) is the only acceptable method to achieve the No Net Loss Standard. Thornburgh provided substantial evidence that all three methods were appropriate and acceptable. Mr. Anuta, Gould’s attorney and others claim that there is no “Cancellation in-lieu of Mitigation” program or claimed cancelling water rights would not protect the water instream, and that anyone else (more junior user) could simply grab the water so there is no benefit. Thornburgh’s experts disputed those claims. Mr. Lambie, Gould’s expert, provided testimony that the formal name for what applicant refers to as cancellation in-lieu of mitigation is the “Offset Voluntary Mitigation Option” which is an acceptable form of mitigation and, as the evidence shows, *does* result in protected instream water under the OWRD mitigation rules. OAR 690-505-0610. We find Thornburgh’s experts to be knowledgeable and reliable. Further, we find Thornburgh’s experts to be more persuasive than those of the opponents, ODFW and the Tribe.

3. Water Law vs. the No Net Loss Standard

Opponents, ODFW and the Tribe have expressed concern over what they see as shortcomings between OWRD water law and the No Net Loss standard, i.e.: that water law will not ensure compliance with the No Net Loss Standard. At the same time the opponents,

ODFW, and the Tribe raise concerns about the shortcomings of water law, they argue that, of the Applicant’s three proposed water rights transfer methods, only transferring the surface water rights to instream water rights complies with ensures the No Net Loss Standard. We find that the Applicant has shown that Oregon water law and additional assurances in its 2022 FWMP will be reasonably likely to achieve compliance with the No Net Loss Standard.

4. ODFW Reliability of Water Rights

As noted above, ODFW disagrees with elements of OWRD water law and desires to create a new standard related to the reliability of water rights that is outside of typical water law, particularly for these Thornburgh proceedings¹¹ and to impose that standard on Thornburgh. This could put Deschutes County in the position of determining aspects of water law that have been delegated to OWRD and not to counties. We decline to take that approach. Thornburgh has provided substantial evidence of pumping records, aerial photos, affidavits of use for individual water rights that indicate substantial use and that rights will provide actual benefits to impacted waterways. Additionally, as Thornburgh has pointed out, ORS 537.270 directly relates to whether certificated water rights are evidence of water priority *and* appropriation or use. We find that where Thornburgh has (or is planning to use) certificated or permitted water that the amount of appropriation, duty and priority govern here. We find that Thornburgh’s water rights are “reliable” for the purpose of complying with the No Net Loss Standard.

The Board finds that, with respect to arguments that the Applicant’s water rights cannot be considered reliable and/or “wet water,” the County cannot second-guess OWRD’s determinations concerning the legality of water rights and/or the current status of those rights for which the Applicant is requesting transfers. We find that the proposed water rights that will be used for the Resort’s water supply and mitigation are reasonably certain to be approved for transfer by ODFW.

5. Compliance with the 2022 FWMP

The hearings officer faulted Thornburgh for not providing clearer compliance requirements. ODFW also expressed similar concerns. The hearings officer cited compliance language in Thornburgh’s burden of proof in questioning whether that should or should not be included. That language provided the basis for the addition of compliance language in the amended FWMP. Thornburgh provided language for a proposed condition 40 to enforce compliance.

¹¹ There is no evidence that shows ODFW has requested any similar rules for any other resort projects in Deschutes County.

In addition, there were concerns the 2022 FWMP would create conflict with existing FMP Condition 38. The Board finds it appropriate to revise Condition 38 as detailed below. Both conditions are below and are imposed:

Revised FMP Condition 38: “Thornburgh shall abide by the April 2008 Wildlife Mitigation Plan (excluding the April 21, 2008 FWMP addendum to that plan and its addenda)(“Terrestrial WMP”), and all agreements with the BLM and ODFW for management of offsite mitigation efforts required by the Terrestrial WMP. Consistent with the plan, Thornburgh shall submit an annual report to the county detailing mitigation activities that have occurred over the previous year.

FMP Condition 40: Thornburgh shall comply with the 2022 Fish and Wildlife Mitigation Plan, including its compliance and reporting mechanisms found in Section II of that plan.

The Board finds that the 2022 FWMP ensures ongoing compliance with the No Net Loss Standard and sufficient monitoring is required by the 2022 FWMP and FMP Condition 40.

6. Advance Mitigation

Thornburgh has secured, by purchase, all of the water rights described in the 2022 FWMP. The rights will not be pumped regardless of the outcome of transfers or other actions. If a transfer is not approved, the mitigation water created by the cessation of pumping the water right will still provide actual benefits to streamflow, and aquatic habitat. In addition, the evidence shows that Thornburgh has ceased pumping all the water, leaving it available for habitat benefits.. Thornburgh has been providing this benefit under the individual right, in some cases, for more than a decade. The Board is not relying upon the advance mitigation for the Applicant to demonstrate the No Net Loss Standard at this time.

7. Whychus Creek

Whychus Creek was the subject of intense litigation that was resolved with the approval of the FMP. The FMP required mitigation into Whychus Creek by restoring 1.51 cfs (a minimum of 106 acre-feet) of conserved water from the Three Sister Irrigation District. The Whychus Creek mitigation is final and past all appeals. As there is no change to this segment of the FWMP, any attack against the plan is an impermissible collateral attack on the FMP. Further, the evidence shows that Thornburgh has completed the requirements pertaining to the Whychus Creek Mitigation and that the water has been permanently transferred instream. Lastly, Thornburgh is canceling the Dutch Pacific water right that will provide additional groundwater discharge to Whychus Creek.

8. Reduction of Water Consumption.

Thornburgh has taken the substantial step to reduce its water consumption by roughly 35%. This in turn reduces all impacts on stream flows and leaves more water in the regional aquifer. As Thornburgh stated, it reduced water use in direct response to opponents' calls to do so. This is a positive action.

9. Other Beneficial Actions

The 2022 FWMP contains mitigation measures the applicant plans to undertake that provide mitigation over and above what is required to comply with the No Net Loss Standard ("extra measures"). The Board has not relied on these excess measures to find that the 2022 FWMP complies with the No Net Loss standard. If it is necessary in the future to rely on extra measures to demonstrate compliance with the No Net Loss standard, the merits of these measures may be reviewed at that time. The following table, Table 1, identifies required and additional mitigation measures:

A. Benefits calculated to meet compliance with no net loss						
#	Groundwater	AF	Type	Ownership	Mit Action	Date
1	BFR Deep Canyon - Terrebonne	614.8	Irrigation	TRC	Thornburgh stopped pumping leaving water in aquifer to be discharged via seeps and springs into the river as noted in the GSFlow & QUAL2Kw modeling.	2022
2	BFR Groundwater - Terrebonne	18.9	Irrigation	TRC		2021
3	Dutch Pacific - Sisters	49.5	Irrigation	TRC		2019
4	Tree Farm - Bend	327.5	Quasi-Muni	TRC		2021
Surface Water						
5	LeBeau - LaPine	200	Irrigation	TRC	In 2021 Thornburgh placed water temp. instream. In 2022 provided water to NUID. Will do temp transfer instream in 2023. Water will increase flow from POD to LBC. Permanent transfer pending.	2021
6	TSID Sisters- 1.51 cfs	106	Conserved Water	Permanent Instream Transfer of 1.51 cfs accomplished by canal piping. Funding for project provided by Thornburgh. Project is complete satisfying Condition 39.		2012
Total		1316.7	NOTE: Provides a net benefit to fish habitat, quality and quantity.			
B. Benefits not included in compliance with no net loss (extra)						
#	Other Mitigation	Action		Date	Benefit	
7	Provide mitigation in advance of creating impacts	Provide mit water before pumping or before impacts are realized in stream flow.		2012 on	Leaving water 24,654 AF (1-6 above) in the aquifer or stream prior to impacts benefits fish habitat, equals 17 yrs of pumping	
8	Juniper Thinning on Thornburgh and BLM Land Redmond	Thin Juniper trees on 1,000 of acres of BLM and Thornburgh Lands.		2024-2039	Up to 912 AF of water savings will improve soil moisture, planting and groundwater recharge	
9	Clear Juniper in cooperation with Crooked River Watershed Council	Clear and remove 1,050 acres of Juniper in Crooked River Watershed		2029-2038	210 AF of water savings will improve soil moisture, planting, groundwater recharge	
10	Fund CRWC Nitrogen study	Fund \$5,000 for nitrogen study in cooperation with the CRWC		2024	Determine cause of Nitrogen levels in river to create options to reduce nitrogen in order to improve fish habitat.	
11	Crooked River restoration & riparian improvements w/CRWC	Will provide over \$400,000 for riparian & restoration action in the lower Crooked River		2024-2033	Will improve fish habitat throughout 11 miles of the lower Crooked River.	
12	DRC mitigation Credits	Provided 6 AF of DRC mitigation credits		2103 on	Provides 6 AF of stream flow	

10. Other Issues and Comments.

There were numerous other comments and issues raised. Applicant has created a chart included as Exhibit A that is incorporated into this decision.

Ultimately, we find that Thornburgh’s 2022 FWMP meets the No Net Loss Standard. We find that the required measures identified in the 2022 FWMP are reasonably likely to succeed. *Gould v. Deschutes County*, 233 Or App 623, 227 P3d 758 (2010).¹²

K. Adequate water will be available for all proposed uses at the destination resort, based upon the water study and a proposed water conservation plan. Water use will not reduce the availability of water in the water impact areas identified in the water study considering existing uses and potential development previously approved in the affected area. Water sources shall not include any perched water table. Water shall only be taken from the regional aquifer. Where a perched water table is pierced to access the regional aquifer, the well must be sealed off from the perched water table.

Opponents argue that Thornburgh has no water right; that G-17036 has expired or is no longer valid; or that water is otherwise unavailable such that the current Application must be denied. The Board finds that the G-17036 water right status was settled by approval of the FMP and subsequent Thornburgh Site Plan and Tentative Plan approvals, which have been adopted by LUBA and affirmed by appellate courts. The Board also finds that compliance with DCC 18.113.070(K) is addressed by FMP Condition 10¹³, which is not implicated in a review of the FWMP, as the Applicant continues to rely on G-17036 for the Resort’s water source. Furthermore, CMP Condition 37 (now met) required that the applicant “demonstrate compliance with DCC 18.113.070(D) by submitting a wildlife mitigation plan to the County as part of its application for Final master plan review.” This makes it clear that the No Net Loss Standard, and not DCC 18.113.070(K), applies to the review of the Resort’s fish and wildlife mitigation plans.

This criterion is interpreted to relate only to consumptive water to be used and the Deschutes Basin Groundwater mitigation required by OWRD. The plain text of the criterion makes this clear. It uses language such as “all proposed uses at the destination resort” and “existing uses and potential development previously approved in the affected area” and

¹² This is especially true because the ultimate backstop for the plan is to not pump water and thereby have no impact. No mitigation is required if no water use or pumping occurs.

¹³ FMP Condition 10 states: “Applicant shall provide, at the time of tentative plat/ site plan review for each individual phase of the resort development, updated documentation for the state water right permit and an accounting of the full amount of mitigation, as required under the water right, for that individual phase.”

describes where water can be appropriated from. Nothing in this criterion relates to the fish or wildlife habitat mitigation measures required to meet the No Net Loss Standard.

This interpretation is consistent with that which has been routinely adopted by LUBA and affirmed by appellate courts. For example, *see Gould v. Deschutes County*, 322 Or App 11, 518 P3d 978 (2022) (*Gould OLU*). In a well-reasoned opinion, the Court of Appeals firmly rejected the argument presented by opponents that Thornburgh had no water available to it for consumptive use by the Resort. The Court said:

“We address each of petitioner's challenges in turn, conclude that LUBA did not err, and therefore affirm.

Petitioner's arguments in her first assignment of error turn on LUBA's interpretations of both FMP Conditions 10 and 38, which we review as a matter of law. As noted, several of those interpretative issues have been decided in previous LUBA orders that have been affirmed on judicial review and that we therefore do not consider here. *Beck v. Tillamook*, 313 Ore. 148, 153, 831 P2d 678 (1992) (A party is not entitled to relitigate issues that have been resolved on review of previous phases of the same land use litigation). LUBA has previously held, in orders that we have affirmed without opinion, that the requirements of FMP Condition 10 were satisfied by the documentation provided by Thornburgh, including documentation of the continued existence of Permit G-17036 and mitigation data. *Gould VIII; Gould Golf*. Thus, we decline to consider petitioner's contention in her first assignment that Thornburgh has failed to show that it holds a valid water permit or that it has not presented sufficient data on mitigation. And we decline to consider petitioner's argument, resolved in previous litigation, that FMP Condition 10 requires proof, at this stage, of the availability of actual water behind Thornburgh's water right. Thus, all of petitioner's arguments relating to FMP Condition 10 have previously been rejected and we reject them here.

Most of petitioner's arguments in her first assignment of error relating to FMP Condition 38 have also been previously addressed and rejected by LUBA in earlier orders. Petitioner's primary argument is that the requirement in FMP Condition 38 that Thornburgh "abide by" "the April 2008 Wildlife Mitigation Plan, the August 2008 Supplement, and agreements with the BLM and ODFW for management of off-site mitigation efforts" means that petitioner must prove, at every approval stage, that it has fulfilled those requirements, which are set forth in the FWMP. LUBA noted in its order that "the plain meaning of 'abide by' is 'to act or behave in accordance with or obedience to (as a rule or promise) * * *: conform to.' *Webster's Third New Int'l Dictionary* (unabridged ed 2002). The opposite of 'conform to' is 'deviate from.'" (Omission LUBA's.) LUBA agreed with petitioner's contention that the

requirement that Thornburgh abide by the requirements of the FWMP at every stage means that it must comply with the FWMP at every stage. But LUBA noted that it has held, in an order that we have affirmed without opinion on judicial review, *Gould VIII*, that neither the FWMP nor FMP Condition 38 requires pre-development mitigation, and that the requirement to "abide by" the FWMP in FMP Condition 38 is satisfied by the reports filed by Thornburgh that address the requirements of the FWMP. As interpreted by the county and affirmed by LUBA, compliance with FMP Condition 38 is measured by annual reporting filed after water use has begun. We are satisfied that, in light of the requirements of the FWMP, with which FMP Condition 38 requires compliance and which imposes no requirement for pre-development mitigation, LUBA's interpretation of FMP Condition 38 is correct as a matter of law. We therefore reject that portion of petitioner's first assignment of error." *Gould OLU*, 322 Or. App. at 23-24.

Further, as in other County decisions approving Thornburgh development approvals, Thornburgh again provided evidence that G-17036 is a valid and non-cancelled permit. The Board finds that this criterion, if relevant, is met.

LUBA has observed that "[i]n calling for updated documentation for each phase of development, the text of FMP Condition 10 suggests that water sources and permits for the destination resort could potentially change following FMP approval." *Gould v. Deschutes County*, __ Or LUBA __ (LUBA No. 2021-066, January 1, 2023), slip op. p. 13.

The Board finds that so long as the Resort can show, consistent with FMP Condition 10, that a groundwater right remains in a valid and non-cancelled status that may serve the Resort, this criterion is not violated, and FMP Condition 10 is satisfied.

Having addressed the substantive arguments found in DCC Title 18 we now address the procedural arguments.

B. Procedural Arguments

Throughout the proceedings below and before the Board, several parties including Appellant Gould made procedural claims or arguments that must be addressed.

1. "Void CMP" Argument

Opponents claim that LUBA held in *Central Land and Cattle Co. v. Deschutes County*, 74 Or LUBA 326 (2016) land use decision ("LUBA FMP 2016 Decision") that the Thornburgh conceptual master plan or "CMP" is void. LUBA held that "[a]ll requirements of the CMP approval are now requirements of the County's FMP approval" and the FMP "has effectively incorporated and displaced the CMP approval" *LUBA FMP 2016 Decision* at 346. LUBA did not

find that the CMP is void. Furthermore, as is detailed in that case, the County's hearings officer *rejected* Appellant Gould's argument in that case that the CMP was void and LUBA affirmed that decision. Therefore, this argument is an impermissible collateral attack on the resolution of this issue by the *LUBA FMP 2016 Decision*. It is also settled and binding under *Gould v. Deschutes County*, __ Or LUBA __ (LUBA No. 2022-013, June 1, 2022), *aff'd* 322 Or App 11, 23 (2022) (explaining a party may not relitigate issues resolved in previous phases of development), *rev den*, __ Or __ (S069882).

Opponents go on to claim that the CMP is void because Thornburgh failed to seek and the County failed to hold a hearing on remand in *Gould v. Deschutes County*, 72 Or LUBA 258 (2015) within the statutory timeline under ORS 215.435. This issue is an impermissible collateral attack on LUBA's finding that the CMP has been incorporated into the FMP. Furthermore, the provision of ORS 215.435 that terminates an application if a review on remand is not requested within 180 days of the final resolution of judicial review was not effective until after LUBA issued its remand decision. This law may not be applied retroactively because to do so would prejudice the Applicant in that case by voiding that application. Furthermore, the case in question did not find that the CMP is void and that was not its legal effect. LUBA approved the FMP thereafter finding that it incorporated the CMP and that decision is final.

The Board finds that Thornburgh's CMP is not void.

Moreover, the Board notes that the CMP required creation of a FWMP to meet the No Net Loss Standard at FMP approval stage, not during CMP review. Therefore, the CMP is not implicated or altered by this Application; there is no change to the CMP and findings from the CMP are not altered.

2. Interaction between the CMP and FMP

There is some confusion regarding the County's resort application process and the relation, if any, between a CMP and FMP. Opponents to the Application argue that Thornburgh's CMP and FMP are not one document, and the Hearings Officer found that the CMP and the FMP are two separate documents. The Applicant has stated they are one document. We find that the issue is largely irrelevant because the FMP "incorporated and displaced" the CMP, as stated by LUBA. We agree with the Applicant that they are now both a part of a single document- one part being the CMP and the other being the FMP.

As outlined in DCC Chapter 18.113, a destination resort is subject to a three-stage approval process. After a CMP is approved, a more refined FMP must be approved. Finally, each phase receives final approval, which is much more specific, at the individual site plan or tentative plan stage. Up and until a third-stage application, fluidity in a resort's plan is warranted and provided for in the Code and in the Board's 2006 decision approving Thornburgh's CMP.

DCC 18.113.090 requires general locations and descriptions to be included in the FMP. DCC 18.113.100(A) then requires the FMP to be reviewed against the CMP criteria and standards. Once an FMP is approved, third-stage development applications may be made and compliance is adjudged against the FMP, which as LUBA ruled, incorporates and displaces the CMP.

The purpose and relevancy of the CMP now, is for context related to a modification of the FMP approval. The hearings officer erred in finding that modifying the FMP may, in this case, require modification of the first-phase CMP document. Here, no change to the CMP is required. The final version of Thornburgh’s CMP included Condition 37. It replaced CMP Condition 28, which was rejected by the Oregon Court of Appeals. CMP Condition 37 required the applicant to demonstrate compliance with DCC 18.113.070(D)(no net loss/degradation) by filing a wildlife mitigation plan as a part of its application seeking approval of the FMP. It also required that a public hearing be held with the same participatory rights allowed for approval of the CMP. While CMP Condition 37 applied to the review of the Resort’s initial FWMP during the review of the FMP, it also applies to any changes made to the FMP that involve revisions to the FWMP. The Applicant has complied with CMP Condition 37 by seeking the required public review for an amendment of the FWMP part of the FMP. Furthermore, no finding in the CMP considers, relies on or addresses any provision of the 2008 FWMP so no change of the CMP is required in order to approve changes to the FWMP.

3. Substantial Change – Code and Conditions

Opponents argue that the Application seeks a substantial change to the approved CMP and FMP, and that such a change requires a new application or a consideration of substantive criteria other than DCC 18.113.070(K), including all criteria related to the original CMP approval. These arguments are largely based upon the term “substantial change” as it is used in various provisions of the Code or specific conditions. While the hearings officer attempted to harmonize these requirements, the decision below was at times conflicting. We take this opportunity to clarify and interpret our code as it relates to “substantial changes” in the context of this Application.

a) DCC 18.113.080

Opponents have argued that the Application is a “substantial change” as that term is used in DCC 18.113.080 and so the Application must be reviewed against all criterion related to CMP approval. They argue that the Application’s proposed reduction in water use and or deletion of an optional golf course changes/alters the “*type, scale, location, phasing or other characteristic of the proposed development.*” The Board disagrees.

DCC 18.113.080 states:

“Any substantial change, as determined by the Planning Director, proposed to an approved CMP shall be reviewed in the same manner as the original CMP. An insubstantial change may be approved by the Planning Director. Substantial change to an approved CMP, as used in DCC 18.113.080, means an alteration in the type, scale, location, phasing or other characteristic of the proposed development such that findings of fact on which the original approval was based would be materially affected.”

As noted by the Applicant and by the Tribe, the CMP and FMP do not commit the Applicant to using all of the water authorized by approval of the FMP or to develop more than one golf course. Consequently, a commitment not to use all allowed water, or to not build a golf course that was *optional* and not required, does not alter the scale of the Resort in any way such that findings of fact of the original CMP approval would be materially affected. Only one golf course is required. The other two are optional. This means that the third golf course that the Applicant has agreed not to build is not required to be built, even if the impacts of this potential golf course were identified, studied and mitigated when the CMP was approved. Choosing not to construct it is not a substantial change given that it was not required in the first instance. As a result, the Board finds that limitations on water use and golf course development are not a substantial change to the approved CMP.

The hearings officer correctly determined that the DCC 18.113.080 definition of “substantial change” has a second requirement (in addition to the “alteration” requirement addressed above). That is, the hearings officer is correct that Applicant’s proposal to modify the CMP/FMP water usage or elimination of an optional golf course are not “substantial changes” under DCC 18.113.080 because the changes would not require an alteration of the findings of the original approval.

However, we disagree with the hearings officer interpretation of the Code in that the hearings officer determined that changing mitigation from the 2008 FWMP to the 2022 FWMP is changing a characteristic of the proposed development. We agree with the Applicant that the changes in the source of mitigation water from the 2008 FWMP to the 2022 FWMP is merely a change to a plan that *mitigates for the impacts* of the proposed development. It does not change the proposed development or the characteristics of it beyond placing a greater restriction on the maximum amount of water used and the number of optional golf courses that may be developed. Approval of the proposed amendment does not require any change in the findings of the CMP as none address the provisions of the 2008 FWMP.

Further, the hearings officer’s determination that an amendment to the FWMP would materially affect the findings of compliance with the No Net Loss Standard in the FMP because it modifies mitigation measures and so is a DCC 18.113.080 “substantial change,” is

incorrect. DCC 18.113.080 asks whether a proposed change to an “approved CMP” is a substantial change. The approved CMP is the CMP approved by the Board in DC Document No. 2006-151 as modified by DC Document No. 2008-51. No finding of the approved CMP addresses the particulars of the 2008 FWMP. Instead, Condition 37 of the approved CMP requires the filing and public review of an FWMP with the FMP application. The requested modification of the FWMP has been reviewed in the manner required by Condition 37 of the approved CMP, which is through a land use application review.

Opponents have also argued that DCC 18.113.080’s requirement that any substantial change “be reviewed in the same manner as the original CMP” requires an entirely new CMP. That is not the case. The Code merely requires that a substantial change be reviewed “in the same manner” as the original CMP, which is to say that it proceed through land use review in the same way as the original CMP in that case. Even though the Board finds that no substantial change is proposed here, the land use review has afforded the same process provided during the original CMP, which was review before a hearings officer and then the Board of Commissioners.

The Board finds that the Application does not need to meet all criteria related to CMP approval. The Board further finds that the Application does not represent a substantial change as that term is used in DCC 18.113.080.

b) CMP and FMP Condition 1 – New Application & Substantial Change

Opponents argue that CMP and FMP Condition 1 are relevant and that they require a new resort application. These conditions are identical and are addressed herein as “FMP Condition 1.” FMP Condition 1 provides that “approval is based upon the submitted plan. Any substantial change to the approved plan will require a new application.” The Board disagrees with opponents that a “new application” means a new CMP or new FMP. The reference to a “new application” means a new land use application and land use review which includes an application to modify the CMP or FMP. This is the most reasonable interpretation of this language as the condition uses a term, “substantial change,” defined by and assigned consequences by the Resort code. There is nothing in the text of Condition 1 to suggest that a different and more stringent rule is being applied by the CMP and FMP decisions. Applying an interpretation that is different than the Code would effectively repeal the relevant Code criteria regarding substantial change.

The CMP originally imposed Condition 1, which states that “Approval is based upon the submitted plan. Any substantial change to the approved plan will require a new application.” Upon FMP approval, the hearings officer carried through the condition to ensure compliance with the original CMP. The condition means the same in both contexts, and neither require that an application for a new CMP or new FMP be sought, only that a modification application be filed and then reviewed in the same manner as the original approval.

This interpretation is consistent with the Board's previous findings in Thornburgh's CMP decision in 2006. In our 2006 Decision, the Board determined that the substantial change of converting Phase A Overnight Lodging Units to single-family homes would require "a modification of this conceptual master plan" – not approval of a new CMP. DC Document 2006-151, p. 46. This finding is contained in the same decision that created Condition 1. If a new CMP were required to make a substantial change such as this to the CMP, Condition 1 would surely have said so. Additionally, Condition 1 does not say that a substantial change renders the approved CMP or FMP void. It only requires a "new application" which the BOCC's CMP findings indicate is an application for modification of the conceptual plan.

With regards to whether the Application is a Condition 1 "substantial change," the hearings officer determined that LUBA had held in a previous modification that the application of DCC 18.113.080's "substantial change" definition to define the meaning of FMP Condition 1 was appropriate and so the Application is an FMP Condition 1 "substantial change" because the hearings officer determined a DCC 18.113.080 "substantial change" was requested. As already noted above, the Board disagrees that the Application is a DCC 18.113.080 "substantial change" because it involves no change to the approved CMP. The Board agrees with the hearings officer that DCC 18.113.080 defines the meaning of "substantial change" in FMP Condition 1. The Board, however, finds that the Application is not a "substantial change" for the purpose of FMP Condition 1. As we determined earlier, it is not a change of CMP Condition 1.

While FMP Condition 1 relates to the FMP that includes the 2008 FWMP, the 2022 FWMP will not modify or authorize additional development so it will not impose significant additional impacts on surrounding properties. It is not a "substantially new [destination resort] proposal." The 2008 FWMP is a discrete and minor part of the FMP that addresses one code criterion of many – DCC 18.113.070(D). It serves a narrow purpose of mitigating the impacts of resort development. It is not, itself, resort development or a plan for resort development.

FMP Condition 1 was imposed to apply to the entire FMP and all supporting documents, not to a discrete singular mitigation plan. Instead, FMP Condition 38 was imposed for compliance with the FWMP, which is exactly what the Application seeks to modify. We agree with the hearings officer's findings of compliance with DCC 22. 22.36.040(C) that find that the FWMP is a minor part of the approved FMP. Changing this one element or part is not a substantially new destination resort proposal.

We find that this is permitted and that such a modification is not a "substantial change" for the purposes of FMP Condition 1.

Opponents argue that approval of the FMP and 2008 FWMP relied upon findings of fact that the Resort had obtained OWRD water right permit G-17036 and that that permit has since expired. We disagree that the FMP and FWMP relied upon that permit, and, that argument

has been routinely rejected by appellate bodies. We have further addressed this issue above related to water availability and in Exhibit A.

The record includes OWRD records that show that G-17036 remains “non-cancelled.” LUBA and the Oregon Court of Appeals have affirmed County findings in approvals of Resort development that G-17036 has not expired. *Gould v. Deschutes County*, 322 Or App 11 (2022), rev den 370 Or 827 (“*Gould OLU*”). The Oregon Court of Appeals has also found that “there is no requirement in the FWMP that the water rights and mitigation can only be satisfied through Permit G-17036.” *Gould OLU* at p. 22, fn 7. LUBA has also found that “[i]n calling for ‘updated documentation for each phase of development, the text of FMP Condition 10 suggests that water sources and permits for the destination resort could potentially change following FMP approval.” *Gould v. Deschutes County*, __ Or LUBA __ (Or LUBA No. 2021-066, p. 13). We agree with the Court of Appeals and LUBA.

4. DCC 18.113.100 and Modifications of FMPs

Our Code specifically permits the modifications of any land use decision, including FMPs and, to the extent necessary, CMPs. DCC 18.113.100(B) makes it clear that any provision of an FMP, including an amended FMP, that is determined by the Planning Director to be a substantial change from an approved CMP may be reviewed as an application for modification or amendment of the CMP. And, contrary to the claims of the opponents, nothing in our Code requires that these processes happen in sequential fashion; they can occur in tandem and during the same application process, so long as the change is reviewed in the same manner as the original CMP. DCC 18.113.080. We interpret DCC 18.113.100 to permit modifications to an FMP and that if such a modification is a substantial change that it must (and may) also be approved at the same time as a modification to the underlying CMP.

5. Harmonizing DCC 18.113.080, Condition 1, and Modifications of FMPs

Both DCC 18.113.080 and FMP Condition 1 require a new application in the event of a substantial change of the CMP. In this case, no change is proposed to the CMP part of the FMP. FMP Condition 1 requires that a new application be filed if the Application proposes a substantial change. The Board finds the Applicant’s proposal does not propose a substantial change. . The Board also finds that, even if the Applicant had proposed a “substantial change,” that the “new application” referred to in both conditions means a new land use application reviewed in the same manner as the original approval. It does not require a new CMP or FMP, merely an application to amend or modify the relevant approval. The review of the modified FWMP conducted by the County is the same review required for substantial modifications.

Opponents also argue that modification necessarily implicates the CMP. While that may be the case in certain circumstances, that is not the case here. The CMP imposed CMP Condition 37, which says:

“Applicant shall demonstrate compliance with DCC 18.113.070(D) by submitting a wildlife mitigation plan to the County as part of its application for Final master plan approval. The County shall consider the wildlife mitigation plan at a public hearing with the same participatory rights as those allowed in the CMP approval hearing.”

Therefore, while CMP Condition 37 may be the base against which changes are measured, we find that no substantial change to the CMP itself is proposed because the CMP does not contain the 2008 FWMP or findings related to it. Given that CMP Condition 37 imposes a requirement to review an FWMP through a public hearing, even if the CMP was implicated, we find that Thornburgh has complied with the requirement of CMP Condition 37 when seeking review of a modification of the FWMP. The Application has been reviewed through a public hearing process and the requirements of CMP Condition 37 have been met. Logically, this condition applies both to a modification of an approved wildlife mitigation plan such as the FWMP as well as to the initial plan.

It has been argued that former CMP Condition 28 applies and requires approval of the FWMP by ODFW and BLM. Condition 28 was, however, replaced by CMP Condition 37. Condition 28 dispenses with the assurance of public review of the FWMP provided by CMP Condition 37 that was provided to assure that the CMP was a valid approval. It would also be a collateral attack against the final decision.

6. DCC 22.36.040 – General Modification Criteria

The Deschutes County Code also imposes general modification criteria that apply to all land use applications. These criteria apply except to the extent that other more specific requirements, such as those provided in DCC Chapter 18.113, apply.

a) DCC 22.36.040 – “surrounding properties”

Opponents argued that for the purpose of determining impacts associated with a modification request on “surrounding properties” under DCC 22.36.040, “surrounding properties” is not just adjoining properties but includes substantially more lands including any land connected by river flows, irrigation wells, drinking water, or water as a whole. The hearings officer found that “surrounding properties,” as used in DCC 22. 36.040.C, means the real property ownerships that are directly adjacent to (surrounding) the Subject Property. The Board finds that a determination of “surrounding properties” must, however, be made based on a project-specific analysis of the area around the subject property and anticipated impacts resulting from the proposed modification. The Board finds that for the purposes of this application, the “surrounding properties” are those adjacent to the Subject Property and that the impacts are not “additional” or “significant.” This is especially true because the Resort

adjoins large tracts of land owned by governmental entities and one 80-acre property owned by a private owner.

However, assuming that surrounding properties include all lands identified by opponents, the impacts of the modification of the FWMP in those areas is not "significant." Imposing a limit on the Resort's water use may, at best, offer a slight benefit to area properties beyond adjoining properties by having a lesser impact on groundwater wells than authorized by the FMP, but this is not a "significant additional impact." If the "surrounding properties" includes all streams and rivers benefitted by the mitigation plan and riverfront properties, the temperature and flow impacts of water transfers and mitigation is so low as to be immeasurable and, therefore, is not a "significant additional impact." DCC 22.36.040.C. This is well documented by Thornburgh's expert technical reports, which we find to be credible and persuasive. The same is true for any water declines in the area that would be caused by pumping at Thornburgh.

b) DCC 22.36.040.B – "substantially new proposal"

DCC 22.36.040.B provides:

"Unless otherwise specified in a particular zoning ordinance provision, the grounds for filing a modification shall be that a change of circumstances since the issuance of the approval makes it desirable to make changes to the proposal, as approved. A modification shall not be filed as a substitute for an appeal or to apply for a substantially new proposal or one that would have significant additional impacts on surrounding properties."

The Board finds that changes in circumstances exist such that it is desirable to make changes to the 2008 FWMP. Among others, this includes the robust technical analysis provided by Applicant's experts that the 2022 FWMP will result in increased stream flows and decreased stream temperatures.

Opponents argue that the 2022 FWMP is a "substantially new proposal" which cannot be approved. We disagree. DCC 22.36.040.B relates to whether the modification modifies the actual approved use, in this case, the Resort as a whole. It relates primarily to the approved FMP and, because the Application only proposes an updated FWMP without substantially changing the actual required development contemplated by the FMP, we cannot find the proposal to be a "substantially new proposal." We also agree with the Applicant that many elements of the 2022 FWMP remain the same as from the 2008 FWMP, including the purchase of Big Falls Ranch water rights and the TSID mitigation for Whychus Creek.

The Application proposes no new infrastructure, housing units, or other actual development. The Application also proposes no "significant additional impacts on surrounding properties." Therefore, we find that the Application is permitted as a modification under DCC 22.36.040.B.

c) DCC 22.36.040.C – “discrete aspect”

DCC 22.36.040.C states:

“An application to modify an approval shall be directed to one or more discrete aspects of the approval, the modification of which would not amount to approval of a substantially new proposal or one that would have significant additional impacts on surrounding properties. Any proposed modification, as defined in DCC 22.36.040, shall be reviewed only under the criteria applicable to that particular aspect of the proposal. Proposals that would modify an approval in a scope greater than allowable as a modification shall be treated as an application for a new proposal.”

The modification proposal will not have “significant additional impacts on surrounding properties.” It is not, based on findings for “surrounding properties” and DCC 22.36.040.B, a “substantially new proposal.” The Board finds that the criteria applicable to the proposed modification here are compliance with the No Net Loss Standard and the County’s procedures ordinance. Those criteria have been addressed herein, consistent with DCC 22.36.040.C.

Applicant’s proposed modification of the amount of water used by the Resort, elimination of one (of three) golf courses and changing the source of FWMP mitigation water are “discrete” aspects of the FMP approval.¹⁴ We find that the Application is not greater in scope than allowable as a modification.

7. Modification of Application During Review Arguments

Both before the hearings officer and again before the Board, Appellant Gould and others argued that Thornburgh had modified its Application by submitting additional evidence in response to comments made or information requested by ODFW and others such that the 150-day clock should be restarted. These arguments generally related to the DCC 22.20.055 or procedural requirements of ORS 197.797.

We have previously interpreted our modification Code when Appellant Gould raised the same arguments during review and approval of the CMP, and we decline to reinterpret them here. These findings are included in the record and are found at page 89 of CU-05-20. In essence, a modification only may be found if the additional information requires the application of new criteria to the proposal, such that the findings of fact would require change. Thornburgh providing response or additional evidence to support its Application

¹⁴ Reduced water use and elimination of one of three golf courses are allowed by the CMP and FMP, and do not require approval as a modification of either document.

does not change the applicable criteria. As such, the Board finds that no modification occurred.

Appellant Gould requested and was granted a *de novo* hearing before the Board on all issues. It is not error for an Applicant to submit additional response evidence during a *de novo* hearing of her appeal.

8. ORS 197.797 has Not Been Violated

Appellant Gould argues that the County has violated ORS 197.797 because it permitted the Applicant to submit additional evidence to support the Application during the public review process. We find this argument to be unpersuasive and contrary to the plain text of the statute.

ORS 197.797(4)(a) requires that “All documents or evidence relied upon by the applicant shall be submitted to the local government and made available to the public.” Appellant Gould argued that by the Applicant putting in any supporting evidence including a revised FWMP document, this law is violated. This is not a correct reading of that law. All that law requires is that documents be available, which they clearly are given that Appellant Gould specifically commented or provided rebuttal argument and evidence related to them. ORS 197.797(4) does not prevent an applicant from submitting additional information or evidence, and, actually expressly permits additional evidence. ORS 197.797(4)(b).¹⁵

Furthermore, ORS 197.797(5)-(7) and (9) govern the receipt of evidence at and after the conclusion of a land use hearing and an initial land use hearing. None of these provisions prohibit an applicant from providing evidence at a land use hearing or during a post-hearing comment period. Additionally, ORS 197.797(6)(c) says that “[a]ny participant” may request an opportunity to respond to new evidence filed during the post-hearing comment period; making it clear that an applicant is not prohibited from providing rebuttal evidence for consideration by the Board.

Similarly, Appellant Gould’s arguments that ORS 197.797(3) has been violated is without merit. That section only requires that the County to mail notice within 20-days of the hearing. The fact that Thornburgh has provided additional evidence to respond to Appellant Gould and others does not mean that the County has violated procedural requirements of the statute. To the extent Appellant Gould has argued that the inclusion of additional evidence or updates to the 2022 FWMP makes it unrealistic for the public to understand the application under consideration, we find little merit in that argument. Thornburgh has clearly applied to modify the FMP by replacing the 2008 FWMP with the 2022 FWMP to meet the No Net Loss Standard and the mitigation measures proposed by that plan to meet the standard

¹⁵ ORS 197.797(4) also likely does not apply to post-hearing record periods. Those periods are controlled by ORS 197.797(6).

are those proposed by the initial Application with only minor adjustments made to address objections to the Application.

Appellant Gould makes additional arguments before the Board that ORS 197.797(6) is violated. Again, we disagree. ORS 197.797(6) only applies to the initial evidentiary hearing and not to an appeal hearing before the Board. Even still, we find that Thornburgh providing additional technical evidence in response to evidence or comments made by Appellant Gould, ODFW, or any other participant is not a violation of ORS 197.797(6).

9. Rebuttal Objection

Appellant Gould also argued, after the record was closed, that Thornburgh improperly provided testimony that it “should have or could have” been submitted earlier. This argument is based upon her claim that the “structure of ORS 197.797(6) is to provide opponents the last word on evidence[.]” We disagree. Nothing in the statute provides project opponents with the ability to provide “the last word on evidence” and the statute specifically allows “any person” or “any participant” to submit new evidence during a post-hearing comment period. Moreover, by its terms, ORS 197.797(6) only applies to an initial evidentiary hearing and not to a *de novo* appeal hearing before the Board.

The Board has reviewed the objection by Appellant Gould filed on March 10, 2023, and the response provided by Thornburgh on March 13, 2023, and agree with Thornburgh. All evidence provided by Thornburgh is responsive to evidence, issues, or claims provided by opponents during the open record period. For those reasons, the Board denies Appellant Gould’s request.

10. Published Notice of Hearing

DCC 22.24.030 requires that notice of an initial land use hearing must be published in a newspaper of general circulation in the county at least 20 days *prior* to the hearing. The Board finds the 20th day cannot occur on the same day as the initial hearing. In this case, notice was published on October 4, 2022, which was twenty days prior to (before) the date set for the hearing. The hearings officer’s decision found that DCC 22.08.070 says that “the time within which an act is required to be done shall be computed by excluding the first day and including the last day” except when provided otherwise. We agree. We note, however, that the hearing before the Board was a *de novo* review so the error was resolved by having an additional hearing. No party has challenged notice issues regarding the Board process.

C. Miscellaneous Argument and Arguments Outside of the Scope of the Proceeding

Opponents have raised a number of issues that have no relevancy to the Application. We have generally addressed those in Exhibit A.

1. Changes to Physical Layout Warrant Additional Modification

Opponents have questioned whether Thornburgh’s plan to remove an optional golf course is a substantial “on the ground” change that warrants a broader modification of the Resort’s CMP and FMP. We find that it does not. The scope of the Application relates only to the modification of the Resort’s FWMP and our decision is limited to the scope of the present Application.

The Application supports a reduction of water use by removing an optional golf course. Given that the golf course is *optional*, it is clear that the CMP and FMP approvals contemplated that changes in the number of golf courses might occur. It is worth noting that the Resort has already received various approvals including a golf course site plan, two tentative plans, and various site plans, that have already updated the physical layout of the Resort. Those decisions cannot be collaterally attacked during this proceeding or any proceeding in the future.

Further, the Board finds that it is appropriate to make reasonable revisions to the FMP layouts during third-stage review under DCC 18.113.040.C. The FMP application requirements at DCC 18.113.090 are only meant to provide general, preliminary, or descriptions of later applications; they are not set in stone and unable to change. An FMP does not require legal descriptions or accurate surveying and monumenting, it is a general plan. The site-specific plans and their review are addressed during the individual site plan and tentative plan stage, or 3rd stage of the destination resort review process. The Board finds that DCC 18.113.040 and the three-stage application process allows “on the ground changes” or updates but does not require that a CMP or FMP be modified for each change *unless* the specific impacts of the change proposed for a site plan or tentative plan application would result in a substantial change to the CMP or FMP. In this scenario, a separate modification request would be required.

2. G-17036 is Required under Condition 38 and the 2008 FWMP Argument

Opponents argue that the 2008 FWMP and the findings of fact related to FMP Condition 38 relied upon the specific impacts of G-17036 and the permit’s mitigation sources to ensure the mitigation plan met the No Net Loss Standard. This argument has been made and rejected numerous times, including at the Court of Appeals. *Gould v. Deschutes County*, 322 Or App 11, 22 fn 7 (2022) (*Gould OLU*). We agree with the Court’s analysis that nothing in the previous 2008 FWMP or in the FMP requires use of G-17036 by the Resort, nor were findings of facts based upon it. The only findings regarding the source of consumptive water included in the FWMP are that water be appropriated from the Deschutes Basin regional aquifer.

Regardless, we find that the No Net Loss Standard only requires a showing that specific measures ensure that the Resort’s groundwater pumping will result in *no net loss* or

degradation of wildlife habitat. This is detailed more above. Neither that standard nor the FMP nor the 2008 FWMP require use of a specific groundwater permit.

3. Alleged Code Violations and Well Indemnity Agreement

Opponents have argued that the Application cannot be approved due to alleged violations under DCC 22.20.015. We have previously interpreted that code provision (which is in this record) and decline to do so again. Under our previous interpretations, which have been upheld on appeal, we are not required to address alleged code violations during this proceeding unless the Subject Property has been adjudicated to have existing code violations. There are no adjudicated code violations. Further, these arguments are mostly based upon opponents’ “void CMP” argument, which we have already addressed and rejected.

Appellant Gould also argues that Thornburgh is in violation because the well indemnification agreements required by CMP Condition 11 were offered by a different and now inactive LLC. We disagree for three reasons. First, CMP Condition 11 required the “Applicant” of the Resort to provide such agreements. Deschutes County did not condition the CMP or FMP approvals to apply to any particular entity or to prohibit assignment of development rights by Thornburgh Resort Company, LLC to Central Land and Cattle Company, LLC. This issue was settled against Appellant Gould during the FMP litigation. *See Central Land and Cattle Company, LLC v. Deschutes County*, __ Or LUBA __ (LUBA No. 2015-107, September 23, 2006)(Cross Petition Issue C). Thornburgh remains bound to provide the well agreements because Central Land and Cattle Company, LLC has assumed all development rights and obligations of Thornburgh Resort Company, LLC and because the resort approvals and their conditions run with the land and apply to development by any developer. Second, this issue has no bearing on whether the Resort meets the No Net Loss Standard, and so it is not a relevant approval criterion. Lastly, the issue is not ripe because Thornburgh has not begun pumping water for Resort uses. Therefore, compliance with the well indemnity requirements is not yet required and no violation of CMP Condition 11 has occurred. To the extent relevant to Appellant Gould’s argument, the Board finds that CMP Condition 11 required a showing of “actual well interference as a result of Applicants [sic] water use.” Actual well interference requires a finding of such by OWRD, who assisted in developing the well indemnification agreements. *See* CMP Condition 11.

4. Housing Affordability and ORS 197.455

Opponents argue that approval of the Application will have negative impacts on housing affordability or that the Resort will not be able to pay employees enough, thereby exacerbating affordability issues. These arguments are in no way applicable to the Application and we decline to further address them.

Appellant Gould argues that ORS 197.455 precludes Thornburgh from providing residential housing. This is simply incorrect and has been routinely rejected by LUBA and the Courts. *See Gould v. Deschutes County*, __ Or LUBA __ (LUBA No. 2022-011, June 16, 2022)(slip op 15-17), *aff'd without opinion*, 311 Or App 383 (2022). Further, it has no bearing on the application at hand.

5. Claims of Streams or Wetlands on Subject Property and DSL Coordination

Appellant Gould claims that streams exist on the Subject Property. That is simply not the case, as stated by Hickman Williams & Associates. Further, Department of State Land (“DSL”) staff advised planning staff that notice to DSL was not necessary because no wetlands or streams exist on the property.

6. Adequate Sewer Flow

Appellant Gould and her technical expert Mr. Lambie argue that Thornburgh must also update its Sewer System Master Plan. This argument is based upon Thornburgh’s decision to not build an optional golf course. The Board finds that the Sewer Master Plan is not implicated by changes to the 2022 FWMP, nor does it supply applicable criteria for the review of this application. Additionally, nothing in the 2008 FWMP implicates the Sewer System Master Plan. Lastly, the Sewer System Master Plan found that only 34.5 acres of land are needed in the south basin to apply treated effluent to. The south basin is the southern half of the Resort that received approval for two golf courses but where only one will be built. Based upon the size of the approved golf course and other open space and landscaped areas already approved by previous decisions, there is more than enough land to apply the effluent contemplated by the Sewer Master Plan. Thornburgh has also provided a technical response to this issue, which is persuasive.

Thornburgh’s sewer system is subject to approval to the Oregon Department of Environmental Quality (“DEQ”). That body is the correct body to approve construction drawings and requirements. This argument provides no basis for denial.

7. Adequate Water for Uses and Fire Flow

Opponents argue that there is not sufficient water flow to ensure fire suppression for resort uses. This is not applicable criteria or relevant to whether or not the 2022 FWMP meets the No Net Loss Standard. Thornburgh has provided a technical response from Hickman Williams & Associates that refutes this argument, which is persuasive.

The County’s building official, Randy Scheid, also weighed in. He stated that specific fire flow requirements will be addressed during the building permit stage for any proposed structure or occupancy.

It is also worth noting that the resort’s Water System Master Plan¹⁶ found that:

“After approval of the final master plan for the resort, the water distribution network will be modeled to determine the final locations of the reservoirs and to determine which zones will require booster pump station in order to maintain adequate pressure and flow for domestic and fire protection uses.”

Therefore, water and fire flow capacity and flow requirements are properly deferred until specific application for a use consistent with the building official’s statements and the Water System Master Plan.

Opponents also argue that building without water places the County’s population at risk. This argument is unrelated to the Applicant’s request to modify the FWMP. Further, we find that the Applicant is not building without water – it has a valid and non-cancelled water right *and* has obtained approval of a temporary transfer of the Tree Farm Water right.

8. Drought Conditions Warrant Denial of the Application

Many commenters to the record note that Deschutes County remains in a drought. While that may be true, there is no legal authority for us to deny this Application on the basis of a drought and, as noted above, the Applicant’s proposal does not change the findings under DCC 18.113.070(K). Thornburgh is required to show that the impact of its own water use does not create a net loss or degradation of wildlife habitat, independent of drought conditions. Importantly, Thornburgh has provided expert testimony that shows that even in drought conditions, the 2022 FWMP meets the No Net Loss Standard, which we find persuasive.

Further, Oregon land use law and the land use process provides limited tools to address drought. Current domestic use of water is only about 50,000 acre feet per year, as opposed to nearly 725,000 acre feet of irrigation use. Thornburgh’s overall water use is not substantial in this greater context. Limiting its total water use to a maximum of 1,460 acre feet as required by the 2022 FWMP ensures that its impact will be reduced.

9. Additional Crooked River Program and Juniper Thinning

At the request of the Tribe, with consultation with the Crooked River Watershed Council (“CRWC”), Thornburgh designed an additional benefit package related to the Crooked River. Thornburgh also provided additional evidence that its juniper tree thinning would be beneficial to stream flows. While the Board is appreciative of both of these measures, the Board finds that these measures are not necessary nor relied upon to establish that the

¹⁶ This further supports our finding that on the ground changes will occur at the third-stage development application stage under DCC 18.113.040.C.

Application meets the No Net Loss Standard. That standard, as articulated above, is met by the 2022 FWMP and does not include the additive thinning or CRWC measures.

Thornburgh expert Eilers and participant Tim DeBoodt also provided comment that Thornburgh’s existing juniper thinning efforts are likely to lead to water conservation of 300+ acre-feet of water. However, the Board finds a separate review would be needed to determine the effectiveness of juniper thinning in the context of the requirements of the FWMP.

IV. DECISION

The Application is **APPROVED**. The 2008 FWMP is replaced in its entirety by the 2022 FWMP. FMP Condition 38 is modified per Thornburgh’s request. FMP Condition 40 is imposed, as proposed by the Applicant, to ensure compliance with the 2022 FWMP.

The Applicant’s appeal is **AFFIRMED** and Appellant Gould’s appeal is **DENIED**.

V. CONDITIONS OF APPROVAL

FMP Condition 38 is revised to read as follow:

Revised FMP Condition 38: “Thornburgh shall abide by the April 2008 Wildlife Mitigation Plan (excluding the April 21, 2008 FWMP addendum to that plan and its addenda)(“Terrestrial WMP”), and all agreements with the BLM and ODFW for management of offsite mitigation efforts required by the Terrestrial WMP. Consistent with the plan, Thornburgh shall submit an annual report to the county detailing mitigation activities that have occurred over the previous year.

The FMP is modified to include the following new condition, FMP Condition 40:

FMP Condition 40: Thornburgh shall comply with the 2022 Fish and Wildlife Mitigation Plan, including its compliance and reporting mechanisms found in Section II of that plan.

- ATTACHMENTS:** Exhibit A – BOCC Supplemental Findings
- Exhibit B – 2022 FWMP

Dated this ____ day of April, 2023

BOARD OF COUNTY COMMISSIONERS
OF DESCHUTES COUNTY, OREGON

ANTHONY DEBONE, Chair

PATTI ADAIR, Vice Chair

ATTEST:

Recording Secretary

PHIL CHANG, Commissioner

THIS DECISION BECOMES FINAL UPON MAILING. PARTIES MAY APPEAL THIS DECISION TO THE LAND USE BOARD OF APPEALS WITHIN 21 DAYS OF THE DATE ON WHICH THIS DECISION IS FINAL.

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

#	Issue or Opposing Argument	BOCC Findings
1	2022 Fish and Wildlife Mitigation Plan (“FWMP”) is too complex and unlikely to meet the no net loss standard.	<p>The 2022 FWMP is based on widely accepted and practiced principles, i) pumping cool groundwater reduces discharge via seeps and springs into the river, ii) restoring groundwater increases cool discharge via springs into the river, iii) restoring surface water flows to a more natural state is positive. The cooler the water restored the better it is for fish habitat. The 2022 FWMP in large part replaces the cool groundwater lost from pumping with cool groundwater from other certificates that Thornburgh has ceased pumping under and is transferring (to the resort or instream) or cancelling. The 2022 FWMP adds surface water to increase stream flows and reduce temperatures. The scientific analysis shows that streamflows increased while temperatures decreased in virtually all reaches and times of year. Thornburgh provided extensive modeling of the changes to flow and temperature and retained a Fish Biologist to assess the impacts/benefits to fisheries habitat from the changes to flow and temperature. His conclusions were very clear:</p> <p><i>“In conclusion, the findings presented above indicate that the combination of planned groundwater pumping at Thornburgh Resort, and the associated mitigation planned to offset this pumping as described in the 2022 Fish and Wildlife Mitigation Plan (NCI 2008; Newton 2022), appear to be a net benefit for both fish habitat quantity and quality at all sites evaluated and would result in no net loss of fish habitat quantity or quality.”</i> Lucius Caldwell, Ph.D., FP-C.</p> <p>The BOCC does not find that the 2022 FWMP is “too complex,” understands its measures and finds that the 2022 FWMP meets the no net loss standard based upon the highly credible evidence provided, and that the measures provided in the plan are reasonably likely to succeed. Specifically, the BOCC finds that the modeling and biological opinion are persuasive that streamflows will generally increase and temperatures generally decrease, which will allow the proposal to meet the no net loss standard.</p>
2	The 2022 FWMP was not properly scoped prior to being modeled, nor did it account for future conditions, worst case events, drought, dropping	<p>The Board finds that Thornburgh’s experts undertook a thoughtful and thorough process to establish the modeling parameters. The no net loss standard only requires a resort to mitigate for its own impacts, not for impacts not caused by the resort. This includes “worse case scenarios” based upon potential litigation regarding the HCP, drought, and general declines to wells. The evidence shows that during low flow years the 2022 FWMP will achieve the no net loss standard.</p>

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

	levels of groundwater, or the Habitat Conservation Plan ("HCP").	
3	2022 FWMP does not have clear compliance and monitoring standards and, therefore, cannot be relied on to achieve compliance with the no net loss standard.	The BOCC finds that reporting and compliance measures of the 2022 FWMP, revisions to FMP 38 and new FMP 40 (as amended by our deliberations) are sufficient to assure compliance with the FWMP and, consequently, the no net loss test. The BOCC finds that specific flow monitoring is not feasible because the changes in temperature and flow are too small to be measured and cannot be specifically attributed to a particular source. Furthermore, no party has explained how flow impacts might be monitored. Additional measures outside of those required in the 2022 FWMP are unnecessary because the measures of the 2022 FWMP achieve compliance with the no net loss standard.
4	2022 FWMP does not provide "wet water."	Wet water rights are those that allow the use of water that is actually available for use by the holder of a water rights permit. Thornburgh has presented evidence that its proposed transfers of certificated and permitted water rights are transfers of wet water that may be used for mitigation. The transfers will result in increased streamflows when not pumped at the location currently permitted (e.g. Tree Farm) and when pumped from Resort wells instead. The BOCC notes that ORS 537.270 provides that a water right certificate "shall be conclusive evidence of the priority and extent of the appropriation therein described in any proceeding in any court or tribunal of the state, except in those cases where the rights of appropriation thereby described have been abandoned subsequent to issuance of the certificate." We believe this means that it is entirely appropriate to rely upon existing certificated water rights as "wet water." Additionally, Thornburgh provided extensive evidence of use of its existing water rights to show that they are currently valid water rights that can be pumped where presently authorized by OWRD.
5	2022 FWMP does not provide legally protected flows; cancellation in lieu is not sufficient or disallowed; only an instream water right is sufficient	OAR 690-505-0610 lists a number of methods to provide "legally protected" water and does not provide that the only method of protecting flows is through an instream water right; this includes "cancellation in lieu" as a potential method for protecting flows. The flows restored by water right transfers may not be claimed by other water users in the basin because new surface water rights are not being issued in the Deschutes Basin, and the evidence shows no party has been regulated off of a surface or groundwater right in the basin. Further, the BOCC finds that the evidence in the record related to cancellation in lieu does not result in the ability of a junior holder to "pick up" the water. The evidence shows the watermaster has not regulated any groundwater or surface water rights off. This means enough water exists for all water rights (not storage),

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

		<p>even the junior holders. OWRD accepts this method for mitigating groundwater permit applications and the BOCC finds that OWRD is the authority and controlling agency over water law. The 2022 FWMP and its extensive technical evidence shows that streamflows will increase and temperatures decrease as a result of implementation of the 2022 FWMP. As such, we find that methods provided by the groundwater mitigation program, including the methods relied upon by the 2022 FWMP, are sufficient to meet the no net loss standard.</p>
6	<p>2022 FWMP does not provide legal protection of cold, spring-fed water in close proximity to the point of impact as it did in the 2008 FWMP.</p> <p>ODFW has concerns re localized impacts of groundwater pumping on springs. Springs and Seeps provide cold water inputs that cool stream temperatures during the summer in streams with depleted flows.</p>	<p>The BOCC finds that the 2022 FWMP meets the no net loss standard and that Thornburgh's modeling shows the 2022 FWMP provides cold(er) actual spring water discharges (springs and seeps) in numerous places during irrigation season when flows are low and river temperatures are high. The modeling shows that these improvements to water quality are expected in areas that are more proximate to impacts of the Resort, including in the Deschutes River, the Crooked River and Whychus Creek. This evidence is persuasive.</p> <p>A core premise of the 2022 FWMP is to restore discharges of cool groundwater to waterways via seeps and springs that reduce stream temperatures. Thornburgh modeled the groundwater effects from the 2022 FWMP. In all reaches impacted by Thornburgh's water use, except certain times and locations in the Crooked River, Thornburgh's transfers (restoration) and other measures may result in a net benefit by either decreasing waterway temperatures overall, or by offsetting impacts of the Resort on streams to the point that increase in stream temperatures are so minimal as to be not measurable. The modeling also provides extensive analysis related to spring and seep impacts and concluded that the 2022 FWMP meets the no net loss standard. The 2022 FWMP provides substantial groundwater inputs that globally offset impacts of pumping on habitat.</p> <p>The BOCC agrees.</p> <p>Additionally, measures that provide actual mitigation that do not qualify as Deschutes Basin Groundwater Program mitigation also merit consideration in determining compliance with the no net loss/degradation test. For example, the TSID mitigation found by the County and LUBA to meet the no net loss test for Whychus Creek does not qualify to authorize pumping under the OWRD program but actually mitigates for impacts of the Resort's pumping. In totality, the 2022 FWMP meets the no net loss standard.</p>

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

7	<p>Advanced mitigation measures and additional mitigation measures such as juniper removal or Crooked River Watershed funding cannot be relied upon to meet the no net loss standard.</p>	<p>The BOCC finds that the 2022 FWMP meets the no net loss standard without reliance on these measures. Advance benefits, however, may provide benefits to habitat over and above what is required to meet the no net loss standard. Full resort development and thus its impact is likely to be 15+ years in the future. However, the evidence shows that, at full buildout, the 2022 FWMP meets the no net loss standard.</p> <p>The BOCC finds that while the extra juniper removal and Crooked River measures show that the Resort is attempting to be responsive to comments made from other parties, they are not necessary in order to find that the 2022 FWMP meets the no net loss standard. If Thornburgh wishes to rely upon these measures in the future for compliance, the Resort may file for an additional modification to evaluate those specific measures.</p>
8	<p>Impacts to Whychus Creek should be readdressed, including the mitigation provided by the TSID project; leaving water in stream increases temperature.</p>	<p>The BOCC finds that the issue of Resort impacts to Whychus Creek has been previously litigated and resolved. It has been determined that the TSID project provides benefits to Whychus Creek and fully offsets the impact of the Resort's use of groundwater at a higher level than proposed by the 2022 FWMP. Additionally, Thornburgh provided extensive modeling that shows the Dutch Pacific water is providing additional flow and thermal benefits to Whychus Creek.</p>
9	<p>Thornburgh did not provide ODFW with information needed to show that the water rights it owns are "reliable."</p> <p>Thornburgh has failed to demonstrate the "reliability" of its water rights.</p> <p>Tree Farm and Dutch Pacific water rights do not have regular past use. The LeBeau water right has</p>	<p>ODFW claimed that water rights are "unreliable" if they do not have a recent history of being pumped every year or nearly every year. This is inconsistent with Oregon water law that protects water rights if they are used once every five years. Such water rights are "reliable" and may continue in use or be transferred. ODFW cites no legal authority to discount existing, valid water rights based on prior use, and such a discount does not make sense given the fact that a valid water right, if not transferred, may be pumped every year when pumping is occurring at Thornburgh. Thornburgh's plan assures that such pumping will not occur and this provides water instream that mitigates Resort impacts.</p> <p>The BOCC notes that Thornburgh provided 22 years of well logs for the BFR water, 10+ years of aerial photos showing use of the LeBeau water, and Mr. Newton provided evidence he had personally inspected the LeBeau property for use in 2018. Thornburgh also submitted affidavits of use of the full amount of the Tree Farm water rights by Kirk Schueler, CEO of Brooks Resources, Inc. (previous owner of the water right), plus numerous OWRD approved transfers from the Tree Farm to Thornburgh and other buyers of the Tree Farm water rights. Ms. Howard, Thornburgh's water lawyer, stated the Tree Farm rights are quasi-</p>

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

	<p>partial use only so whether it is reliable is “inconclusive.”</p> <p>Tree Farm water is not reliable.</p>	<p>municipal rights that do not have the same use requirements as irrigation rights and, therefore, those standards should not be applied to judge the reliability of those rights.</p> <p>Evidence also shows that there were multiple offers to purchase Thornburgh’s Tree Farm water, including an offer by the City of Bend. It is undisputed the Tree Farm water rights, if not purchased by Thornburgh, would have been purchased and would have been rights that could be relied on by the new owner to pump the full amount of water authorized by the Tree Farm permit. The permit, therefore, provides reliable water. Applicant provided photos of use for the Dutch Pacific water rights and final orders on the TSID water that shows it is permanently protected instream. No party showed any evidence to the contrary. All of the above are routinely accepted and acknowledged actions, particularly when performed by CWRE and “qualified” water lawyers. The BOCC finds this evidence persuasive that the water rights are available, not subject to cancellation, and may be relied upon for compliance with the no net loss standard consistent with the 2022 FWMP.</p>
10	<p>None of these rights independently are certain to achieve no net loss to the system and no potential impacts to the resource.</p>	<p>The BOCC finds that no single measure or right meets the no net loss standard on its own nor must it. Instead, an applicant must prove through evidence that the totality of the impacts of its actions and related mitigation measures meet the standard. We find that the 2022 FWMP does and conclude that the use of the rights as described in the 2022 FWMP will meet the no net loss standard. Included in the technical analysis was a comprehensive summary of the impacts on fish habitat by Lucius Caldwell, PhD, who concluded the 2022 FWMP would provide net benefits to the fish habitat quantity and quality at all sites evaluated, and the BOCC find this to be persuasive.</p>
11	<p>Modeling was insufficient, based upon improper assumptions, or was not adequate given additional considerations such as the potential for climate change.</p>	<p>The BOCC finds that compliance with the no net loss standard only requires Thornburgh to mitigate for its own impacts, and not for additional impacts of climate change, the HCP, or other impacts to the system. The record includes extensive modeling that is generally and widely accepted. While comments were made about various elements of the modeling, Thornburgh’s experts provided credible responses. No party provided persuasive contrary evidence that the modeling was incorrect or conclusions drawn from it were not supported. The BOCC finds the evidence from Thornburgh’s experts more persuasive.</p> <p>Thornburgh’s experts utilized the USGS GSFlow modeling tool that was based on information collected by the USGS and OWRD between 2001-2015. We find this sufficient and appropriate for evaluating flow related to no net loss.</p>

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

		<p>QUAL2Kw was then utilized to model temperature changes, using both the Yinger 2008 and GSFlow models. We find that this is an appropriate model for determining temperature impacts and find it reliable.</p> <p>Numerous reports in the record evaluate the various GSFlow and QUAL2Kw findings, and, the general findings are that the 2022 FWMP will result in increased flows and decreased temperatures. RSI memo dated March 7, 2023, states that the modeling inputs and methods RSI used in providing QUAL2Kw thermal modeling were, <i>"the same as those applied in the analysis of water quality conditions in the lower Deschutes River prepared for PGE and the CTWS [Tribe] (Eilers and Vache 2021; Eilers et al. 2022)"</i> See: RSI response to ODFW and CWTS, dated March 7, 2023.</p> <p>The BOCC finds that the technical evidence provided by Thornburgh's highly qualified experts is reliable and persuasive. The BOCC finds that while some minor stretches of certain waterways may experience slightly decreased flows or extremely minor increases in temperature, the evidence shows that overall the no net loss standard is met because of the extensive system-wide benefits. The BOCC specifically notes that the opinion of Mr. Lucius Caldwell is persuasive with regards to habitat benefits.</p>
12	<p>Modeling analysis does not incorporate levels or bounds of uncertainty as requested by ODFW (wet, dry, average years) and range of past use of water rights.</p>	<p>The USGS GSFlow modeling utilizes actual data from 2001-2015, which includes low, medium, and high flow years to determine the maximum impacts of Thornburgh's pumping over that period of time. The QUAL2Kw modeling utilized those maximum impacts from Thornburgh pumping to determine the thermal and flow impacts at given points in time throughout the irrigation season. QUAL2Kw began with flow data from the year 2016 and applied the impacts during the irrigation season to the 2016 flow data. The analysis explained that 2016 was an average water year and that its use was statistically relevant. The evidence in the record, including modeling and reports, present a simulation of mean, 10% & 20% greater impacts, and 10% & 20% less impacts. The analysis explained that use of the year 2016 as being an average year and why that was statistically relevant. The evidence showed that the 2022 FWMP would result in increased benefits in drier years. We find this evidence persuasive and appropriate to meet the no net loss standard.</p>
13	<p>Applicant is required by the 2008 FWMP to show Deep Canyon Creek has 5.5 cfs of flow. It lacks 5.5 cfs of flow.</p>	<p>The 2022 FWMP does not rely on 5.5 cfs of flow in Deep Canyon Creek to achieve compliance with the no net loss standard.</p>

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

14	<p>Plan does not adequately address impacts to the Crooked River.</p> <p>Wet water impacts to the Crooked River and elsewhere must be identified and assessed.</p> <p>Removal of .65 cfs (RSI's flow reduction) of cooler groundwater in summer months cannot produce a temperature increase relative to a simulation in which 0.65 cfs is not removed.</p>	<p>The BOCC finds that impacts to flow were extensively modeled and studied using the GSFlow program to determine the impacts to the Crooked River, while the changes to temperature were extensively modeled using the QUAL2Kw program. The impacts to fisheries habitat from that modeling was then analyzed and assessed. This detailed analysis included the impacts and benefits to the Crooked River which showed mitigation flows into the Crooked River from the 2022 FWMP, which was supported by Mr. Lambie who stated the transfer of BFR groundwater will provide flows into the Crooked River. In all cases, the changes in streamflow were minimal and the change to temperature was positive at times and negative at other times, but in all cases was effectively zero. ODFW stated that the modeling outputs are within range of model "noise", particularly for the Crooked River results. Dr. Caldwell assessed the impacts to the fisheries in the Crooked River and concluded the 2022 FWMP would provide net benefits to fish habitat quality and quantity at all sites evaluated.</p> <p>A temperature reduction was modeled at Osborne Canyon despite a slight decrease in flow to the Crooked River at this location. Although the groundwater loss is cold water, the reduction in flows has a counter-intuitive result because there is less water (of any temperature) proceeding towards Opal Springs. Consequently, the spring input further downstream has a greater impact on decreasing river temperature than if the reduction in flow was distributed closer to Opal Springs. Regardless, these changes are imperceptibly small and scientifically irrelevant.</p>
15	<p>Improper to defer review of compliance with FWMP to OWRD to establish wet water.</p>	<p>The BOCC finds that the 2022 FWMP does not defer compliance or determinations to OWRD. The 2022 FWMP does not allow water use unless OWRD approval is obtained. The 2022 FWMP prevents Thornburgh from pumping specified water rights and this action provides benefits before water use is authorized by OWRD. The plan assures compliance with the no net loss standard by requiring that specific water rights be used to authorize groundwater pumping and by actions that may provide streamflow benefits, such as the TSID conservation program required by FMP Condition 39.</p>
16	<p>OWRD mitigation does not ensure compliance with no net loss.</p>	<p>The BOCC finds that the OWRD mitigation program does not itself meet the no net loss standard but that the 2022 FWMP, which includes some OWRD program measures, does meet the no net loss standard.</p>
17	<p>OWRD Permit G-17036 is cancelled, expired, void, and water availability criterion</p>	<p>The BOCC finds that the issue of water availability and G-17036 is resolved by past proceedings and appellate courts. Further, the BOCC finds that this proceeding does not implicate DCC 18.113.070(K). Instead, it implicates mitigation for water use. The BOCC's findings in the CMP make it clear that the issue</p>

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

	of DCC 18.113.070(K) is not met.	addressed by DCC 18.113.070(K) is whether Thornburgh possesses water rights that allow it to pump groundwater from the regional aquifer. The record shows that it does.
18	Neither OWRD nor ODFW have approved the water rights the Applicant relies on in the 2022 FWMP; it is premature to approve the 2022 FWMP before approval of new water rights transfers.	The BOCC finds that the measures provided in the 2022 FWMP are feasible and not precluded by law. Thornburgh owns the water rights in question and has committed not to pump them. This provides streamflow and temperature benefits to area waterways. Advanced approval from OWRD is not necessary in advance of implementing the approved plan. The BOCC additionally finds that ODFW approval is not a requirement to meet the no net loss criterion. Its approval was only impliedly required by CMP Condition 28, and that condition was replaced by CMP Condition 37 which requires the applicant to submit a plan to the County for its review.
19	ODFW has not approved the 2022 FWMP, which is necessary. The Tribe must also approve the plan.	The BOCC finds that ODFW approval is not required to meet the no net loss standard; the same is true regarding the Tribe.
20	Per ODFW, the 2022 FWMP must replace surface water quality and quantity in perpetuity or for the life of the project and result in documented improvements to habitat quality and quantity	<p>The BOCC finds that the no net loss standard does not require any specific improvements to habitat quality and quantity. The evidence in the record shows that the 2022 FWMP will achieve compliance with the no net loss/degradation standard by replacing the loss of surface water due to Thornburgh's pumping, in large part, with cool groundwater and some cool surface water mitigation. This will be a benefit offered in perpetuity throughout the life of the Resort and a plan that is reasonably likely to succeed. The Applicant's modeling documents the benefits to habitat quality and quantity.</p> <p>Nothing in the no net loss standard prescribes the use of a certain measure, only that the applicant prove its impacts are mitigated and Thornburgh has done so.</p>
21	There is no instream water right for groundwater, so it is not protected instream. Must have an instream right to claim surface mitigation flows.	Applicant has not claimed there is an instream water right for groundwater. What applicant has stated, is that when you stop pumping a groundwater right, that water is left in the aquifer and flows to a point of discharge into a stream or spring and provides benefits to that waterway. The Applicant provided substantial evidence to demonstrate this habitat benefit.
22	More water will be leaving the system after the Resort	The BOCC finds that there are finite water rights in the Deschutes Basin and that if Thornburgh did not use the rights described in the 2022 FWMP, another party would. Moreover, the evidence shows that

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

	starts pumping than is leaving the system now with limited use of water rights purchased by Thornburgh, and so the no net loss standard is not met.	Thornburgh will have a very gradual increase of water use even after it begins pumping as the development will occur over a long period of time. Thornburgh has provided evidence of extensive use of its water rights and that pumping has currently ceased under those rights. The result is that more water is left in the system than will be taken from it, with full stability and impacts occurring in the next few decades. Even at that time, the BOCC agrees with the conclusion of Thornburgh's expert fish biologist Dr. Lucius Caldwell that Thornburgh's plan will meet the no net loss standard.
23	Thornburgh is not providing mitigation water related to its water rights transfers	OWRD's transfer program does not require OWRD mitigation water, and this is not a requirement of the no net loss standard. The transfers, however, increase stream flows and reduce stream temperatures due the change in the location where pumping will occur. The evidence in the record shows that the measures contained in the 2022 FWMP will meet the no net loss standard.
24	The 2022 FWMP results in a substantial change because it changes the assumptions around economic impacts, water use for consumption, open space and recreation, and sewer or effluent plan.	<p>The BOCC finds that Thornburgh's request does not implicate other elements of the resort such that a substantial change is requested. Elimination of a golf course and curtailment of water rights are both measures allowed by the CMP and FMP as they presently exist. While the CMP and FMP addressed the impacts of full development of the Resort, neither plan requires that the Resort be fully developed. This fact was understood by the Board when it reviewed the CMP and its various supporting plans. The BOCC further finds a "substantial change" can be approved through a land use application, which is the process that has occurred.</p> <p>Regarding sewer impacts, Thornburgh provided evidence that it maintains adequate area to dispose of treated effluent.</p>
25	2008 FWMP and FMP relied upon the G-17036 water right and this is required by FMP Condition 10.	The Board disagrees that the 2008 FWMP or the FMP relied on G-17036 (or its predecessor permits) and does not rely upon any particular water source for consumption by the resort. Condition 10 is not implicated.
26	Well impacts to surrounding property owners are not resolved.	This issue was settled by approval of the CMP and FMP; it is not impacted by this application. Thornburgh previously agreed to provide well indemnification to property owners within 2-miles.
27	Holding a water certificate does not authorize pumping, and offers no guarantees that the amount	The record shows no evidence of any live flow water right being regulated off or reduced due to a lack of flow or water. Mr. Newton differentiated live flow from storage water during the hearing noting that the irrigation districts that rely on stored water do in fact get reduced and partial allocations but this does not affect the amount of water that will left in stream by not pumping surface water rights. That is not the case

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

	appropriated will be available for use or that the use won't injure a senior right or degrade the environment.	for live flow or groundwater. As for the groundwater rights, there is over 3 million AF of recharge with only roughly 50,000 AF of use, and the likelihood of a groundwater right being regulated off or not being able to pump its full water right is insignificant. Additionally, ORS 537.270 is a relevant consideration and Thornburgh is entitled to rely upon water rights granted by OWRD unless and until they are subject to cancellation proceedings. None of the identified water rights are subject to cancellation proceedings. The BOCC rejects this argument.
28	Use of specific wells on the Thornburgh property are relevant to the impacts of pumping.	Thornburgh studied the impacts of pumping water on its property in a number of different locations so that any change to the number of wells and locations allowed by the FMP and OWRD will not undermine the efficacy of the 2022 FWMP. The BOCC finds this evidence to be persuasive.
29	No water is currently available to permanently operate the Resort. None of the proposed water in the 2022 FWMP provide a permanent source for the Resort.	The BOCC finds that LUBA and the Courts have weighed in on this question. Specifically, the status of the G-17036 and other water rights as being "non-cancelled" and valid is sufficient for County land use review. OWRD is the body that authorizes water use at the Resort, not the County. The record indicates that the Resort has obtained a temporary transfer of the Tree Farm right and that a permanent transfer has been applied for.
30	Impacts to the spotted frog have not been specifically analyzed or addressed.	The no net loss standard does not impose a species by species or one for one mitigation requirement. Thornburgh provided expert testimony that documented no harm to spotted frogs, and we find that evidence to be reliable and persuasive. Criticisms of the expert analysis by persons who are not biologists do not rise to the level of impeaching the conclusion that the 2022 FWMP will not harm spotted frog habitat. Commitments made by the applicant regarding Resort development of on-site lakes and ponds relied on by Thornburgh's expert shall, in future proceedings, be binding on Thornburgh.
31	The October 2022 study makes reference to the 2008 Steady State Modeling by Yinger that is out of date. It looked at effects of use of G-17036 as a source of water; this was not done in the GSFLOW study.	The original plan looked at the results of the 2008 Yinger report that was relied on extensively by Ms. Gould and the hearing officer (as well as courts, etc.) during the 2008-2015 proceedings. The original study assumed then, as always, that the source of the water was groundwater pumped from wells at the resort. The permit or certificate number would have no bearing on the impacts. At that time Thornburgh had not completed more up to date modeling. Based on the comments received, largely those by ODFW, Thornburgh retained Four Peaks to complete the full GSFlow modeling using the most up to date information available to accurately assess the real impacts of pumping and benefits of 2022 FWMP measures. The BOCC finds this evidence to be sufficient and persuasive.

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

32	The third FWMP is substantively different than the FWMP considered by the hearings officer.	The hearings officer found that the 2 nd FWMP was substantively similar to the 1 st FWMP. Due to concerns raised by the Hearings Officer regarding clarity, Thornburgh returned to using the 1 st FWMP and added information that the hearings officer found should be in the plan – most of which was provided in the burden of proof and in documents filed to support approval of the FWMP. There are no substantive differences in the mitigation plan itself. The BOCC finds that there is no modification and that the 2022 FWMP attached to this decision is sufficient.
33	Without a defined source of water for the missing water supply (243 AC/FT/year), OWRD mitigation is unlikely to meet the no net loss test.	The modeling showing compliance was done utilizing 1,317 AF of water, including BFR, Tree Farm, Dutch Pacific, and TSID to offset the impacts of the pumping of 1,460 AF of groundwater. The modeling and analysis shows conclusively that this complies with the no net loss standard. The remaining water, if needed, must come from BFR, COID (both previously approved sources) or other sources that provide flows to the lower Crooked River or the middle Deschutes River. Hydrogeologist Jim Newton, PE, provided his expert opinion that the use of mitigation water or water rights transfers allowed by the OWRD groundwater program to allow pumping over the amount allowed by rights described in the 2022 FWMP, will not materially impact the overall benefit offered by the specified water rights that will be held by Thornburgh and not pumped, except as necessary to preserve them prior to transfer or use to obtain OWRD mitigation credits. The BOCC finds that Mr. Newton's testimony is credible and that the 2022 FWMP meets the no net loss standard. The BOCC also finds that if additional OWRD mitigation is provided, that such mitigation will further increase flows which is generally shown to further reduce stream temperatures. The testimony of Joseph Eilers on this point is persuasive.
34	Thornburgh findings demonstrate a net decrease to discharges down to Culver. That is where the groundwater discharge to surface water decreases to the Deschutes and Crooked River will be experienced.	Flows in the Deschutes River see a general increase with a corresponding decrease in temperature. In the Crooked River, there are slight decreases in flow in amounts so small they cannot be measured using current technology. Similarly, the change to temperature is so small as to not be measurable as well. Thornburgh's expert fish biologist Lucius Caldwell, Ph.D, assessed the net effect of the changes on both the Deschutes and Crooked Rivers. Regarding the Deschutes River, Dr. Caldwell stated: <i>"Overall, the combined effects of planned groundwater pumping and mitigation appear to be a net benefit for both habitat quantity and quality within the Deschutes River, throughout the vast majority of the irrigation season." On the Crooked River he noted: "Overall, the combined effects of planned groundwater pumping and mitigation appear to vary seasonally within the Crooked River. During the spring and fall, a net impact is expected for fish habitat quantity and a net benefit for fish habitat quality. During the summer, a net benefit is expected for fish habitat quantity and a net impact for fish habitat quality. Lucius Caldwell, Ph.D.</i>

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

		The BOCC finds the statements of Dr. Caldwell persuasive.
35	Claim that the source of the resort's water supply remains exclusively groundwater is a mischaracterization.	The BOCC determined at the time of CMP approval that the resort's water supply is "ground water from the regional aquifer of the Deschutes Basin." CU-05-20, pg. 71.
36	Deep Canyon water rights are being appropriated along with groundwater rights from the same well and are interfering with one or more groundwater rights. Due to this interference noted by OWRD, these rights will become junior water rights and will be regulated off when groundwater levels fall below their criterion levels and that will happen based on trends in the Middle Deschutes area.	<p>The 2022 FWMP proposes to discontinue pumping Deep Canyon water rights from groundwater. Pumping of these rights from groundwater was recently approved by OWRD and would not have been approved if the relevant facts supported regulating off these water rights. This comment is pure speculation.</p> <p>Further, the evidence shows that no groundwater rights have been regulated off. Interference is a legal term defined by OWRD. OWRD's analysis of interference claims is relevant and is included in the final Tree Farm order contained in this record. It is persuasive in showing that no interference will occur, especially when other wells have not fully penetrated the aquifer. The record shows that no surface or groundwater regulation off has occurred. OWRD is the proper forum for these arguments. Nevertheless, the BOCC finds that the measures outlined in the 2022 FWMP are likely to succeed and to be approved as described by that plan.</p>
37	Water left in stream by cancellation of a water right merely goes to the next user in line. Cancellation and non-use of water rights does not result in mitigation because other users will simply use the same water.	The evidence shows this is not correct; that cancellations provide mitigation and are accepted as mitigation by OWRD to offset flow impacts of new water use. This is explained in detail in numerous technical submittals by both Thornburgh's experts and Mr. Lambie.

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

38	The transfer of BFR rights T-14074 is inconsistent with their FMP regarding water supply and mitigation for water use at the Resort property. They would have no mitigation water at all to offer under T-14074.	The evidence shows T-14074 does not require OWRD mitigation as this is a transfer application of existing water rights and no additional water will be withdrawn from the Deschutes Basin as a result of approval of the transfer.
39	The reduction of the right under the existing land use approval to use 2,129 AF per year of groundwater to 1,460 AF is not a resource benefit because the applicant is not required by the FMP to use all of its water rights and is required by law to conserve water. It also appears that the applicant will reduce its water use whether or not the 2022 FWMP is approved.	The BOCC finds that voluntarily reducing water usage is beneficial and should be encouraged as it incurs less impact on fisheries habitat, and leaves more water in the stream and in the aquifer. The technical analysis of the 2022 FWMP includes showing why reduction in water use is beneficial and meets the no net loss standard.
40	OWRD transfer process does not consider fish and wildlife impacts; it addresses other issues.	The extensive modeling done by Thornburgh and its selection of water rights addresses fish and aquatic habitat. The comprehensive summary of the effect on fish habitat summarizes those impacts stating that the 2022 FWMP may provide a net benefit to fish habitat quality and quantity.
41	Excess mitigation should not be considered because it is simply a feature of the 2022 transfer strategy and	The evidence shows the applicant did not account for the excess mitigation in order to comply with the no net loss standard. Compliance was achieved without the addition of the excess mitigation in the 2022 FWMP. The BOCC finds that while excess measures may be beneficial, they are not necessary to determine the 2022 FWMP meets the no net loss standard.

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

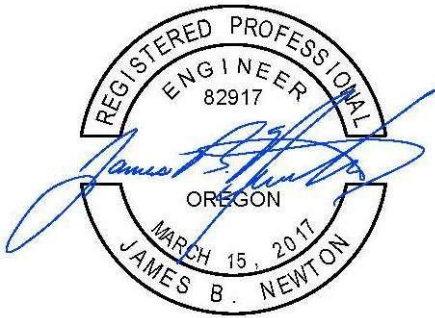
	not a result of a mitigation action, and its benefits are not assured.	
42	Juniper removal is not a stand-alone water mitigation strategy and is not a permanent benefit.	The Applicant's proposed juniper removal may provide water savings, but the applicant did not rely on it to meet the no net loss standard.
43	The fishery resource is treaty protected; there may be ESA "take" liability related to MCR steelhead	No evidence supports the conclusion that the 2022 FWMP will result in a take of MCR steelhead. In addition, the applicant provided a comprehensive fish summary that concluded the 2022 FWMP may provide a net benefit to the fishery habitat quality and quantity. Take liability is not regulated by Deschutes County. It is a separate regulatory scheme and not relevant to these proceedings.
44	OWRD approval is not assured. Any changes in the Resort's water supply plan must undergo further County review.	The 2022 FWMP commits to using the water listed in the plan to meet the no net loss standard. The BOCC finds that, consistent with this proceeding, if new measures are required then the Resort may file for a future modification and, at that time, assure no net loss is still met based upon changes.
45	County lacks authority to make a land use decision because Thornburgh is in violation of Condition 10 due to the provisions of DCC 22.20.015	There has been no adjudicated code enforcement issue (or even a code complaint or noncompliance complaint) and the Board is not required to undertake a compliance review as a part of its review of the 2022 FWMP. The Board has already interpreted this provision and it does not apply here.
46	Providing cold water upstream in Whychus Creek that warms as it flows to Lower Whychus Creek does not offset degradation of important cold, groundwater resource in Lower Whychus Creek	<p>Providing cool water upstream (TSID mitigation), even though it warms, results in lower water temperatures in Lower Whychus Creek. This issue has been litigated and settled. <i>Gould v. Deschutes County</i>, 78 Or LUBA 118 (2018).</p> <p>Not only is this settled science, but it is embraced and accepted as noted by Professional Hydrologist Joseph Eilers, RSI who states:</p> <p><i>"The ODFW objection to adding flows to Whychus Creek raises a wider issue regarding approaches to mitigation. The notion that flows upstream of springs should not be increased where possible is counter to all major efforts</i></p>

**Exhibit A to BOCC Decision
Incorporated into BOCC Decision**

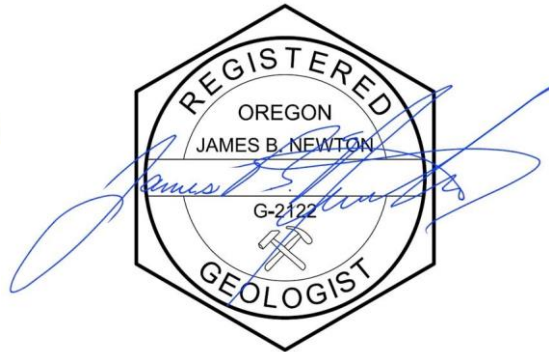
	<p><i>around the state where the single greatest need for stream habitat is additional flow, particularly where agricultural usage has resulted in loss of streamflow. It also conflicts with ODFW previous support of flow restoration measures in Whychus Creek."</i></p>
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THORNBURGH RESORT FISH AND WILDLIFE MITIGATION PLAN

ADDENDUM #2 (2022 FWMP) RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT



Renews: 1/1/2025



Renews: 5/1/2023

Prepared for:

Central Land and Cattle Company, LLC
67525 SW Cline Falls Hwy
Redmond, Oregon 97756

Prepared by:

Cascade Geoengineering, LLC
21145 Scottsdale Drive
Bend, Oregon 97701

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As reorganized on
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Revised April 4, 2023

Project: Thornburgh Resort

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

I. Introduction

This report was prepared by Jim Newton, PE, RG, CWRE, Principal of Cascade Geoengineering ("CGE") on behalf of Central Land and Cattle Company, LLC, owner, and developer of the Thornburgh Resort ("Thornburgh") as an Addendum to the Thornburgh Resort and Wildlife Mitigation Plan regarding potential impacts on fisheries and aquatic habitat and the specific measures to mitigate for any negative impacts. It incorporates elements of and replaces the "Addendum Relating to Potential Impacts of Ground Water Withdrawals on Fish Habitat" dated April 21, 2008 (the "FWMP") developed by Newton Consultants, Inc. ("NCI") and supplements thereto.

The mitigation requirements and enforcement measures are set out in Section II, below. The following section discusses the results of the mitigation measures. The remainder of the document provides background information and scientific analysis based of thermal modeling and analysis by highly qualified experts and an expert analysis of the effects of pumping and mitigation on fish and other wildlife that are dependent on the quality or quantity of Deschutes Basin rivers and streams.

II. Thornburgh Mitigation: DCC 18.113.070(D) - The No Net Loss/Degradation Standard ("No Net Loss").

The proposed mitigation measures are designed to ensure No Net Loss of habitat quantity or quality and net benefits to the resource and are comprised of four categories including:

- A) Reduce water use and thus reduce impacts on the aquatic habitat (Item 1 below):
 - 1. limit groundwater pumping to a maximum of 1,460 AF annually, which is more than a 30% reduction in originally approved water usage.
- B) Comply with the No Net Loss standard of DCC 18.113.070 (D) (Items 2-5 below):
 - 2. Use 1,211 AF of existing water rights described herein to authorize pumping of groundwater from wells on the Thornburgh property by transfer, cancellation or other permanent mitigation (e.g., mitigation credits).
 - 3. Comply with requirements for Water Right Permits, Certificates, or Transfers of water rights described herein, or others hereinafter acquired. Provide mitigation when needed in advance of pumping as required by OWRD mitigation rules.
 - 4. For additional supply or mitigation over the water rights specifically identified in this plan, use mitigation credits, COID mitigation, BFR surface water, BFR ground water, or any other water source in the Deschutes General Zone of Impact that will discharge water into (or leave it in) the Deschutes or Crooked Rivers or their tributaries, to supply or mitigate for any unmet needs the resort will have. The amount of water needed is the 1,460 AF of total pumping less the amount of water transferred, cancelled, or converted to mitigation credits, and:
 - 5. Thornburgh has provided 1.51 cfs of water in a quantity of no less than 106 AF of mitigation in Whychus Creek from the TSID diversion downstream by funding the completed TSID piping project called for by the 2008 FWMP that completely mitigates all impacts to Whychus Creek. Nothing more is required here.

FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)

- C) Provide advance or excess mitigation which is not required to meet DCC 18.113.070(D)(Items 6-7 below).
 - 6. Let unused water rights remain in the groundwater or stream to increase flows and reduce temperatures of the streams in advance of creating impacts except as provided to others for drought relief at Thornburgh's sole discretion.
 - 7. Thin thousands of acres of Juniper forests onsite and on BLM Lands.
- D) Compliance and Reporting measures.
 - 8. Detail what constitutes compliance with this FWMP and what reporting actions are required and who will be entitled to receive them.

Section A:

1. Limit Pumping To 1,460 AF Annually:

Groundwater pumping for the resort does not exceed a maximum combined volume of 1,460 AF. This is more than a 30% reduction in the amount of water Thornburgh is currently approved to use. This will dramatically reduce the level of potential impacts, creating less demand and strain on the region's water resources.

Section B:

2. Use OWRD Water Rights Certificates, Permits & Transfers for Pumping or Mitigation:

For the purposes of this FWMP ("2022 FWMP") and compliance with DCC 18.113.070(D), it is assumed the certificated water rights in #a-d below will be transferred to and used at the Thornburgh property. Certificate 89259 (#e, below) is being cancelled in-lieu of mitigation for any Thornburgh groundwater permit granted by OWRD. The Temporary Credit from Deschutes River Conservancy (f) have been leased since 2013 and may continue until such time that Thornburgh does not require them, and the Three Sisters Mitigation water (g) has been transferred instream in Whychus Creek.

None of these water rights require additional OWRD mitigation under OWRD's mitigation program. Thornburgh presently owns items a-e which are existing water rights. Rights a-d are being transferred from their original point of appropriation (POA), which would be a groundwater well, or point of diversion (POD), which would be a diversion from surface water, to wells at the Thornburgh property, while e is being cancelled in lieu of mitigation consistent with the Deschutes Basin Groundwater Mitigation rules. Transferring a certificated water right does not require OWRD mitigation, as it eliminates the use of this transferred water right in its former location and allows it to be used, instead, on the Resort's property. Cancelling a right is done as mitigation and results in placing water back in the system by cancelling the legal right to use the water at the original point of appropriation.

While OWRD requires no mitigation for transfers, as they only change the point of appropriation ("POA"), or point of diversion ("POD"), transfers can change the point of impact where the withdrawals will be felt in the stream from one location to the other.

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

The change from where the stream was impacted under the original POA to the points of impact from the Thornburgh wells is the only element that could affect the No Net Loss standard and compliance with DCC 18.113.070(D). As such, CGE assessed whether changes in the POA would change the location where impacts are felt in the stream, and if so, how and to what degree that change could affect the no net loss standard and compliance with DCC 18.113.070(D).

- a. **Surface Water Certificate 95746 (4/30/1902) and Transfer application T-13857 (LeBeau)** –Thornburgh owns this certificate authorizing the use of 4 acre-feet per acre of irrigated land of surface water from the Little Deschutes River, a tributary of the Deschutes River, to irrigate 50 acres of land, for a total authorized use of 200 AF of water. An application for a permanent transfer, T-13857, has requested the POD of this right currently at River Mile 56 on the Little Deschutes arm of the Deschutes River to be transferred to a POA on wells located at the Thornburgh Resort, located generally west of RM 143, roughly 105¹ river miles from the point on the Deschutes River closest to the Thornburgh Resort. These proposed changes to the certificated water right do not require OWRD mitigation. Pumping has ceased and this water is currently in the river to flow from its point of diversion all the way to Lake Billy Chinook, about 137.7 river miles². See Map 2. The added flow will provide thermal benefits that cool the Little Deschutes arm of the Deschutes River and the Deschutes River throughout those reaches.

Compliance with this is certificate occurs as described in Section D Compliance, 1(b) below dealing with surface water.

- b. **Surface Water Certificates 96192 and 96190 (4/13/1967) and Transfer T-12651 to Groundwater POA** – Big Falls Ranch (“BFR”) (Deep Canyon Creek Groundwater POA). Applicant currently owns this certificated water that presently authorizes the use of 4 acre-feet of surface water per acre of irrigated lands from Deep Canyon Creek onto of 153.7 acres of land, for a total volume of 614.8 AF of water. This certificated water requires no OWRD mitigation. The POAs of this water are wells located at Big Falls Ranch. Pumping was stopped on 90 acres of this water in September 2021 and the water was assigned to Thornburgh on September 23, 2021. Pumping was stopped on the remaining 63.7 acres in 2022 and a deed conveying this water to Pinnacle Utilities, LLC, was executed on November 30, 2022. (See Exhibit A.) An application has been filed to transfer all 153.7 acres of water to wells at the Thornburgh Resort. Compliance with the FWMP has been achieved.

All 153.7 acres of this water is in the ground at Big Falls Ranch to increase flows of 11 degree C groundwater into the stream reaches affected by the BFR wells that are also impacted by Thornburgh Pumping. This is increased flow of cool groundwater

¹ The Little Deschutes arm, merges into the Deschutes River at RM 192.5 on the Deschutes River. LeBeau POD is at RM 56 on the Little Deschutes arm, which is roughly at the equivalent of Deschutes RM 246.5. The Thornburgh POA is west of Deschutes RM 143. Round Butte Dam is roughly 137.7 miles from the LeBeau POD.

² In 2021 Thornburgh this water placed this water instream (lease) to benefit fisheries habitat. In 2022 it was temporarily transferred to North Unit Irrigation District to provide drought relief to farmers.

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

provides thermal benefits cooling the rivers and creeks. While our analysis does not rely on the flows provided by Deep Canyon Creek to achieve compliance with the No Net Loss standard, changing the mitigation source from 13-degree surface water flows in the creek (2008) to 11 degrees C groundwater flows (2022 FWMP) into areas waterways is clearly beneficial. Also not accounted for is the fact that pumping from Deep Canyon Creek has completely ceased, allowing Deep Canyon Creek to flow to the Deschutes River.

In the alternative, if not approved for transfer, this water right could be cancelled in lieu of mitigation for any groundwater permit or Limited License application to serve the Resort. Cancelling a groundwater certificate leaves the water in the aquifer so it can return to streams and rivers. Lastly, the POA could be returned to a POD in Deep Canyon Creek from where it could be transferred to an instream right with mitigation credits issued groundwater or limited license applications. Also, if this proposed transfer is not approved, and the transfer of the water below in **c.** is approved, Thornburgh will replace this water with more of the BFR groundwater rights that are not Deep Canyon Creek rights. Similarly, if the transfer in **c.** below is not approved, but this transfer is approved, Thornburgh may replace the water in **c.** with this water in **(b).** As both are being pumped from the same ground wells, there is no effect which certificate is used to appropriate the water. This water can also be cancelled in lieu of mitigation, or it can be transferred to instream use for mitigation of permit G-17036, or the alternate permit. Neither action impacts the efficacy of this plan.

Compliance with this FWMP regarding these certificates appropriated from the ground is completed as described in Section D: Compliance, 1(a).

- c) **Ground Water Certificate 87558 (BFR)** – Applicant currently owns 18.9 AF of this certificate authorizing the appropriation of groundwater from wells located at Big Falls Ranch to irrigate 6.3 acres. A quantity deed conveying this water to Pinnacle Utilities, LLC, was executed on November 30, 2022. An application for transfer has been filed to transfer all 18.9 AF to wells at the Thornburgh Resort. Thornburgh has filed an application to transfer all 18.9 AF to wells at the Thornburgh Resort. This certificated water requires no OWRD mitigation. Leaving this 11 degree C groundwater in the ground at Big Falls Ranch has increased flows in the same manner as the BFR water in (b) above. As noted above it cannot be converted to an instream right the same way surface water rights can although it could be cancelled in lieu of mitigation for any GW permit serving the resort as described in (b) above.

Compliance with this FWMP regarding this certificate appropriated from the ground is completed as described in Section D: Compliance, 1(a).

- d) **Ground Water Certificate 94948 (1/30/1995), Transfer T-13703 (Tree Farm)** – Applicant currently owns roughly 327.5 AF of water authorizing the appropriation of 0.453 cfs Year-Round for Quasi-Municipal. This certificated water right does not require mitigation. A temporary transfer T-13703 was approved by OWRD which

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

changed the POA of this water right from wells located in the Tree Farm subdivision west of Mt. Washington Drive in Bend to wells on the Thornburgh property. It also changed the Point of Use (POU) from the Tree Farm subdivision to Thornburgh wells. A permanent transfer has also been applied for and is in process. Pumping ceased in 2021 increasing the flow of cold 11 degrees C groundwater into the streams. The Final Order approving this transfer was issued on December 7, 2021. At present it can be used per the transfer order, or in the alternative it could be cancelled in lieu of mitigation for any groundwater permit or Limited License serving the resort.

Compliance with this FWMP regarding this certificate appropriated from the ground is completed as described in Section D: Compliance, 1(a).

- e) **Ground Water Certificate 89259 (3/18/1998)** – Dutch Pacific – Applicant currently owns this certificated water right allowing the use of 3 AF of water to irrigate 16.5 acres or 49.5 acre-feet of ground water pumped from a well in Sisters. This is a certificated water right that doesn't require mitigation. The place of impact from pumping at this location is in Whychus Creek and Indian Ford Creek that flows into Whychus Creek near Sisters. Pumping ceased in 2019 allowing all 49.5 AF of water to remain inground to flow to Indian Ford Creek and into Whychus Creek. It is presently being cancelled in-lieu of mitigation. This 16.5 acres of irrigation (49.5 AF) of cool water will provide thermal benefits to the stream that will cool the creek and mitigate for most all the impacts to Whychus Creek from Thornburgh pumping (see Table 8 above). Leaving this water in the stream is like leaving the 106 AF (f below) of Three Sisters Irrigation District (TSID) water (13 degrees C) in the creek in the same area. The TSID mitigation was shown to cool Whychus Creek from its point of diversion to the Mouth.

Compliance with this FWMP regarding this certificate appropriated from the ground is completed as described in Section D: Compliance, 1(a).

- f) **Temporary Mitigation Credits (DRC)** – 6 acre-feet of temporary mitigation credits from the Deschutes Resource Conservancy have been in place since 2013. For nearly 10 years these credits have increased flow to the Deschutes River in advance of pumping groundwater as mitigation for permit G-17036. Excess mitigation has been accumulating since then, further discussed in Section C page 8 below. Thornburgh may cancel the use of these temporary credits at some point in the future, although that is not required by this plan. They are not considered in the efficacy of this 2022 FWMP in meeting the No Net Loss standard.

Compliance with this FWMP regarding these credits are completed.

- g) **Three Sisters Irrigation District ("TSID") Mitigation Water:** Applicant has already completed the arrangements leaving 106 acre-feet (1.51 cfs) of Whychus Creek irrigation water (surface) permanently in Whychus Creek. This is surface water diverted at the TSID diversion near the town of Sisters. See Map 2, pp., 5. It has

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

been permanently transferred instream at that point and is providing flow and thermal benefits of the cool 13 degrees C surface water to Whychus Creek all the way to the Deschutes River and then downward into Lake Billy Chinook. The TSID mitigation is 1.51 cfs of flow that is left in the creek for a portion of the irrigation season. In low flow years that may only be 90 days. In heavy flow years that may be 150 days or so. Depending on the flow in Whychus Creek, the actual volume of mitigation water from the rights being purchased by Thornburgh could be as high as 200-300 AF, instead of the 106 AF required to mitigate as determined by Yinger 2008. As noted above, the 106 AF need was determined by Yinger who modeled stream impacts using 2,355 AF of water at 100% consumptive use whereas Thornburgh's current plan reduces pumping to 1,460 AF and consumptive use to 882 AF. The TSID water was shown to mitigate for the full impact of 106 AF of stream reduction at Whychus Creek. As noted above, Thornburgh has completed the required arrangements and this TSID mitigation is presently in the creek.

Compliance with this FWMP regarding this certificate is completed.

3. Comply w/OWRD Mitigation Rules: Provide Mitigation Before Pumping:

Mitigation required for any groundwater permit that appropriates water from wells at the Thornburgh property, will be provided prior to pumping water under that permit, as required by OWRD rules. Mitigation, when or if needed, will be provided by either cancellation of water rights in lieu of mitigation, or transferring the existing surface water rights to instream rights. By providing mitigation water from the conversion or transfer of existing water rights, Thornburgh will be restoring natural stream or groundwater flows to the system at or above an area of impact from Thornburgh wells, much of which will occur during the time period when stream flows are typically the lowest and temperatures are warmest.

4. For Remaining Water Use BFR, COID, or Other Water Benefitting Deschutes or Crooked Rivers:

The water rights described in **Section II-2.** above will provide up to 1,217 AF of the resort's total water needs of 1,460 AF leaving at least 243 AF of additional water needed. For any additional water needed over and above the 1,217 AF, Thornburgh will use some combination of: i) BFR surface water (Deep Canyon or Makenzie Canyon); ii) BFR ground water; iii) COID mitigation water or credits; iv) Temporary credits such as the 6 AF from Deschutes River Conservancy ("DRC"), or v) other ground or surface water or credits that discharge water into either the Crooked River or Deschutes River or its tributaries and meet the requirements of the OWRD mitigation program.

Analysis by Cascade Geoenengineering, LLC shows: i) using additional BFR water with groundwater points of appropriation will comply with the no net loss standard and have no impact to fish habitat; and ii) the transfer of other groundwater rights that discharge cool groundwater into area streams and rivers will provide thermal

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

benefits to the rivers and streams; and iii) other surface water placed instream above areas of concern will provide thermal mass that will serve to cause cooling during the critical summertime period when stream temperatures are highest and flows the lowest.

5. Provide 106 AF of Additional Whychus Creek Mitigation (TSID):

Thornburgh will provide 106 AF of Three Sisters Irrigation District water for additional mitigation in Whychus Creek. This was required by Condition #39 of the FMP approval. Thornburgh has provided documentation evidencing the funding arrangements required, satisfying condition #39. TSID has completed the project and the water is permanently protected in Whychus Creek. This mitigation was previously proven to result in thermal and flow benefits from the TSID diversion above Sisters throughout Whychus Creek. With the extra water from Certificate 89259, flows are further increased, which is expected to lower temperatures further throughout Whychus Creek and in the Deschutes River onward to Lake Billy Chinook.

Collectively, the measures in **1.-5.** above will demonstrate Thornburgh Resort's continual compliance with Deschutes County's No Net Loss standard in DCC 18.113.070(D), specifically as it pertains to impacts to fisheries and aquatic habitat. The measures discussed in **6.-8.** below will provide excess mitigation that provide additional net benefits to the fisheries resources.

Section C:

6. Leave Water Rights Instream or In the Aquifer Until Needed for Resort Uses:

Thornburgh intends to pump water only as needed. When not needed, it will allow water to flow in the stream, or leave it in the ground, providing advance benefits for impacts to occur at some point in the future. Advance or excess mitigation accumulates from providing mitigation prior to pumping but also during the transient period before impacts are fully realized in the stream. The CGE memo dated August 12, 2022, discusses the accumulation of excess mitigation. Table 5A of that memo shows that Thornburgh, between now and 2071, will provide "mitigation" benefits of 71,771 AF while reducing streamflow by 47,117 AF. This creates excess "mitigation" benefits of 24,674 AF (or more) or the equivalent of roughly 17 years of full pumping of 1,460 AF. Of that excess mitigation, more than 17,000 AF, or nearly 12 years of full pumping by the resort is provided from groundwater.

During periods of severe water shortage, Thornburgh may work with OWRD as to request usage of excess mitigation water that may be used to benefit farmers in significantly impacted irrigation districts, including the North Unit Irrigation District that supports up to 58,000 acres of farmed land in Jefferson County. Thornburgh will request OWRD concurrence and permission from the County to periodically allow it to use its excess mitigation water to provide drought relief to farmers impacted by water shortages resulting from drought, the Habitat Conservation Plan,

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

or other extraordinary circumstances causing water shortages for farmers. As discussed above, Thornburgh has applied to temporarily transfer 200 AF of water to the North Unit Irrigation District. Under this exception, until the water rights are pumped by Thornburgh or used as mitigation, Thornburgh would like to be allowed to offer free use of its water to farmers severely impacted. Thornburgh does not intend this as a business, rather it is envisioned as an act of goodwill and a benefit to actual farm uses in the area. Further, any water excesses provided by Thornburgh is purely excess mitigation water that is not needed to mitigate for Thornburgh pumping. As such it will not have a negative impact on fisheries habitat although it could have a very positive impact on farmers. This temporary usage by others may be accomplished by temporary transfers on an annual basis when excess mitigation may be available.

7. Thin Juniper Forests Onsite and On BLM Lands.

Thornburgh is thinning substantial areas of Juniper forests both on site and on BLM managed lands. Juniper is a native species that, with an increase in European settlement in Oregon, has increase substantially throughout Oregon. With this increased human settlement, and the associated changes to the environment through agricultural and livestock grazing practices, Juniper is now often seen as invasive by means of a likely 10-fold increase in prevalence that has been shown to reduce water capture, retention, and recharge to the area surrounding these increased stands of Juniper. Studies show a strong correlation between Juniper removal and increased spring discharges with estimates that may be upwards of 1 acre-foot of increased discharge resulting from the removal 4-5 acres of Juniper forests. Over the last 100 years there has been large expansion in the acres covered by Juniper, which may be impacting water levels. Deschutes and Crook Counties are both looking at Juniper removal as a method to benefit water.

Deschutes County has received Federal funding for Juniper removal and is promoting residents to utilize the funding to remove Junipers. Crook County is looking at the construction and operation of a biomass plant to facility the removal of some of the 600,000 acres of Juniper increases since the 1930's. Over the same time, Crook County officials report an estimated reduction in water flow of 160,000 AF. Experts, such as Tim DeBoodt, Crook County Natural Resource Policy Coordinator, report that the reduction of between 4-5 acres of Juniper trees can save, or return 1 AF of water, ideally in the form of increased ground seepage that may result in increases in spring flow. Crook County hopes to reduce Juniper coverage and subsequently increase stream flows and return some of the 160,000 AF that has been lost from Crooker River flows.

Thornburgh, as part of its development and wildlife mitigation plans, will thin up to 5,000 acres of Juniper forests, returning the land to the condition of the historic old growth forest that was prevalent in the 1930's.

FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)

Section D:

Compliance: The purpose of this section is to clarify what constitutes compliance with this updated 2022 FWMP, whether during the review of Resort land use applications, as reported as part of annual monitoring, or for any other purpose. As noted above Thornburgh³ owns 1,211 AF of water rights to be used for pumping or mitigation and pumping at the point of diversion or appropriation of the certificate has been discontinued. For the reasons discussed herein compliance with this FWMP has been met for rights b-f, and will be met for the TSID water (g) in the manner discussed in this Section, 1b below. For any additional water rights that are acquired compliance will be met as described herein.

1. Compliance with this FWMP will occur differently for water appropriated from a surface water Point of Diversion (POD) versus a groundwater Point of Appropriation (POA) or for a mitigation credit as follows:
 - a. POA – Groundwater: For any future rights that may be acquired, compliance occurs upon the cessation of pumping of the rights and along with any of the following: deed evidencing the transfer of ownership, a submittal to OWRD of any of the following: (i) an assignment of the water right to Thornburgh, (ii) an application that seeks OWRD approval of a transfer to pump at the Resort property, or (iii) a cancellation in-lieu of mitigation.
 - b. POD – Surface Water: Once acquired, Compliance occurs upon the cessation of pumping at the source and submittal to OWRD, and OWRD issues a final order (or its equivalent) approving any of the following: (i) an application that transfers to pump at the Resort property, (ii) an application that transfers the water to an in-stream lease, (iii) the cancellation in-lieu of mitigation, or (iv) an application to transfer to obtain mitigation credits, permanent or temporary.
 - c. Mitigation Credit: In the event that Thornburgh acquires mitigation credits, compliance occurs when Thornburgh provides proof of ownership or proof of submittal to OWRD to use the credits as mitigation.

Thornburgh also agrees to the following measures to provide mitigation benefits over and above the benefits achieved by the mandatory measures described above. Noncompliance with these measures shall not, however, be grounds for declining approval of a Resort development permit because these measures are not required to meet any Resort approval criterion, including the no net loss standard:

2. Thornburgh will discontinue the exempt use of all three exempt wells located on the Resort property (referred to as the Kem, Bennet and Price wells) prior to the completion of Phase A-1. Where required for development purposes any of these wells may be physically abandoned and sealed but that is not required for compliance with this FWMP.

³ Pinnacle Utilities, LLC an affiliated company is the Resort's water provider.

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

3. Discontinue the use of all purchased water rights listed in Section B2 a-e above (Pg. 3-6) until they are used by the Resort as a transferred water right or as mitigation for pumping groundwater for Resort uses. The following exceptions apply: (1) purchased rights may be pumped if necessary to avoid forfeiture; and (2) purchased rights may be transferred for use by farmers, including those in the North Unit Irrigation District or other party if used for farm use purposes as defined by ORS 215.203 (whether in an exclusive farm use zone or otherwise), if OWRD authorizes a temporary transfer to help address the needs of farmers. Currently, such transfers may be allowed by Executive Order of the Governor declaring a State of Drought Emergency.
4. The Resort has already committed in its FMP to remove and/or thin thousands of acres of Juniper trees from the Resort property and BLM lands to enhance wildlife habitat values. The thinning and removal of Juniper trees can have a dramatic reduction on the consumption of water, potentially saving hundreds of AF of water per year.

Reporting: In addition to any reporting required by OWRD pertaining to water use or mitigation, Thornburgh will provide annual reporting (no later than December 31st of each year) to Deschutes County, with a copy to ODFW's local field office, of the following information:

1. The status of each of the certificated water rights discussed in Section II-B2, including the status of any transfer or cancellation applications affecting any of those rights.
2. Copies of any annual reporting filed with OWRD.
3. An accounting of the total amount of water pumped under any of the water rights discussed in Section II-B (2) between November 1 – October 31 of the prior year.
4. An accounting of the total amount of a) groundwater left in ground, b) surface water left instream (permanent or temporary), or c) water held as mitigation credits (permanent or temporary) in accordance with this Section D, paragraphs a, b & c.
5. The accounting referred to in #'s 3 and 4 of this section will be maintained both annually, and on a cumulative basis.
6. An accounting of the amount and certificate # of any water provided to farmers for drought relief.
7. The amount and source of any OWRD mitigation used to mitigate for the pumping in #3 of this section.
8. Any change in the status of any of the three exempt wells including whether they have been abandoned to date.
9. Consistent with the 2008 FWMP, no additional reporting is required during the review of any land use application related to the Resort.

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

III. 2022 FWMP Results

Results of Section II-A: Item 1.

Thornburgh, after listening to the concerns of its neighbors as they pertain to water, has taken dramatic steps to reduce its water footprint. The main point of this 2022 FWMP, is that Thornburgh is voluntarily reducing its water usage from 2,129 AF annually to 1,460 AF annually, a reduction of more than 31%. This reduction reduces every impact that Thornburgh's water usage could create and is the driving principle behind this amended 2022 FWMP.

Results of Section II-B: Items 2-5.

Implementation of the elements of this FWMP described in 2.-5. above and the related OWRD requirements as described herein are expected to result in replacement flow, or mitigation of more than the resorts consumptive use of 882 AF per year at full build-out and to fully mitigate for all impacts to the fisheries resource in accordance with the No Net Loss standard of DCC 18.113.070 (D). At least 1,323 AF (1,211 owned, 6 AF leased and at least 106 AF transferred instream) of this replacement or mitigation water is already owned or leased by Thornburgh, who has ceased pumping all of the water from its original place of appropriation. Where needed Thornburgh has already filed transfers to change the POAs, the PODs, and the places of use of the water rights presently owned. 1,123 AF of this water is already providing the FWMP mitigation called for in this FWMP in advance of pumping.

Thornburgh retained experts to complete an exhaustive analysis of the impacts to stream flow, along with the thermal impacts from Thornburgh's pumping on fisheries habitat and commissioned over 15 technical reports or memo's detailing that analysis. A summary of results includes

- a. Provide a net increase in the discharge of cold ground water via seeps and springs stream flow in the Deschutes River from Crane Prairie reservoir downstream to Culver, including at two spring locations of concern to ODFW above and below the mouth of Whychus Creek,
- b. Provide a net increase in the discharge of cold ground water via seeps and springs in Whychus Creek from Sisters to the mouth, including at important "ODFW" spring locations at Alder Springs and the mouth,
- c. Add cold groundwater discharge versus the 2008 FWMP to the Crooked River, including in important "ODFW" spring areas near Osborne Canyon and Opal Springs,
- d. Increase net flows in the Little Deschutes River from south of LaPine into the Deschutes River,
- e. Increase net flows of the Deschutes River from the confluence with the Little Deschutes onto Lake Billy Chinook,
- f. In most cases reduce net stream temperatures in the Deschutes River⁴,

⁴ Thornburgh's 2008 mitigation measures estimated an increase in temperature change of 0.00 degrees C at Lower Bridge, 0.10 degrees C at Steelhead Falls, and 0.1 degrees C below the mouth of Whychus Creek. The hearing officer approved these increases which is DEQ's legal threshold for measurable change.

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

- g. Increase net flows of Whychus Creek from Sisters to the mouth,
- h. Reduce net stream temperatures of Whychus Creek as noted in “g” above,
- i. Increase habitat quantity in the Little Deschutes River,
- j. Increase habitat quantity and improve habitat quality in virtually all areas of Whychus Creek and the Deschutes River, and:
- k. Reduce the thermal impacts in the Crooked River as compared to the 2008 FWMP to levels immeasurable, including in spring areas noted by ODFW, and not likely to cause a change in the quality or quantity of fish habitat.

These elements a-k, above are based on steady state conditions, the point in the future when 100% of the impacts from Thornburgh pumping have been realized in the form of streamflow reductions which may not occur for decades into the future after Thornburgh’s pumping begins. Measure C below discusses the excess or advance mitigation being provided to the fisheries resource.

Results of Section C: Items 6-7.

Excess Mitigation: The net results described in Section B above assume steady state conditions, the point in time when full pumping is occurring and the reductions in groundwater discharge into the streams are fully realized. As noted above and in the CGE memo, steady state conditions will not occur for as long as 95 years or more.⁵ Until then, Thornburgh will provide substantial amounts of excess mitigation, likely resulting in un-required benefits during this timeframe. Assuming it will only take 50 years for steady state conditions to occur, Cascade has calculated that Thornburgh will discharge 71,771 AF of water into the system while creating impacts/withdrawals on the system of 47,117 AF, and excess benefit/discharges of 24,654 AF additional water over impacts in that transient than required. In sum the benefits provided are over 52% greater than the impacts created in the first 50 years of this 2022 FWMP, and equal nearly 17 years of full pumping of 1,460 AF. This situation will be most pronounced (nearly 100% excess) in the early years and gradually narrow as the difference between benefits and impacts narrows until steady state conditions are attained.

Juniper Thinning: As the resort is developed it will both clear and thin Junipers from the Thornburgh lands. It will also thin in conjunction with the BLM, approximately 3,400 acres of Junipers on BLM lands.⁶ The benefits to the watershed from Juniper reductions can be substantial and there are concerted efforts to reduce human induced Juniper expansion that has occurred in many areas of the west, including Deschutes and Crook Counties. Many of these efforts are supported and financed by Federal funding. While it is difficult to quantify the exact benefit to the watershed in terms of increased stream flows, the reduction in Juniper coverage has been shown to be positive. When studies show the possibility to save up to 1 AF for every 4-

⁵ The 2004 USGS model estimated impacts of 100% were reached in year 80 after full pumping is begun. It will take at least 15 years, and perhaps 20-25 years until Thornburgh is fully occupied and pumping at those levels.

⁶ Thornburgh will thin roughly 3.5 acres of Junipers for every acre of land it develops on the Thornburgh site. At the time of the WMP Thornburgh estimated that about 900 acres would be developed.

FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)

5 acres of Juniper reduction, thinning thousands of acres could provide a significant benefit to nearby stream flows.

A technical report issued by Resource Specialists, Inc. dated January 31, 2023 estimated Thornburgh's removal and thinning of Juniper trees could save as much as 304 AF of water annually from when thinning occurred. See Exhibit B.

Comparison of Thornburgh's 2008 FWMP vs. the 2022 FWMP.

All the OWRD mitigation in the prior FWMP was surface water flows benefitting only Whychus creek from Sister to the Deschutes River and the Deschutes River between Bend to Lake Billy Chinook. Of that mitigation water 0% was groundwater (coldest), while 62% (was 13 degrees C) Deep Canyon Creek water, with the remaining 38% being warmer, (26 degrees C) surface water from COID that provides little thermal benefits. The average temperature of the 2008 mitigation was 18 degrees C. By contrast, this 2022 FWMP is comprised of roughly 84% cold groundwater (11 degrees C), and 200 AF of LeBeau surface water (20.4 degrees C) for an average of 12.5 degrees C⁷.

The current plan, like the 2008 FWMP, leaves cool water in the stream to mitigate for thermal impacts from the reductions of groundwater discharge into the river. The current plan, however, substantially increases the percentage of cool water mitigation from 62% to 84% and provides benefits into the affected streams, including Whychus and Deschutes included in the 2008 FWMP but also the Little Deschutes River, Indian Ford Creek, and the Crooked River that received no benefits in the prior FWMP.

In short, the current plan will increase summertime flows in the critical areas while at the same reducing average stream temperatures. Regardless of where the remaining 243+/- AF (1,460-1,217) of water rights or mitigation comes from this plan has already mitigated for the full impacts to seeps and springs.⁸

IV. Background and Baseline

The Thornburgh Resort (the "Resort" or "Thornburgh") will have no direct impact on natural surface waters; there are no such resources on the property and the proposed source of water for the Resort is ground water pumped from wells on the Resort property, to be appropriated under a series of water rights approved by the Oregon Water Resources Department ("OWRD"). Use of ground water by the Resort is expected to indirectly impact flows in the Deschutes River because of a determination of hydraulic connection between surface and ground waters in the Deschutes Basin. This determination was made by OWRD in connection with its evaluation and approval of Thornburgh's original water right authorizing the appropriation of 2,129 acre-feet of ground water for the Resort.

⁷ 206 AF of surface water including the 6 AF of DRC credits. Both plans have an additional 1.51 cfs (at least 106 AF) of cool 13 degree C TSID surface water.

⁸ If all 249 AF of additional water was from a surface water source the resulting % of total mitigation comprised of groundwater would be 69.2%, still greater than the 0% of groundwater and 61.7% of cool Deep Canyon water in the 2008 FWMP.

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

As a result of the determination of hydraulic connection, Thornburgh was required to provide mitigation to offset projected flow reductions in the “zone of impact” identified by OWRD, in this case the “General Zone” of impact, consistent with OWRD’s Deschutes Basin Groundwater Mitigation Program.

Separate from this mitigation and, to meet Deschutes County’s own No Net Loss standard found at DCC 18.133.070(D), Thornburgh voluntarily agreed to address both flow and water temperature concerns, which was to serve as a component of the mitigation measures for the original FWMP. Those measures are set out in Section V. Mitigation and Enhancement Measures of the FWMP. These and other measures added to the 2008 FWMP during the review of the Final Master Plan (“FMP”) were determined to fully mitigate for any negative impacts on habitat and to achieve compliance with DCC 18.113.070(D).⁹

The core component of the 2008 FWMP was adding cooler water to the river upstream of areas that were important for fish habitat. Thornburgh identified Deep Canyon Creek as a source of this cooler water, which had a temperature of approximately 13 degrees C. This water, however, has historically been pumped directly from the creek for irrigation purposes before it reached the Deschutes River. Thornburgh committed to purchasing these water rights and placing them in stream to improve flows and to cool the river.

In 2008, the use of this cool water made up just 62% of the total mitigation promised by the FWMP, but was found sufficient to fully mitigate for 100% of the thermal impacts to the Deschutes River (and to Whychus Creek as well according to Oregon Department of Fish and Wildlife (“ODFW”)) attributable to Thornburgh’s pumping. Additional impacts of 1.87 cfs¹⁰ to seeps and springs were identified in the 2008 FWMP, which planned mitigation by leaving 1.97 cfs (equal to 105% of the impacts) of the Deep Canyon water in the river upstream of areas identified as critical fish habitat. Additionally, this mitigation was determined by the ODFW to result in a net benefit to fisheries.

Project opponents objected to the 2008 FWMP, claiming that no mitigation was provided to address a slight reduction in groundwater recharge to Lower Whychus Creek. Although Thornburgh and ODFW disagreed that mitigation was needed in this location, Thornburgh volunteered to provide additional mitigation specifically for Whychus Creek by funding a part of a Three Sisters Irrigation District project. The County’s hearing officer accepted this offer. The Whychus Creek mitigation was opposed by a project opponent but proven to meet the No Net Loss standard and to provide additional benefits to habitat resources in Whychus Creek. This mitigation project has been completed.

⁹ This is a Deschutes County standard only.

¹⁰ The 1.87 cfs of impact was the total amount of impact to all seeps and springs in any location (Deschutes, Whychus, etc.) from Thornburgh pumping 2,129 AF of groundwater.

FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)

V. Resort Water Supply and OWRD Mitigation

A. Resort Water Needs and Supply

Thornburgh’s water supply is groundwater from the General Zone of the Deschutes Basin Regional Aquifer and is pumped from numerous wells located within the Resort boundaries. This has not changed since the Resort was first approved in 2006. The original plan anticipated 6 groundwater wells would be installed. Presently, there are 8 potential groundwater wells. However, changes to Resort infrastructure may require additional well locations to be added or moved. As was noted from David Newton in a memo dated August 24, 2021, (Exhibit C) the number or specific location of wells within the resort property has no bearing on the mitigation plan or the efficacy of mitigation to offset pumped groundwater from the Resort’s property. Any well within the resort property will pump from the same regional aquifer to supply Thornburgh water for a variety of purposes, common among municipal and resort style communities in Central Oregon. Thornburgh uses to be served include domestic and commercial uses, golf course, park and landscape irrigation, reservoir/pond maintenance and fire protection. Collectively, these uses are defined by the OWRD as “quasi-municipal” uses. In 2008, the Resort’s water needs at full build out were estimated at 2,129 AF per year, having consumptive use of 1,356 AF, and a maximum withdrawal rate of 9.28 cfs as shown below. As defined by OAR 690-505-0605(2), *“Consumptive use” means the Department’s determination of the amount of a ground water appropriation that does not return to surface water flows in the Deschutes Basin due to transpiration, evaporation or movement to another basin.*”

1. Original Water Use Full Resort Build-Out

<u>WATER USE</u>	<u>ANNUAL VOLUME</u>	<u>CONSUMPTIVE USE</u>
Golf Courses	717 AF	645 AF
Irrigation	195 AF	117 AF
Reservoir Maint	246 AF	206 AF
Other Q/M	971 AF	388 AF
TOTALS	9.28 CFS.	2,129 AF
		1,356 AF

Since the approval of the 2008 FWMP, issues regarding the use and conservation of water have become increasingly important to the region. As a result of this growing regional water awareness, Thornburgh has taken focused steps to reduce the Resort’s water usage by roughly **one third**. This reduction of water use will be achieved by Thornburgh foregoing its right to develop some water intensive amenities and reducing irrigated landscaping for resort facilities and individual homes. The Resort will also implement the use of improvements in the type and method of fixtures used in Resort buildings. As a result of this Thornburgh is reducing its total water needs from 2,129 AF to 1,460 AF as shown in table 2 below.

The source of Thornburgh water remains groundwater from the regional aquifer to be supplied via groundwater wells located on the Thornburgh property. All the wells Thornburgh will pump from are within the boundaries of the Resort and are pumping from the same regional aquifer,

FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)

the Deschutes Formation Aquifer. The location of wells within the resort have no change to the potential effects of groundwater pumping.

2. Reduced Water Use at Full Resort Build-Out

<u>WATER USE</u>	<u>ANNUAL VOLUME</u>	<u>CONSUMPTIVE USE</u>
Golf Courses	501 AF	451 AF
Irrigation	111 AF	66 AF
Reservoir Maint	51 AF	43 AF
Other Q/M	797 AF	319 AF
TOTALS	1,460 AF	882 AF

3. OWRD Alternates to Transferring Thornburgh’s Water Rights.

Thornburgh has numerous applications, permits and other certificated water rights, as listed below for use as part of the Resort’s water plans that may be used for consumptive water or mitigation water purposes. In addition to transferring certificated water rights to the Thornburgh property, alternatively, they can be used to mitigate for pumping of groundwater reported under any groundwater permits, or Limited License. OWRD mitigation must be in the form of legally protected water for instream use which can be accomplished in different ways acceptable to OWRD, including: i) transferring existing surface water rights for irrigation use into protected instream use; and ii) voluntary cancellation of either surface or groundwater permits in lieu of mitigation. Each method results in the full amount of pumped water allowed under the certificate to be protected permanently instream. OAR Chapter 690, Division 505 (the Deschutes Basin Groundwater Mitigation Program). Thornburgh can use a surface water certificate either way but can only cancel groundwater certificates “in-lieu” to create OWRD mitigation. Regardless of the methodology for meeting the mitigation obligation, the result is similar: the authority to pump water in one location ceases and allows water to be pumped from wells at the Thornburgh property. Mitigation is discussed in detail below.

Using the certificated rights for mitigation by either cancelling the right in-lieu or transferring it instream provides at least equal benefits to streamflow and temperature as transferring the water to the Thornburgh property. Either method of providing OWRD mitigation will provide sufficient benefits to fish habitat such that there is no net loss or degradation of the resource.

4. Groundwater Permits, GW, and LL Applications:

a. Ground Water Permit G-17036 – This permit authorizes up to 9.2 cfs and 2,129 AF for Quasi-Municipal uses including irrigation of golf courses, homes and commercial areas, and maintenance of reservoirs. Period of use is Year-Round except for the seasonal limits placed on irrigation use by the permit. The rate and volume are further limited by the corresponding mitigation provided. The maximum volume for irrigation of 320 acres of golf courses shall not exceed 717 AF annually. The amount of golf course irrigation specifically under this right is limited to a diversion of 2.24 AF for each acre irrigated during the irrigation season of each year. The amount of water allowed to be

FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)

used for reservoirs under this permit is 246 AF. The fully developed Mitigation Obligation for this right is 1,356 AF annually, to be provided within the General Zone of Impact. Mitigation is to be provided prior to each stage of development under the permit.

In 2013, Thornburgh posted 3.6 acre-feet of mitigation credits as the initial mitigation and the permit was issued. Due to unforeseen delays, Thornburgh was required to apply for an extension of the permit, which was granted in 2018 with OWRD issuing a Proposed Final Order and Final Order granting approval. Ms. Gould subsequently filed suit against OWRD at the Oregon Court of Appeals. OWRD withdrew its final order and sent the approval (as noted in the Proposed Final Order (PFO)) to a contested case hearing. On July 26, 2022, OWRD issued a superseding proposed final order proposing denial of the extension, but the permit remains non-cancelled (valid) as of the date of this 2022 FWMP. Thornburgh has protested this PFO and is seeking a contested case hearing.

Permit G-17036 is the first permit Thornburgh acquired. Due to litigation opposing the permit and the lengthy delays involved at OWRD, Thornburgh developed alternatives to pump groundwater from the Resort's wells with little reliance on this or other OWRD groundwater and limited license permits, or applications as described below.

b. Ground Water Permit Application G-19139 (pending) – This permit application was for the use of 9.28 cfs of year-round Quasi-Municipal water having the same limitations and mitigation requirements as permit G-17036. It was filed at the suggestion of OWRD staff as a potential replacement to permit G-17036 pending the contested case by Ms. Gould. The POA of this application is 8 wells located on the Thornburgh property. The application is pending. If not approved, Thornburgh will file a petition for judicial review.

c. Limited License Application LL-1879 -- This limited license application was for the use of 4.5 cfs of year-round water. The application was filed to provide preliminary use of some of the water permitted by G-17036 pending the resolution of the contested case on the extension. OWRD denied the application, and Pinnacle has filed a petition for judicial review in Deschutes County Circuit Court. If the limited license is approved, this will require mitigation for the life of the limited license, which can be done more informally than is required for permanent permits or certificates.

d. Limited License Application LL-1917 (pending) – This limited license application was for the use of 0.453 cfs of year-round water. The amount requested is the same amount of water as will be transferred under the authority of T-13703. It was filed as an alternative to the use of the water in T-13703, as a challenge to the transfer is reviewed by the court system. The application is pending. If approved, this will require mitigation for the life of the limited license, which can be done more informally than required for permanent permits or certificates.

FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)

The source of water pumped from groundwater wells located at Thornburgh is the regional aquifer residing under the Resort and throughout much of Central Oregon. The source and method of supply—or the impacts generated from withdrawal of water—does not change based upon which permit, or certificate(s) Thornburgh reports its groundwater pumping under (i.e., a transferred right, permit G-17036, or an alternate permit or certificate). OWRD rules and regulations govern the withdrawal of water from the aquifer regardless of permit or certificate number, and the impacts to that aquifer are the same regardless of the legal mechanism for withdrawal of the resource.

B. OWRD Mitigation Requirements for New Groundwater Permits

Mitigation is required for new ground water permits in the Deschutes Basin under ORS 390.835 and related administrative rules in OAR 690-505-0500 *et seq.* This does not apply to certificated water rights that have been fully developed and need no further mitigation. The OWRD mitigation rules were adopted in response to a comprehensive study of ground water resources in the Deschutes Basin conducted by the United States Geological Survey (“USGS”) and OWRD. (*Ground Water Hydrology of the Upper Deschutes Basin, Oregon,* USGS Water Resources Investigation Report 00-4162, 2001.) The study demonstrates hydraulic connection between the regional groundwater aquifer and surface water within the Deschutes Ground Water Study Area as shown on Figure 1.

Under OWRD rules, all new ground water uses within the USGS study area are presumed to be in hydraulic connection with the Deschutes River system. The rules require mitigation to offset the impact of ground water pumping on surface water flows. In reviewing applications for new ground water rights, OWRD determines the total quantity of water to be diverted from groundwater and the amount of “consumptive use” associated with the proposed new use. The amount of mitigation required – or “mitigation obligation” – is equal to the annual amount of consumptive use.

In addition to specifying the quantity of mitigation water required to offset consumptive use, OWRD identifies the “zone of impact” or location within the surface water system in which the impact of a proposed ground water use is expected to occur. Mitigation for any new groundwater permit used by Thornburgh is required in the “General Zone of Impact” which allows mitigation water to be obtained from any source in the Deschutes Basin above the Madras gage, located below Lake Billy Chinook. The broad geographic scope of the General Zone reflects findings in the USGS Study that most ground water within the basin flows toward the confluence area of the Crooked and Deschutes Rivers and discharges into the river and tributaries in an area just above Lake Billy Chinook.

Initially, OWRD determined the consumptive use, and mitigation obligation of permit G-17036 to be 851.6 AF (40%, of 2,129 AF). Water Watch protested that determination and Thornburgh voluntarily agreed to increase the consumptive use of individual elements of the permit which raised the overall mitigation requirement to 1,356 AF. The application for the replacement permit, permit application G-19139 uses the same consumptive use rates applied by OWRD because of the settlement. Under OWRD rules, mitigation for new groundwater permits must

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

be provided in advance for the full amount of water to be pumped under the new permit for each phase of development.

C. Thornburgh OWRD Mitigation Plan

Applicants proposing municipal or quasi-municipal water use have the option of providing mitigation in incremental units tied to specified phases of development; however, the mitigation obligation for each phase of development must be provided in full before water use may begin for that phase. Thornburgh submitted several versions of its “Incremental Mitigation Plan” (“IMP”) to OWRD as allowed by OWRD rules. Changes to the IMP may occur in the future without need for amending this plan. The IMP describes the proposed timing for meeting the mitigation obligation for Permit G-17036, developing the 2,129 AF of water uses and mitigation over several phases extending out to 2035.

Because of extensive and protracted litigation and challenges to land use and water permit and transfer applications and the delays in processing the contested case on the extension of the permit, Thornburgh developed extensive additional water resources as noted in Section B above, that can be used to comply with the No Net Loss standard. Thornburgh completed funding for the TSID mitigation that has been determined to fully mitigate for groundwater reductions projected to occur to Whychus Creek based on the water use studied by Mark Yinger that overstated the water use of the Resort. This mitigation has already been provided by TSID and is described in B.6. above.

At this point it is unclear how much water will be pumped from G-17036 or any alternate “NEW” groundwater or limited license permit.¹¹ What is clear, however, is that the Resort has agreed to reduce its water use from 2,129 AF with a consumptive use of 1,356 AF to 1,460 AF with a consumptive use of approximately 882¹² AF. More importantly, this FWMP has accounted for the maximum amount of pumping that could occur of 1,460 AF and is providing mitigation that meets or exceeds the no net loss standard. Thornburgh will be required to provide mitigation for this amount of water when due, which is before pumping consumptive water for an approved resort use. Thornburgh’s maximum water use is capped to 1,460 AF, which is less than 1/100th of 1% of all current water use (approximately 750,000 AF) in the Deschutes Basin.

The certificated, fully mitigated water rights above, except for the Dutch Pacific water rights, have been or are being transferred to the Thornburgh wells. The transfers will change the place of appropriation and use. The first of these, Transfer T-13703, was approved transferring 327.5 AF of quasi-municipal water from a well in west Bend to the Thornburgh wells. The total amount of the planned transfers, including T-13703, if approved, is 1,161 AF. In the alternative the 1,161 AF of certificated water rights could be cancelled (both the groundwater and surface water rights) or transferred instream (just the surface water rights) for mitigation credits. All

¹¹ It is unnecessary to determine this at this time as the source of water must remain the same, the Deschutes Regional aquifer. DCC 18.113.070(K). However, the mitigation for impacts to habitat based upon withdrawal from that source are the subject of this document.

¹² Applying OWRD standard practice of 40% to QM permits would result in consumptive use of 584 AF. This plan provides mitigation far more than that amount.

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

this water would comply with the OWRD mitigation rules if used in that manner.¹³ Certificate 89259 (2. E. above) for 49.5 AF is being cancelled in lieu of mitigation. When all the transfers or cancellations are done, Thornburgh will need to obtain a relatively small amount of additional water rights to transfer to its property or to use as mitigation. Because of the efficacy of the present plans, most critically is the fact that the 1,217 AF¹⁴ already mitigates for 119% (w/out the TSID or 198% with it) of the impacts to springs and seeps¹⁵, and that the source of remaining water coming from within the General Zone of Impact will not create an adverse impact on the fisheries habitat.

Of the certificated water rights described above, Thornburgh owns 1,211 AF¹⁶ that at the time of this report it is not pumping. 200 AF of that is surface water that is not being pumped from the river south of LaPine while 1,011 AF remains in the aquifer to flow to the streams, including the Deschutes River, Whychus Creek, and the Crooked River to increase flows and provide thermal benefits, long before the resort creates any impacts on the stream. This “advance” or “excess mitigation” accumulates for years until the impacts are fully felt in the stream. As is discussed in more detail below this excess mitigation accumulates to a substantial amount.¹⁷

D. Groundwater Withdrawals and Quality Mitigation

In other resort approvals, OWRD mitigation only¹⁸ was accepted as providing the entire mitigation needed to meet this standard for fish habitat. In the case of Thornburgh Resort, this standard has been redefined to require “water quality” mitigation. This was required despite the fact that all groundwater pumping in the Deschutes Basin affects groundwater discharges which impact stream flows. OWRD mitigation, by design, increases streamflow by either increasing groundwater discharge into the stream (groundwater mitigation) or by leaving water in the stream (surface water mitigation) which typically has the benefit of reducing river and creek temperatures.

Increasing streamflow is the main purpose of the OWRD mitigation program. It is also a primary purpose of many of the basin’s environmental actions and restoration programs. NCI noted this in the 2015-2017 remand of the FMP relating to TSID mitigation for Whychus Creek. Flow volumes in the upper Deschutes River are an important component of the current Habitat Conservation Plan for the Oregon Spotted Frog. Flow volume guarantees set to protect the frog have created substantial impacts on the operation of the basin’s irrigation districts and a tremendous burden on some of farmers within the basin, including North Unit Irrigation District.

¹³ As the basic premise of the mitigation program was to halt expansion of water use in the Deschutes basin, it cannot allow for expansion of use and must instead be permanently instream.

¹⁴ Including the DRC credit.

¹⁵ This is regardless of how the water is used. The analysis of the ratio of cool water mitigation is provided below.

¹⁶ The 937 AF currently left instream presently does not include the 106 AF of TSID water in Whychus Creek currently flowing from the TSID diversion to the mouth of the creek and into the Deschutes River.

¹⁷ Thornburgh may allow farmers affected by the Habitat Conservation Plan and/or drought conditions to use some portion of water it doesn’t currently need to authorize pumping on a temporary basis. When providing water for farm drought relief, that portion of Thornburgh’s water will not be instream.

¹⁸ Meaning standard mitigation credits issued in conjunction with the Deschutes Groundwater Mitigation program.

*FISH AND WILDLIFE MITIGATION PLAN - ADDENDUM #2 (2022 FWMP)
 RELATING TO POTENTIAL IMPACTS OF THORNBURGH'S
 REDUCED GROUND WATER WITHDRAWALS ON FISH HABITAT
 August 16, 2022 (As reorganized on January 31, 2023; Revised April 4, 2023)*

Opponents of Thornburgh have typically focused on groundwater as it relates to its ability to affect streamflow, particularly the thermal conditions or “quality” of the remaining flow resulting from groundwater pumping. More specifically, opponents have focused on the location of the impacts to the area below Lower Bridge on the Deschutes River and lower Whychus Creek. However, these areas are where discharge of significant amounts of cold groundwater discharge into the Deschutes River, Crooked River and Whychus Creek, dramatically lowering stream temperatures and resulting in improved water quality.

In the original FWMP, groundwater withdrawals were mitigated for by providing surface water in the Deschutes River and its Deep Canyon Creek and Whychus Creek tributaries. In the case of the Deep Canyon Creek mitigation, surface water mitigation was justified in the 2008 FWMP because the creek itself is spring fed. While it is true that this water is cool, the surface water is heated (from approximately 11 degrees to 13 degrees) as it flows down the creek prior to discharge into the Deschutes River. In 2008, Tetra Tech’s Mass Balance Analysis¹⁹ reported minor thermal impacts (temperature increases) may occur in the Deschutes River. With Thornburgh’s 2008 mitigation measures, Tetra Tech’s analysis estimated a temperature change of 0.00 degrees C at Lower Bridge, 0.10 degrees C at Steelhead Falls, and 0.1 degrees C below the mouth of Whychus Creek. Even though there was an 0.1 degree C increase in temperature (impact) in the critical fish habitat at Steelhead Falls and below Whychus Creek, the mitigation plan was approved as meeting the No Net Loss standard.

In the case of Whychus Creek, project opponents argued that slight groundwater withdrawals that occurred in both the upper and lower parts of the Creek impacted lower Whychus Creek. Opponents claimed it to be an area of critical fish habitat because it receives substantial cold groundwater discharges from the regional aquifer. The 2008 hearings officer expressed concerns about the creek during the peak summertime temperatures. While Thornburgh disagreed that mitigation was needed for Whychus Creek, it offered a solution to increase flows with the use of surface water. The solution was to leave 106 AF of cool mountain water in the creek from a point south of Sisters that would otherwise be pumped by TSID. The use of this TSID mitigation was challenged by a single project opponent. It was, however, approved because it was shown to achieve compliance with the No Net Loss standard based on an analysis of the impact of TSID mitigation water on temperatures in lower Whychus Creek. This mitigation also provides substantial additional thermal benefits to the middle and upper parts of the creek that were not even considered to meet the standard due to the limited scope of the review on remand. The NCI memo from October 2017 shows the maximum thermal impacts to lower Whychus Creek without mitigation, during the peak summertime temperatures and the creek at its lowest flow, to be 0.0042 degrees C. This 4/1,000^{ths} of a degree is far less than what can be measured using technology available today. **With** the TSID surface water mitigation, the temperature was **lowered** in Whychus Creek (lowered by approximately 0.001 or 1/1,000th of a degree, again in an amount too small to be measured)²⁰. Three Sisters Irrigation District has

¹⁹ Tetra Tech overstated impacts by allocating 100% of the impacts of 1,356 AF consumption into the Deschutes River which was not accurate. Yinger 2008 report stated lower % impacts, and when corrected the result is lower thermal impact.

²⁰ Since the amounts cannot be measured, they cannot be verified and are simply theoretical. As such, whether positive or negative they are considered as no change.

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completed the project, and Thornburgh has fulfilled its agreement to provide this the water which is now instream.

While Yinger 2008 noted roughly 13% of the flow reduction impacts would be felt in the Crooked River, neither Yinger nor ODFW voiced concerns about thermal impacts there. This may be because of the large groundwater discharges in the area and the fact that the temperatures of the groundwater discharging into the Crooked River at Opal Springs and Osborne are warmer (between 11.6 and 13.7 degrees C²¹) than the discharges noted into the Deschutes or Whychus (around 11 degrees C). **See Exhibit 6, OWRD Spring Temp.** Still, to better understand any thermal impacts to the Crooked River from Thornburgh pumping, Newton undertook mass balance analysis of the 2008 mitigation plans comparing that to the current 2022 plans.

In the CGE memo dated August 12, 2022, impacts to the Crooked River were analyzed based on the Yinger 2008 report using both the 2008 FWMP mitigation and Thornburgh's current plans. Both scenarios used the OWRD temp data, Yinger 2008 impacts, and recorded flows at Opal Springs and Osborne. The 2008 FWMP had no Crooked River mitigation. All mitigation was Deschutes River and Whychus Creek surface water mitigation. The 2008 plan resulted in very slight temperature increases of between 0.0001 to 0.0017 degrees C. The 2022 plan used the same inputs but included mitigation that came from the cessation of pumping BFR groundwater, some of which impacts the Crooked River. As a result, the 2022 plan results in even smaller temperature increases, ranging from between 0.0000 to 0.0004 degrees C. Although the 2008 FWMP allows more than 4 times the thermal impacts of this 2022 Plan, the thermal impacts range from between ZERO to 4/10,000^{ths} of a degree C. None of these amounts can be measured and as such are considered as no change scientifically. They have been described as having no impact on fish habitat²². Subsequent analysis was done by Four Peaks and Newton to detail the impacts on the Crooked River. The resulting thermal impacts are 0.00 degrees C at both Opal Springs and Osborne Canyon. In both cases, the resulting benefits are too small to physically measure.

E. Fish Habitat Potentially Affected by Ground Water Use

During the consultation process in 2008, ODFW identified two specific concerns with respect to potential impacts of ground water pumping on fish habitat: First, the potential for flow reduction due to hydraulic connection that could impact flows necessary for fish and wildlife resources in the Deschutes River system; and second, the potential for an increase in water temperature as a result of flow reductions from ground water pumping. In preparation for this 2022 FWMP Thornburgh discussed the changes with ODFW to understand what areas would currently be of concern. While the area from Lower Bridge to Lake Billy Chinook on the Deschutes is still important, other areas were also of concern. This included flow limitations on the Deschutes River from Bend to Lower Bridge, on Whychus Creek from Camp Polk Road

²¹ As recorded by OWRD staff and noted in Exhibit 6.

²² Tetra Tech in their 2017 report, page 8, cited the EPA 2003 report which noted that temperature changes less than 0.25 degrees C were of no consequence to fish.

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upstream to Sisters, and in Indian Ford Creek, that empties into Whychus Creek. This plan takes those areas into account.

In the 2008 process, ODFW identified six species of fish that could potentially be impacted: Redband Trout, Bull Trout, Brown Trout, Mountain Whitefish, Summer Steelhead and Spring Chinook. While relevant to consider, more important is the habitat itself. In *Gould v. Deschutes County*, 233 Or App 623, 227 P3d 758 (2010) the Oregon Court of Appeals found that the no net loss standard refers to habitat, stating:

“Thus, the context of DCC 18.113.070(D) strongly suggests that “fish and wildlife resources” refers not to species of fish and wildlife, but to the habitat that supports fish and wildlife. In light of that context, we conclude that DCC 18.113.070(D) allows a focus on fish and wildlife habitat to establish that “[a]ny negative impact on fish and wildlife resources will be completely mitigated so that there is no net loss or net degradation of the resource.” That standard may be satisfied by a plan that will completely mitigate any negative impact on the habitat that supports fish and wildlife, without showing that each individual species will be maintained or replaced on a one-to-one basis.”

In its consultation with Thornburgh regarding these issues, ODFW recognized that the OWRD groundwater mitigation program was specifically designed to identify and mitigate for the impacts of flow reduction because of new groundwater pumping in the basin. Although the OWRD rules and USGS study on which the rules are based do not directly address temperature issues, ODFW also recognized that with the flow replacement required under OWRD rules the potential impact to temperature because of the Thornburgh project – or any similar individual project – is expected to be negligible. However, ODFW expressed a concern about the potential for cumulative impacts from on-going groundwater development in the basin, over time. Although cumulative impacts may be a concern, Thornburgh does not need to mitigate for the impacts of others in order to achieve compliance with the No Net Loss/Degradation standard. That standard is based solely on impacts created by Thornburgh’s pumping which were acknowledged to be negligible in 2008.

In early correspondence on this issue, ODFW identified concerns about potential impacts on cold water springs and seeps in the Whychus Creek sub-basin because of Thornburgh’s groundwater use. Following consultations with OWRD staff and the Department of Environmental Quality and their own internal review, ODFW determined the type of habitat potentially affected by the Resort in Whychus Creek would be classified, for purposes of commenting on the Resort’s FMP application, as Habitat Category 2. This conclusion was based on ODFW’s determination that temperature impacts to stream flow, if present, can be mitigated with appropriate actions. As used in the ODFW Mitigation Policy, “Habitat Category 2” describes essential habitat for a fish or wildlife species. Mitigation goals for this category of habitat, standards that do not apply to the County’s review of the FWMP, are no net loss of either habitat quantity or quality and to provide a **net benefit** of habitat quantity or quality. OAR 635-415-0025(2). ODFW reviewed the 2008 FWMP and determined that it would, without placing TSID mitigation water in Whychus Creek, offer a net benefit for fish habitat. Nonetheless, TSID mitigation water was required by the County’s hearings officer. This led to legal challenges from

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Annunziata Gould who claimed the mitigation water was “hot water” that would harm fish habitat in lower Whychus Creek. Ms. Gould also argued on appeal of the FMP and 2008 FWMP, without success, that temperature impacts (of .1 degree C) to the Deschutes River violated the no net loss standard.

As a result of the Gould challenges, NCI undertook extensive mass balance analysis in 2015-2017 of the impacts on Whychus Creek *without* mitigation that showed maximum thermal impacts of 0.004 degrees C in Whychus Creek under the peak summertime temperatures and the lowest summertime flows. It also provided an analysis of the TSID mitigation. The analysis showed that keeping water instream in upper Whychus Creek offsets the thermal impact of groundwater pumping by the resort and slightly reduces the temperature of water in lower Whychus Creek, more than 15 miles downstream²³. The NCI studies resulted in affirmance of the FWMP because it demonstrated compliance with the no net loss standard.

The principle illustrated by the results of the 2015-2017 studies – that increasing the flow of rivers and streams upstream by not diverting for irrigation use both increases volume and lowers temperatures downstream – is also adopted in this 2022 FWMP. From the point that surface water withdrawals cease and aren’t being pumped from surface water and from the point where previously pumped groundwater no longer being pumped is discharged into rivers and streams, increasing flows reduce thermal impacts, which in turn lowers stream temperatures from that point of discharge on downstream.

VII. CONCLUSION

DCC 18.113.070.D requires that any negative impact on fish and wildlife resources be completely mitigated so that there is no net loss or net degradation of the resource. This Addendum to the Thornburgh Wildlife Mitigation Plan, referred to as the 2022 FWMP, amends the 2008 FWMP (as it was updated) and addresses potential impacts to fishery resources because of ground water pumping and identifies specific mitigation measures. The potential for loss of habitat due to reduced surface water flows was quantified in connection with the OWRD review of Thornburgh’s application for a water right permit. Under OWRD rules, Thornburgh is required to fully mitigate for consumptive use associated with Resort development. Consumptive use represents the amount of water not otherwise returned to the Deschutes River system after initial appropriation or diversion. The OWRD mitigation program is based on estimates of impact and modeling, the program is specifically intended to replace stream flows lost due to groundwater use.

The 2008 FWMP was developed in consultation with ODFW to address two specific areas of concern regarding the potential for negative impacts: the potential for a loss of habitat due to reduced surface water flows in the impacted areas, and the potential for loss of habitat due to increased temperature from reduced stream flow or loss of inflow from springs. As part of the development of this plan, discussions with ODFW took place to understand the current priorities to ODFW to protect species and related habitat. While the area of the Deschutes River from

²³ The TSID mitigation reduced temperatures slightly throughout Whychus Creek starting from the TSID diversion where the water was left in stream.

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Lower Bridge to Lake Billy Chinook remained important to ODFW, other issues presented concerns to the agency. ODFW expressed concern with limited flows of the Deschutes River between Bend and the Lower Bridge area, and of Whychus Creek between Sisters and Camp Polk Road and in Indian Ford Creek. Also important to ODFW was the distance in the stream the mitigation change will improve, as longer stream reaches are better.

As described above this 2022 FWMP has numerous sources providing benefits and mitigation, several that provide benefits over a significant distance, including areas of concern to ODFW. For example: 1) the LeBeau water increases flow in the Deschutes River for 137.7 miles; 2) The Tree Farm water is cold groundwater discharges that increase flows in the Deschutes River from Bend downstream through the stretch of concern to ODFW and onto the lake; 3) The Dutch Pacific water is benefitting Indian Ford Creek and Whychus Creek around Sisters to the mouth; 4) TSID water adds cool surface water above Sisters to the mouth of Whychus Creek at the Deschutes River. All of these sources increase flows that add to the thermal mass which in turn reduces temperatures in their respective stream and river reaches, ultimately providing benefits down to Lake Billy Chinook.

The potential for an increase in stream temperature resulting in a negative impact to fish and wildlife resources was also evaluated. Regarding Whychus Creek, the TSID water was shown to fully mitigate any potential peak temperature impact and lower the stream temperatures in not only Lower Whychus Creek, but throughout Whychus Creek to the mouth, which includes the area of concern to ODFW. Increasing the groundwater discharges from the Dutch Pacific water will further increase the reduction in temperature and the thermal benefits being provided to Whychus Creek.

Regarding the Deschutes River, the 2008 FWMP increased flows between Bend and Lake Billy Chinook by adding warmer surface water in Bend and cooler surface water from Lower Bridge to Lake Billy Chinook. These additions resulted in temperature change of 0 degrees C above Lower Bridge down towards Steelhead Falls, and an increase in the temperature of 0.1 degrees C at Steelhead Falls to below Whychus Creek. Even with those slight increases in temperature providing cool water mitigation equal to 105% of the impacts to seeps and springs fully mitigated for any reduction in groundwater. Increasing the percentage of benefits to seeps and springs coming from cool water sources (includes groundwater, Deep Canyon Water, TSID water) to 195% presently from 155% in the 2008 FWMP naturally provides far greater benefits than previously approved.

In developing recommendations for this plan, it was clear any potential change in stream temperature attributable to Thornburgh's proposed ground water use under steady state conditions, whether positive or negative, would be at levels not measurable with available equipment and technology. Although the changes being discussed will, in almost all cases, result in an increase in stream flows and a reduction in stream temperatures, they are not significant enough to result in any quantifiable negative impact to fish habitat at any time. However, the massive influx of excess flows provided during the transient period will further increase stream flows and further lower temperatures in all the affected reaches for decades into the future as the actual impacts to stream flows gradually increase from Thornburgh's groundwater pumping until steady state conditions are attained.

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By committing to fully utilize the water sources as described herein, and to comply with the conditions of this 2022 FWMP, any potential negative impacts to fish habitat resources because of the Thornburgh Resort development will be completely mitigated such that there is no net loss or degradation of habitat quantity or quality. In fact, it will likely provide a slight net benefit when steady state conditions are achieved many decades from now. During the transient period, Thornburgh will provide significant additional benefits to the quantity and quality of fish and aquatic habitat. As such this 2022 FWMP will exceed the no net loss/degradation standard set by DCC 18.113.070(D).



BOARD OF COMMISSIONERS

AGENDA REQUEST & STAFF REPORT

MEETING DATE: April 17, 2023

SUBJECT: Healthy Schools Program Update

RECOMMENDED MOTION:

N/A; update only.

BACKGROUND AND POLICY IMPLICATIONS:

The Healthy Schools program began in FY 2022 when the Board of County Commissioners approved the budget committee’s recommendation to match the contribution from Bend-La Pine Schools (BLS) and initiate Healthy Schools in that district. The program was approved as a phased-in approach over three years with staffing increases each year such that the program will reach 100% implementation by July 1, 2024.

The Healthy Schools program brings the expertise of Public Health directly into schools and the district to meet student and family needs and address gaps that the district and schools alone cannot. Healthy Schools focuses on topics such as adolescent suicide, vaping, social media, alcohol and other drug use, pregnancy, and sexually transmitted infections as well as other emerging risks and infectious diseases that may keep students away or disconnected with school, which increases the likelihood of negative consequences in adulthood.

The first analysis on student health outcomes will be conducted in Fall 2025; however, ongoing program monitoring indicates Healthy Schools implementation is being conducted in a manner that will create change. For example, 95% of middle and high school Health teachers are now using effective skills-based Health curricula to address current student health needs, a 206% increase from 2021.

Public Health and Bend-La Pine Schools staff will provide a program update as of March 2023.

BUDGET IMPACTS:

N/A

ATTENDANCE:

Jessica Jacks, Deschutes County Health Services, Prevention and Health Promotion Program Manager

Aimee Snyder, Deschutes County Health Services, Healthy Schools Supervisor

Lora Nordquist, Bend-La Pine Schools, Deputy Superintendent

Sean Reinhart, Bend-La Pine Schools, Executive Director Student Services

Dean Richards, Bend-La Pine Schools, Director of Secondary Curriculum, Instruction, and Systems

Program Update

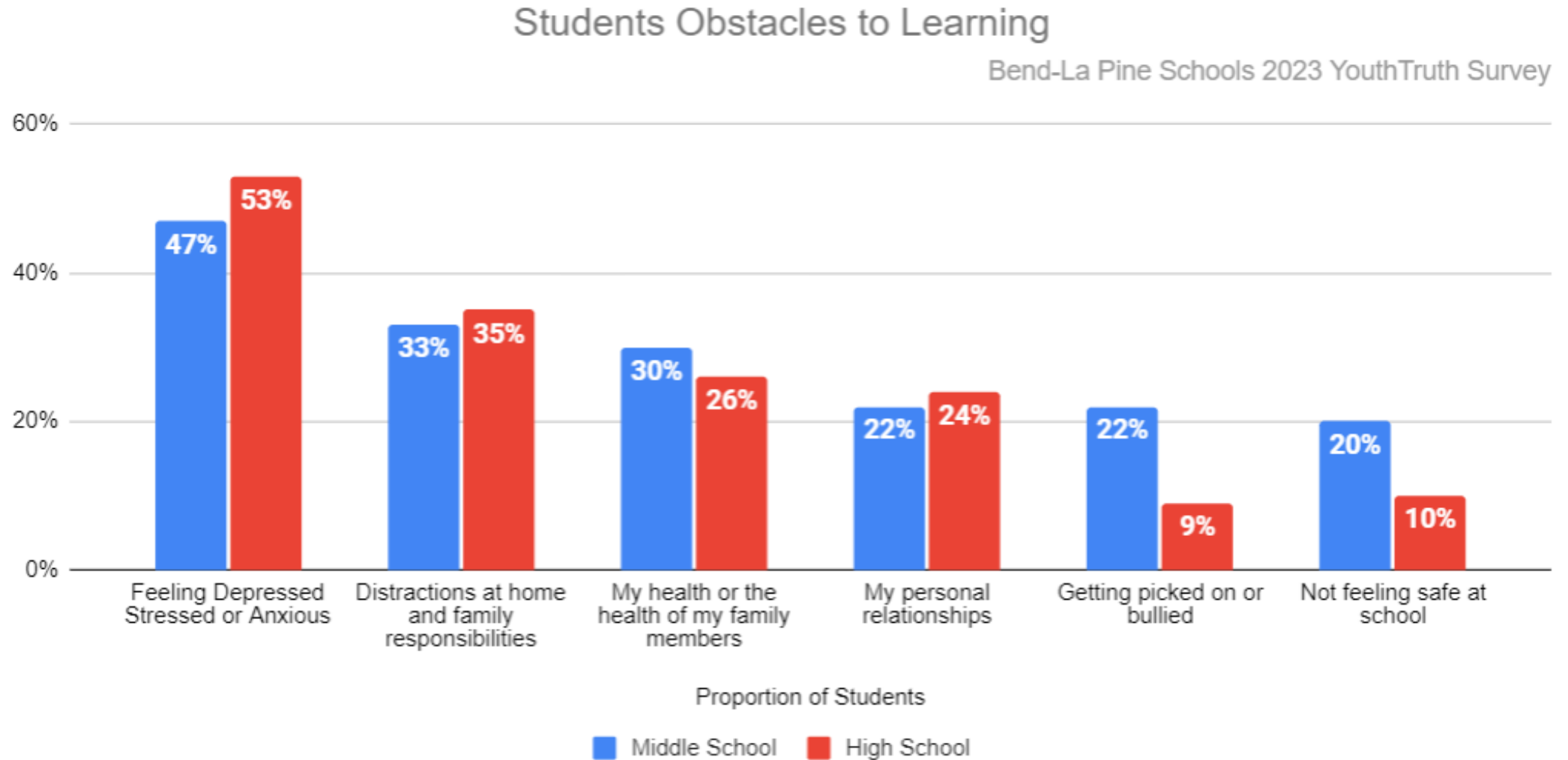
Healthy Schools



Connecting education, health, & community



Why do we need Healthy Schools?



HEALTHY SCHOOLS TEAM



04/17/2023 Item #2.



Hire July 1, 2023

Pending Budget Approval



Healthy Schools Impacts Over Time

If this...

then this...

Healthy Schools
Connecting education, health, & community

Coordinate SHIP



Short-term (1 yr)

- ↑ School Community Engaged in SHIP
- ↑ Shared Priorities and Actions
- ↑ Capacity Built for EBPs

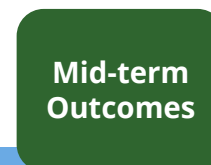
Mid-term (2-3 yrs)

- ↑ Collaboration and Integration
- ↑ EBPs
- ↑ Links to care
- ↓ Unmet health needs
- ↑ PYD

Long-term (3+ yrs)

- ↑ School Climate and Culture
- ↑ Student Health Outcomes
- ↑ On-time Grad
- ↓ Disparities

SHIP: School Health Improvement Process
EBPs: Evidence-based Practices
PYD: Positive Youth Development



Healthy Schools – School Level

School Health “Core Capacity”

School Health Core Capacity

1. School Health Coordinator
2. Evidence-based Assessment
3. School Health Team
4. Health Goal in Improvement Plan

Oregon schools with “Core Capacity”:

- More evidence-based practices
 - More Positive Youth Development*
 - More healthy student behaviors*
 - Higher grades*
 - Fewer attendance violations
 - Fewer disciplinary actions
 - Higher 4-year graduation rates*
- *statistically significant

HEALTHY SCHOOLS TEAM



04/17/2023 Item #2.



Hire July 1, 2023
Pending Budget Approval



HEALTHY SCHOOLS TEAM



04/17/2023 Item #2.



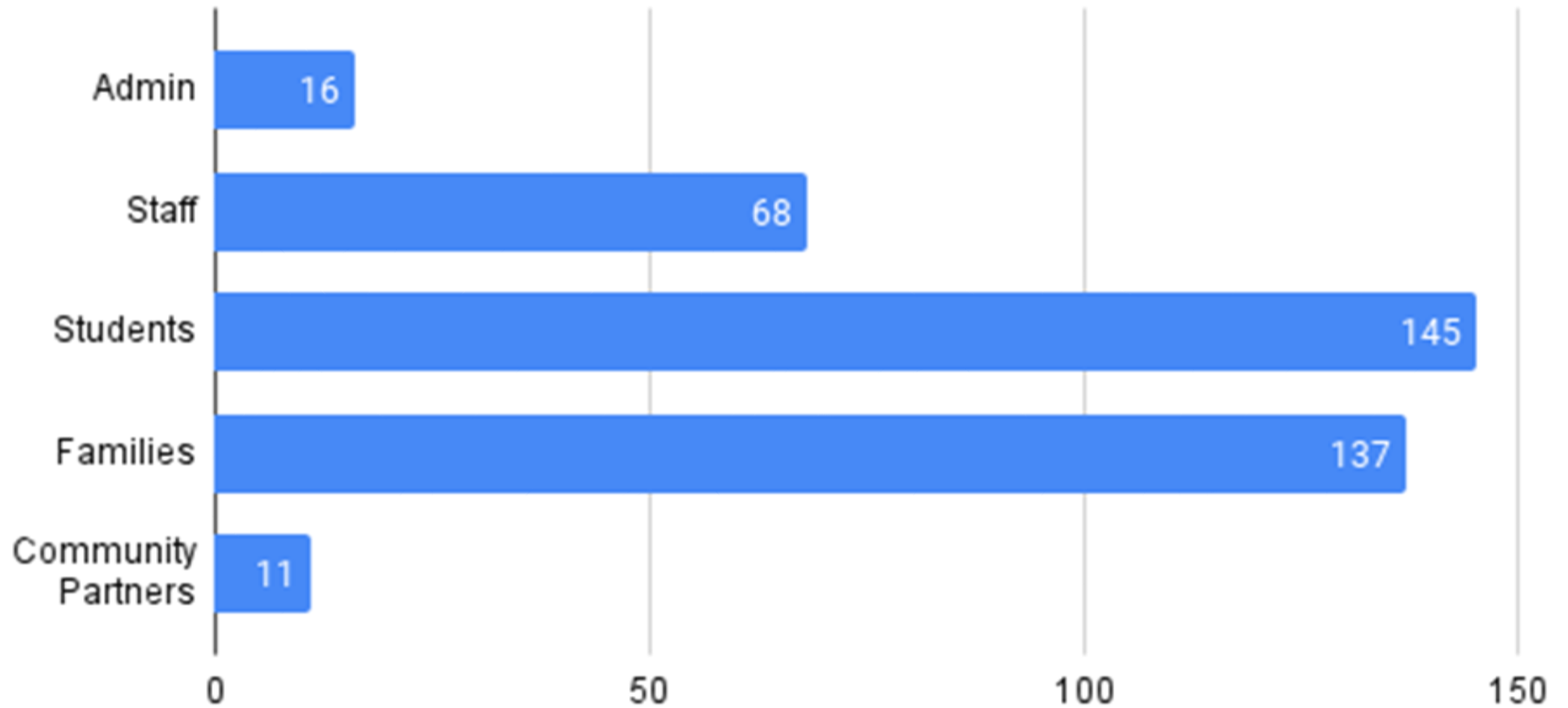
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Engagement in School Health Improvement Process (SHIP)

From November 2021-March 2023 (2 Full Semesters of Healthy Schools)



Healthy Schools – District Level

Health Ed: Effective Best Practices

- **Established Educator Network**
- **Identified barriers and priorities**
- **Facilitated 55+ hours of Health teacher trainings or workgroups**
- **Increased Use of Effective Curriculum**
 - Review processes
 - District approval
 - Purchase and distribution
 - Field testing



Most Valuable Part of Training

“**Getting together** with other health teachers w/ **facilitated, organized** topics to review/discuss.”

“**Time** with my co-workers and other Health teachers in the district to **collaborate** so we are **all teaching the same content.**”

“The most valuable part of this training was that we started it at all. I have been with the district 10 years and have not [had] this **training. Tools we can use** in the classroom.”

“Seeing **new curriculum, connecting** to other Health teachers, and **seeing a positive direction** for Health Education.”

Increase EBP: Curriculum

04/17/2023 Item #2.
Student Health Outcomes

Health Education

School Climate and Culture

Family Engagement

Linkages to Services



↓ Unmet Needs

↑ PYD

↓ Suicide

↓ Substance Use

↓ STI/Pregnancy

↓ Violence

↓ Disparities

Mid-term Outcomes

How has Healthy Schools affected Health teachers?

Comparison of 2021 and 2022 Health Teacher Survey

100%

said we **improved access** to effective, skills-based health curriculum.

95%

said we **improved their knowledge, skills, and confidence** to deliver effective health education.

80%

said we **improved their practices** so that they are **now delivering more effective curriculum and instruction.**

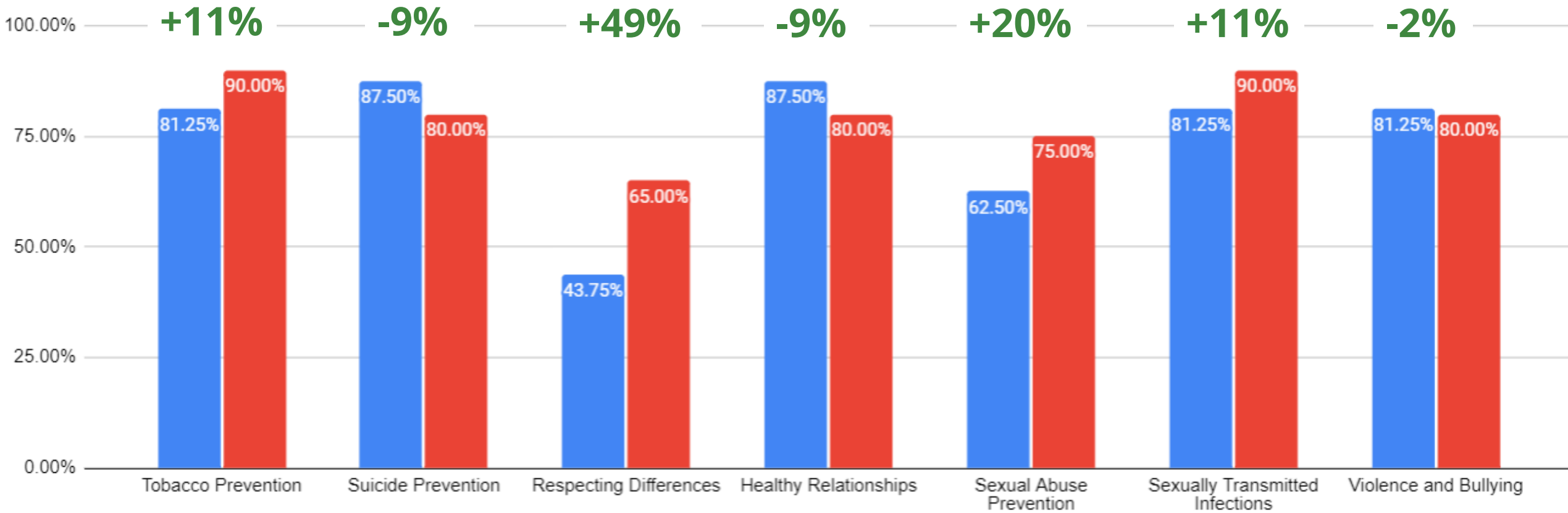
Over 1 year, a **206%** improvement in using effective skills-based curriculum (from 31% to 95%).

Improving Health teacher practices and curricula can reach 7,000 Bend-La Pine Schools students.



Changes in Required Topics Taught by BLS Health Teachers

Comparison of 2021 and 2022 Health Teacher Survey

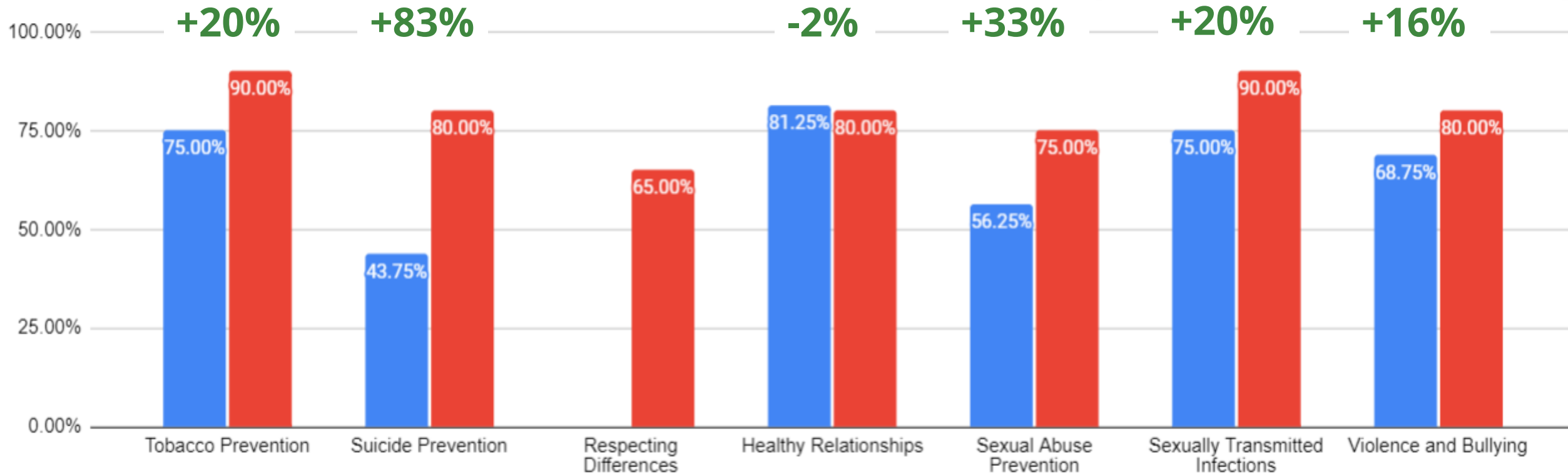


Do you teach the following topics?

■ Proportion in 2021 (n=16) ■ Proportion in 2022 (n=20)

Changes in Teachers “Very Confident” about Teaching Topics

Comparison of 2021 and 2022 Health Teacher Survey



How confident are you about teaching the following topics? Very, Somewhat, Not

■ Proportion for 2021 (n=16) ■ Proportion for 2022 (n=20)

Short-term
Outcomes

Increase EBP: All Substance Use

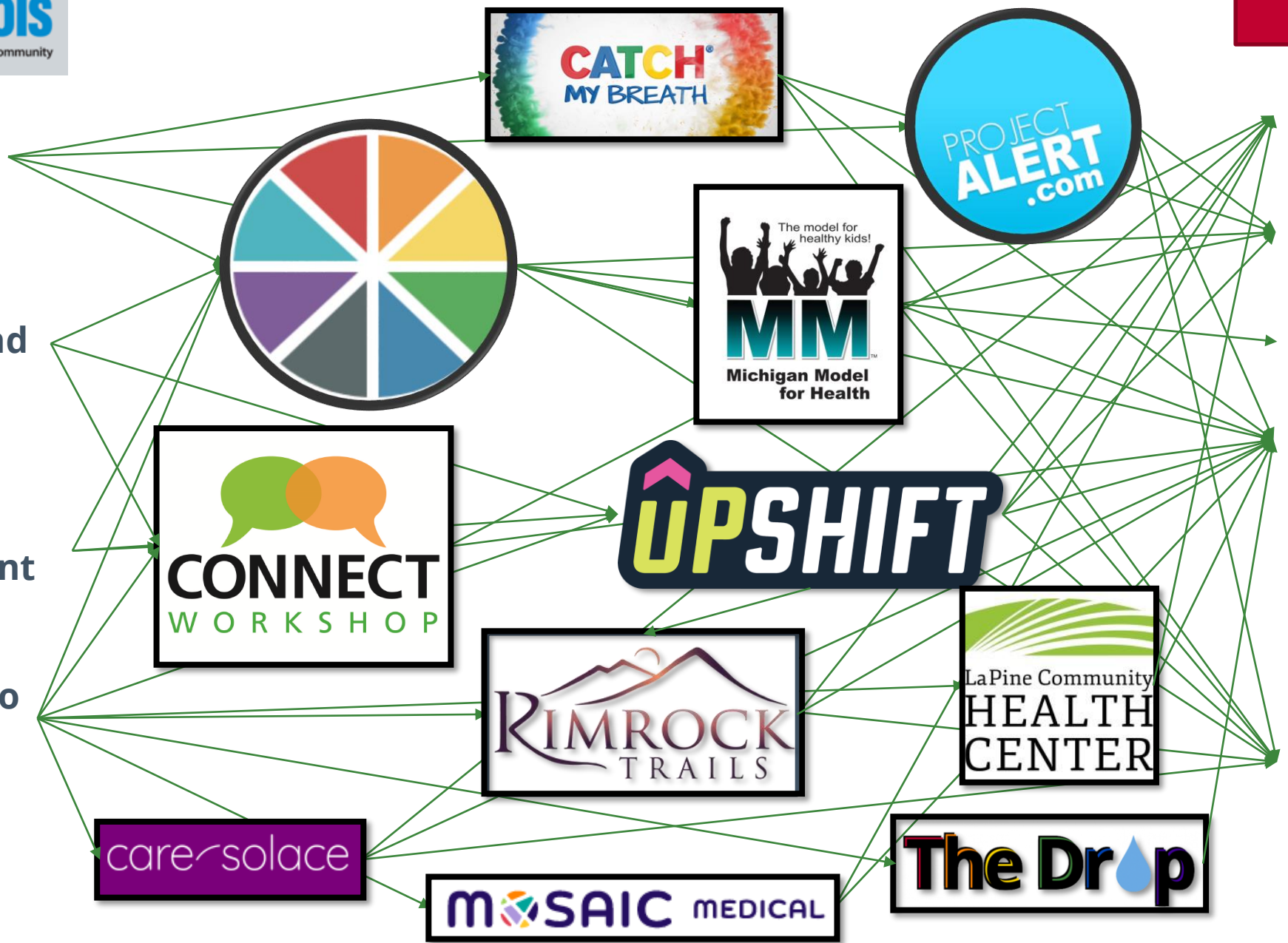
Health Education

School Climate and Culture

Family Engagement

Linkages to Services

Mid-term Outcomes



- ↓ Unmet Needs
- ↑ PYD
- ↓ Suicide
- ↓ Substance Use
- ↓ STI/Pregnancy
- ↓ Violence
- ↓ Disparities

Evaluation

Annual Reports and Evaluation

Annual Reports - (every September)

- What we did
- Changes in school health scores
- Successes and challenges

Program Outcome Evaluation (Fall 2025 and every four years)

- Changes to student metrics





Acknowledgements



MosaicMedical
Quality Care For All

