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December 3, 2021

RE: MAGSA Groundwater Valuation and Export Fee Analysis – Technical Memorandum

Dear Ms. Grady,

Please find the enclosed technical memorandum summarizing the results of the requested economic analysis of the value of groundwater in the McMullin Area Groundwater Sustainability Agency (MAGSA) and potential groundwater export fee schedule.

If you have any questions or need any additional information, please do not hesitate to contact me at (530) 341-3374.

Sincerely,

Duncan MacEwan, PhD
Principal Economist

Enclosure: Potential Fees for Groundwater Extracted for Use Outside of MAGSA Technical Memorandum

Technical Memorandum

Subject: Potential Fees for Groundwater Extracted for Use Outside of MAGSA

By: Duncan MacEwan, PhD, Steve Hatchett, PhD, Richard Howitt, PhD, Economics LLC

To: Ellison Schneider Harris Donlan LLP

Date: December 3, 2021

Purpose and Background

Ellison Schneider Harris Donlan LLP, on behalf of the McMullin Area Groundwater Sustainability Agency (MAGSA), is evaluating options for MAGSA Groundwater Sustainability Plan (GSP) implementation and development. MAGSA engaged ERA Economics to assess regional water values under current and future conditions to support its GSP implementation planning and related groundwater management activities. This included developing a draft fee schedule that MAGSA could consider for groundwater extracted from lands within MAGSA but conveyed and used outside of MAGSA (more generally, the "groundwater export fee").

This technical memorandum (TM) summarizes the results of an economic analysis that was developed to establish the value of water in MAGSA, which forms the basis for a groundwater export fee.

The Value of Water in MAGSA

ERA assessed near-term and future water values in MAGSA. Two approaches were developed to quantify the value of water: (i) a statistical analysis of water transfer observations over the last 25 years, and (ii) water supply valuation using ERA's economic model of crop markets and agricultural water use.

The analyses establish the value of water under current and future conditions. Future conditions reflect GSP implementation. This considers how the value of water changes as the supply of groundwater available is reduced in some GSAs to meet sustainable groundwater management objectives. It also considers the potential for new water supply projects. However, there is insufficient information at this time to assess the potential amounts, and especially the costs, of new supply and recharge projects that GSPs are considering. In addition, no analysis was conducted to evaluate how water values change in response to other external factors affecting the demand for water (e.g., crop markets and prices, regulatory and other production cost changes).

The value of water in MAGSA reflects what MAGSA water users (growers) would be willing to pay for water. Additional costs such as for conveyance costs and losses, negotiations, legal fees, and regulatory compliance costs would need to be added to these values. Due to the overwhelming dominance of agriculture in MAGSA, and the greater region, water values correspond to agricultural water uses.

The value of water is determined by the interaction of supply and demand. Examples of factors that affect supply include annual water year conditions, carry-over storage, CVP and SWP contract delivery decisions, GSA costs, water supply costs, and GSP implementation. Examples of factors that affect demand include consumer preferences, and export and domestic market conditions for California crops. Current crop market conditions are reflected in this analysis; no attempt was made to evaluate future market conditions. It is likely that market conditions will change as GSPs are implemented across the San Joaquin Valley.

Two approaches were applied to evaluate factors affecting supply, demand, and establish the value of water:

1. **Spot-market transfers**. The value of water under different water year (water supply) conditions was estimated using a combined statistical analysis of historical transactions and economic analysis of the effect of GSP implementation.
2. **Value of water in agricultural uses**. Economic analysis of crop production and water use was used to assess the value of groundwater under GSP implementation in MAGSA. This approach evaluated the supply and demand for agricultural water in these regions and how that value would change as groundwater supplies are reduced under GSP implementation.

Each approach is used to establish willingness to pay for water from the perspective of different parties. A combination of the two approaches was used to develop a recommended range for a groundwater export fee.

Water Transfer Analysis

There is no centralized exchange or data repository for water transfers in California. Deals are found and negotiated between buyers and sellers individually, through long-standing arrangements, and through various consultants/brokers. Transactions can be between agricultural, municipal and industrial (M&I), and environmental (e.g., refuge) water users. Buyers or sellers can be individual water users, local districts or municipal agencies, groups of districts (such as canal authorities), or state or federal agencies.

The transaction price of water varies by the location and circumstances of buyer and seller. The buyer’s willingness to pay represents the maximum value the water provides and the seller’s willingness to accept represents the minimum acceptable value. The negotiated price generally falls somewhere between the buyer’s willingness to pay and seller’s willingness to accept.

Sometimes the transaction involves other considerations besides the water itself, so the reported, agreed-on price per AF may not always provide an accurate value of the water to one or both parties. A transfer contract will usually specify some additional terms of the exchange, for example: how the parties bear the legal and compliance costs, where the water is delivered, which party is responsible for any wheeling charges and carriage losses, and the terms and conditions for completing the transfer (e.g., option to call on the water). These contract-specific terms affect the negotiated price, but are often not clear or even disclosed in public reports of water transactions. A contract can be for a firm amount or it can depend on hydrologic conditions when the transfer is physically completed (for example, a transfer of a share of contract quantity that bears a risk of shortage). For these reasons, compilations of water transactions include uncertainty in the actual or effective quantities and prices.

Transfer prices adjust with changes in supply and demand. For example, in wet years most users have sufficient water supply, but in drier years many need and are willing to pay for additional supply so the price of water on the transfer market increases. Agricultural buyers' willingness to pay derives from the net return to the crops they would grow using the water. The sellers' willingness to accept also depends on their alternative use of that water. If the seller would otherwise use the water for crop production, then willingness to accept will be driven by the net return from production. If a seller's water is stored in a reservoir and may be lost to spill during the next winter/spring, the opportunity cost to the seller is relatively lower. If municipal buyers are also looking for water, that generally bids up the price, presuming the transfer can be physically accomplished.

Operational limitations to water transfers affect price. Conveyance capacity, timing, and regulatory restrictions (e.g., transfers across the Delta) can limit or prevent some transfers. A seller that has water in a location (relative to potential buyers) that reduces or avoids these issues can generally negotiate a better price. For example, groundwater banks can accept water (either by direct recharge or in-lieu recharge) in times of abundant water and few constraints and then provide or sell the water in times of restricted supply.

In short, the value of water in the Kings Subbasin is affected by supply, demand, and institutional constraints. The value varies across time, location, and the circumstances of buyer and seller. Information on prices and quantities of transactions needs to be evaluated in light of these considerations.

A statistical analysis of observed water market transactions was developed to isolate supply, demand, and institutional factors affecting price. Data cover transactions between 1992 through 2019. Supply, demand, and institutional factors that affect price are also included in the database. For example, water transfer prices rose substantially during the most recent drought, especially in 2014 through 2016. This also coincided with record prices for almonds and increasing permanent crops plantings across the state. Strong demand and limited supply resulted in a spike in water transfer prices. Water policy and institutional factors including DWR drought water bank purchases, the 2009 BiOps, and other shifts that affect the water transfer market are also considered.

A statistical analysis was developed to show the incremental effect of supply, demand, and institutional factors on expected water transfer prices. It was then used to estimate prices under a range of conditions in the MAGSA area. Prices reflect water south of the Delta. Water supply conditions are based on the San Joaquin Valley Index (SJVI or 60-20-20 index) water year types

(Wet, Above Normal, Below Normal, Dry, and Critical). For reporting purposes Above and Below Normal are sometimes grouped (Average), as are Dry and Critical (Dry).

Table 1 summarizes the results of the analysis. Spot-market values are shown as a range based on prior year water year (WY) type. For example, average values in a Critical year following a Wet year are $610 per AF, and in a Critical year following a Critical year are $1,085 per AF. The final row shows the expected annual price weighted by the frequency of water year types as measured by the historical SJVI. Weighted-average values range from $410 to $810 per AF.

Table 1. Ranging Analysis for Historical Transfer Price Statistical by Water Year Type ($/AF)

Water Year Type	Value Range ($/AF)
Wet	$305 - $485
Above Normal	$325 - $505
Below Normal	$335 - $515
Dry	$395 - $765
Critical	$610 - $1,085
Weighted-Average	**$410 - $810**

These estimates are based on historical transaction prices, so they provide a reasonable value of water in the MAGSA area in the near term – that is, before GSP implementation starts to affect water supply. Each water transaction price in the data is the result of negotiations between buyer and seller, so the estimates cannot be claimed to represent either a willingness to pay by buyers or the willingness to accept by sellers. As discussed above, the negotiation process generally ends up somewhere in the middle.

These prices do not clearly include additional transaction costs including and fees, conveyance costs, or other delivery charges. Our best assessment at this time is that the reported prices generally do not include conveyance costs, but that transaction and negotiating costs are typically borne by both parties. Therefore, in using this approach to estimate price received by a buyer for a particular transaction, one would add any conveyance cost and adjust for conveyance losses. Again, these historical transaction prices provide some indicator of near-term prices but cannot be used to assess likely prices under GSP implementation to comply with SGMA.

Economic Analysis of Water Values under SGMA

An economic analysis was developed to establish the value of water in MAGSA under conditions including SGMA implementation. This approach establishes the value of water based on its use as an input to farming activities. In contrast to the statistical analysis of historical spot-market transactions, the economic analysis is able to evaluate the supply and demand for water in MAGSA, and how that changes over time in response to SGMA/GSP implementation.

The value (price) of water depends on the same factors that determine the price of any commodity: supply, demand, and institutional and regulatory conditions. In areas like MAGSA that depend on groundwater, and barring any new supplies of surface water, the supply of water under SGMA will become limited by the sustainable yield. Water use in the region is dominated by crop irrigation, so the demand for water depends on the value of the crops produced using that water.

The economic analysis considers crop markets, returns, costs, and water use. As water supply (in particular, groundwater) conditions change, the acreage and mix of crops would also change, resulting in a change in the value of water. As noted earlier, crop market conditions are held constant at current conditions in the analysis. That is, the quantity produced and price for California crops do not increase (in real terms) over the GSP implementation period.

The estimated average annual decrease in groundwater storage in the Kings Subbasin GSPs is about 122,000 AF. Table 2 below outlines the change in groundwater storage and assigned responsibility across GSAs. Three methods were presented in the GSPs: (i) overall water budget including all inflows and outflows, (ii) Technical Memorandum 6[1] incorporates historical subsurface boundary flows, and (iii) the draft "proposed agreement" accounts for assumed James ID well field pumping within MAGSA[2]. Table 2 summarizes the assigned responsibility for groundwater overdraft in MAGSA and neighboring GSAs. MAGSA is working to develop supply augmentation projects and is considering options for demand management programs.

Table 2. Annual Groundwater Overdraft Responsibility (AF)

GSA	Groundwater Storage Change	Adj. Tech Memo 6	Adj. Proposed Agreement
Central/South Kings	(17,000)	(7,100)	(7,100)
James	(5,000)	16,700	(1,840)
Kings River East	(11,000)	(11,000)	(11,000)
McMullin Area	(16,000)	(91,100)	(72,560)
North Fork Kings	(49,000)	(50,300)	(50,300)
North Kings	(24,000)	20,800	20,800
Total	**(122,000)**	**(122,000)**	**(122,000)**

The crop mix in MAGSA is similar to other parts of the San Joaquin Valley, including a mix of high-value permanent crops, row crops, and dairies. Except for row crops, this crop mix is associated with less flexible crop water demand. Orchards and vineyards require irrigation every year. Dairies have some ability to import feed, but typical dairy rations include silage that is produced near the dairy to manage hauling costs.

The economic analysis was developed to evaluate the supply and demand for water in MAGSA. The analysis was developed over a range of demand management up to 91,000 AF per year (AFY). The approximate spread in the willingness to pay for water ranges from approximately

[1] Provost & Pritchard Consulting Group (P&P). (2018, October 24). *Kings Subbasin GSA Coordination Efforts Technical Memorandum 6, Summary of Alternatives for Initial Estimation.*

[2] The reported average annual extraction amount by the James GSA from MAGSA is 18,540 AF.[2] MAGSA would increase its groundwater storage by that amount and James GSA would reduce its storage by the same quantity.

$295 per AF initially to $1,005 per AF after full implementation (again, assuming no other new, cost-effective supplies are identified). These values represent variability under SGMA implementation under average water year conditions (i.e., they do not reflect wet or dry/critical water year conditions).

Water Value Summary
The results of the statistical analysis of recent water trades and the results of the irrigated crop economic analysis at low levels of demand management provide a range of values for current or near-term values for water in MAGSA and surrounding areas. The statistical analysis produced a range of near-term values from $410 to $810 per AF weighted across year types. Near-term values based on water trades over the past 25 year do not reflect additional water scarcity that will result from SGMA implementation.

For the purposes of establishing a reasonable groundwater export fee, values should be forward-looking and represent full implementation of SGMA. This reflects water scarcity under SGMA, with average and dry year values jumping substantially. Even wet year values are expected to be greater due to increased demand for recharge water under SGMA. Water values broadly increase under GSP implementation due to limited groundwater supply but will ultimately depend on the cost of projects and the level of demand management implemented in MAGSA and other GSAs.

MAGSA Groundwater Export Fee Approach

This groundwater export fee analysis is based on costs, measured as expected loss of net return to irrigated MAGSA lands, imposed by less groundwater pumping in MAGSA. The fundamental concept is that the export fee would be proportional to the costs imposed on MAGSA landowners. The value of water was established under the economic analysis described in the previous section.

Based on MAGSA's GSP, and the GSPs for other GSAs in the Kings Subbasin, the Kings Subbasin is experience long-term overdraft of groundwater. The GSP includes a phased implementation of projects and management actions to offset overdraft and achieve sustainable groundwater conditions by 2040. This includes a phased implementation of a demand management program that would limit groundwater pumping within MAGSA. The demand management program may include an allocation that will be scaled in over the GSP implementation period. The allocation would place a restriction on the long-term average net extraction of groundwater from the subbasin. MAGSA is currently evaluating options for dividing the overall allocation among its users and considering ways to allow trading of allocation within MAGSA. Whatever those decisions are, the allocation would restrict pumping, reduce irrigated acreage, and reduce the net return from irrigated crop production within MAGSA.

Reduced net return from crop production may, in turn, lead to secondary losses to other sectors within the local economy. This TM is concerned with secondary losses associated with groundwater that is pumped and exported for use outside of MAGSA. The extent of such losses would depend on how and where the exported water is used – if it is used for irrigation on lands near MAGSA but in the same regional economy (e.g., Fresno County and several adjacent counties), then secondary effects on input suppliers, trucking, farm labor, and processing industries may be negligible from the regional economic perspective. If the exported water is transported (e.g., through transfers and exchanges) and used by more distant areas, then secondary economic impacts may warrant more analysis and quantification. These secondary impacts have not been quantified or included in the proposed groundwater extraction fee described in this TM. In addition, ERA has not quantified any additional costs for collecting and administering the groundwater export fee. These costs would be in addition to the groundwater export fee presented in this TM.

Summary MAGSA Groundwater Export Fee

An appropriate fee for exporting groundwater that would otherwise be available for allocation and use within MAGSA should, at minimum, compensate MAGSA for the loss in net return that water could generate. The method developed to quantify the value of water and establish a recommended groundwater export fee for MAGSA does exactly that. The value of water was quantified under current and future conditions. Future conditions reflect full GSP implementation to account for how the value of water, and associated groundwater export fee, would change as the supply of groundwater available is reduced to meet sustainable groundwater management objectives.[3]

The economic analysis establishes the unit value of groundwater that is the basis for the groundwater export fee. The unit value of groundwater is interpreted as the total willingness to pay for a unit of additional water supply delivered to the crop. To calculate a cost-based fee per AF to charge for groundwater exported and used outside of MAGSA, we start by calculating the total willingness to pay for an AF of groundwater not including the cost to pump it. Then we subtract the pumping cost, which recognizes that MAGSA growers would have to pay the pumping cost to gain the value of the water for irrigation, so the true opportunity cost to growers is the unit benefit minus the pumping cost.

According to MAGSA's GSP, the Kings Subbasin's average annual overdraft is around 122,000 AF, which will need to be reduced to zero by 2040 at full GSP implementation. Water users within MAGSA, overwhelmingly agricultural water users, will bear the cost of the reduction through a combination of paying for recharge and new supplies or reducing crop production from groundwater pumped for irrigation. Irrigation water demand is driven by crop markets which are expected to remain strong into the future. As a result of stable or increasing crop markets and water supply that is limited and increasing in cost, the value of groundwater to MAGSA growers

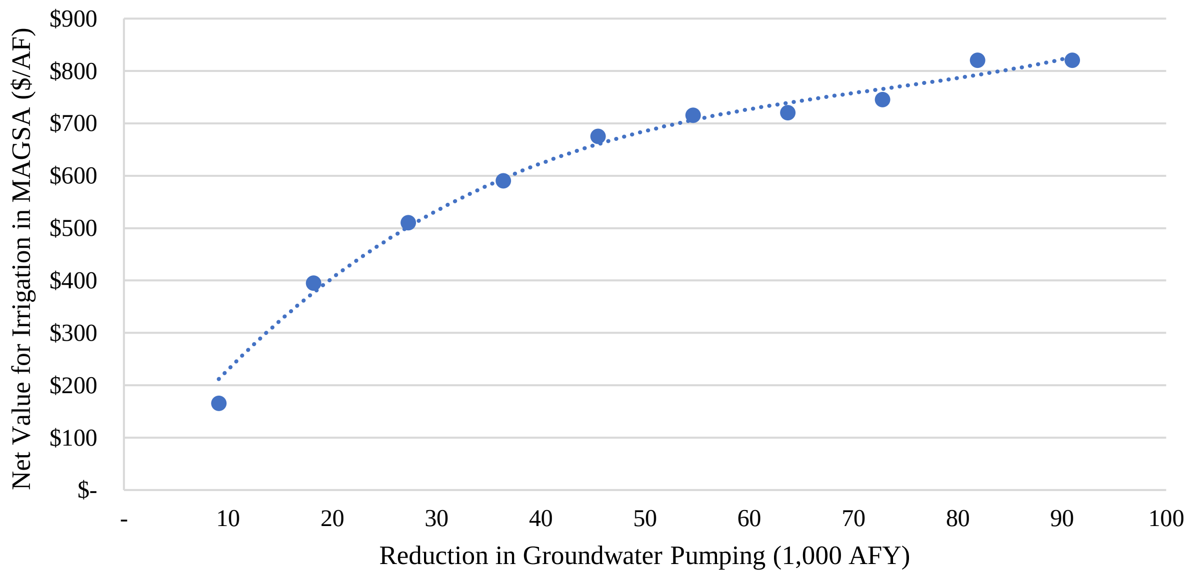
[3] The GSP considers the potential for new water supply projects. However, there is insufficient information at this time to assess the potential amounts, and especially the costs, of new supply and recharge projects the GSAs are considering. In addition, other external factors affecting the demand for and net return to water (e.g., crop markets and prices, regulatory and other production cost changes) have not been incorporated in this analysis.

will increase. Any water pumped within MAGSA but exported from the area will increase the costs to MAGSA growers.

In addition to the cost of foregone (lost) net return to irrigation, the analysis also recognizes that the value of irrigated land would also be affected as available water supply declines. That is, the current land rent (or, capital recovery) is based on the value of land with water supply sufficient to meet crop water demand. Under GSP implementation there will not be sufficient water supply. Appropriately valuing that water supply requires considering the portion of the land value that is attributed to water. An analysis was developed to approximate the value of water embedded in the value of the land. Fresno County[4] rangeland rents were used to approximate the dryland rental rate. Irrigated (undeveloped) cropland was used to approximate irrigated land rents. The ratio of irrigated cropland rent to dryland rent was calculated. Using this method, approximately 90 percent of any change in annual cropland rents paid is also attributed to the change in water supply.

Figure 1 illustrates the value of groundwater in MAGSA. It shows the progression from current conditions through full GSP implementation. Full GSP implementation limits average annual pumping to the sustainable yield, which is a reduction in groundwater pumping of approximately 90,000 AF per year. As described above, this is the opportunity cost per AF to MAGSA growers of losing access to additional groundwater. This amount does not include any other fee or assessment the groundwater exporter might pay for GSA management, GSP implementation, or administration of the exporting agreement.

Figure 1. Net Value (Opportunity Cost) of groundwater (in $/AF) to MAGSA as annual groundwater pumping is reduced



[4] See farmland prices and rents reported in the 2019 Fresno County Trends Report, California Chapter of the ASFMRA.

The proposed groundwater export fee schedule is developed to cover the full implementation period (though perhaps with a reasonable and justifiable inflation adjustment built into the value). Therefore, the fee should represent the expected conditions at any point (year) in the schedule. Whereas the analysis described earlier in this TM used additional information on water transfer transactions to break out the water values by year type, the calculations below simply use the "average" condition.

Typically, fees are calculated and displayed based on a yearly time frame. In this case, the appropriate fee depends on the GSP implementation schedule and level of the pumping restriction caused by a demand management program. Figure 1 is displayed in this way. The following section presents a proposed fee schedule over time. If MAGSA adjusts its GSP implementation schedule in the future this can be adjusted as appropriate to match the new time trend of irrigation water values. For example, if demand management is delayed, or "back-loaded" during the implementation period, for example to allow time to pursue other supply and recharge projects, then the trajectory might be less steep early but rise faster later.

Potential MAGSA Groundwater Export Fee Schedule

As described above, an economic analysis of crop production and water use was used to assess the value of groundwater under GSP implementation in MAGSA. The analysis was developed over a range of demand management up to 91,000 AF per year (AFY). The unit value of water increases as groundwater pumping is increasingly limited. MAGSA growers' willingness to pay for water net of the cost to pump groundwater (and therefore the unit value of changes in groundwater supply) ranges from approximately $200 per AF at initial implementation to about $840 per AF after full implementation (again, assuming no other new, cost-effective supplies are identified).

A proposed groundwater export fee was developed assuming a phased implementation of the GSP between 2021 and 2040. Table 1 summarizes the proposed groundwater export fee for 2021 through 2040. The groundwater export fee increases each year in proportion to the cost imposed on MAGSA landowners. All values are in current (2020) dollars and reflect average (not dry or critically dry) water year conditions. Under these reasonable assumptions, the export fee increases from $200 to $840 per AF. This should be viewed as the minimum acceptable groundwater export fee. As described earlier, critical drought conditions, additional administrative costs, and potential secondary economic impacts would increase the cost to MAGSA landowners, and therefore increase the export fee.

Table 3. MAGSA Potential Groundwater Export Fee

Year	$/AF Export Fee
2021	$200
2022	$285
2023	$360
2024	$425
2025	$485
2026	$535
2027	$580
2028	$615
2029	$650
2030	$675
2031	$695
2032	$715
2033	$735
2034	$750
2035	$760
2036	$775
2037	$790
2038	$805
2039	$820
2040	$840

Escalating the Fee to Account for General Inflation

The proposed groundwater export fee is expressed in constant 2020 dollars. The annual fee should include an automatic inflation adjustment. The basis for the inflation adjustment should be a widely used index such as the national consumer price index (CPI), and the adjustment to the fee should use the average annual increase in the CPI as of the last posted CPI data at the time of the adjustment.

Since 2017 the annual average inflation based on the CPI has ranged between 1 and 2.5 percent, and early 2021 forecast of inflation by the Federal Reserve Board of Cleveland indicated an average annual rate of about 1.57 percent over the next 10 years, which has since increased to around 2.7 percent with recent inflationary pressure.[5] The most recent CPI data indicate higher inflation in the last few months, though it is unclear how much is long-term versus transitory.[6] The actual CPI values can be used to update the groundwater fee, as described in the example fee calculations below.

[5] https://www.clevelandfed.org/our-research/indicators-and-data/inflation-expectations.aspx. Downloaded April 20, 2021 and November 30, 2021.

[6] Federal Reserve Board of St. Louis. 2021. Consumer Price Index for All Urban Consumers: All Items in U.S. City Average (CPIAUCSL). Downloaded December 1 from: https://fred.stlouisfed.org/series/CPIAUCSL

Potential Adjustments to Account for The Value of Water under Different Water Year Conditions

This TM summarized an analysis of the water value by water year type. This was for purposes of understanding water values and how variability in water supply conditions in the region have affected observed water transfer prices in recent years. For setting a fee schedule that covers a number of years into the future, it is unclear whether incorporating an adjustment factor for water year type is workable or desirable. Water year types are not known in advance and are often not known until relatively late in a planting or production season.

However, if desired, the groundwater export fee schedule could be adjusted to account for water year variability using the groundwater value economic analysis results described earlier in this TM (Table 1). Using the mid-point of the range of values reported in Table 1, and defining the average of above normal and below normal as an "average" year, a reasonable export fee adjustment by water year type could be calculated using the percent difference in water value from the average year conditions. This would be approximately -6% in wet years, 38% in dry years, and 102% in critical years (or an average of 69% in dry and critical years). These additional adjustments could be applied to the groundwater export fees summarized in table 3 to adjust for water supply conditions in that year.

The water supply conditions would need to be specified as part of the groundwater export fee. The SJVI could be used as the basis. However, this would require defining water year conditions on a one-year lagged basis. Alternative indices for real-time water supply conditions could be defined and calculated for the basis of the groundwater export fee adjustment.

Fee Calculation Procedure for Future Fee Adjustments

This section describes the general procedure that can be used to develop an alternative groundwater export fee schedule. For example, if MAGSA considers an alternative GSP implementation schedule, or wishes to include adjustments for water year conditions, the following steps could be followed to set a new groundwater export fee.

The following steps assume that the water pumped and exported is part of the annual groundwater pumping allocation. The base pumping amount is determined in the MAGSA GSP to be 292,100 AFY. Prior to each production season, MAGSA would calculate the fee on water pumped and exported using the following steps.

1. Set the allocation for the upcoming year and subtract from the base pumping amount. The result is the groundwater pumping reduction (GWPR) in that year. Express that quantity in thousand AFY. If the allocation ramp-down schedule is set for more than one year ahead, or even for the full ramp-down to the sustainable yield target, then fee calculations in step 2 can be made in advance rather than on a yearly basis.

2. The opportunity cost of water (Fee) can be calculated using the data shown in Figure 1. Fitting a polynomial function to the curve shown in Figure 1, the fee in 2020 dollars would be[7]:

   $$Fee(2020\$) = 0.0015 \times GWPR^3 - 0.3215 \times GWPR^2 + 26.075 \times GWPR$$

3. Escalate the fee in 2020 dollars to the appropriate fee for the current year. For example, if the fee is calculated for the year 2030, look up the values of the CPI at the end-of-year years 2019 and 2029 (if a year-end CPI is not yet reported, use the most recent quarter available at the time the fee is being recalculated). Call these CPI values CPI(2019) and CPI(2029). To escalate for inflation, multiply the result from step 2 by the fraction CPI(2029)/CPI(2019).

   $$Fee(2030\$) = Fee(2020\$) \times CPI(2029)/CPI(2019)$$

4. If also adjusting the fee for water supply conditions, multiply the export fee (in current dollars) by the water year adjustment factor (WY_adj).

   $$Fee(20XX\$) = Fee(20XX\$) * WY\_adj$$

[7] Alternatively, the fee could be calculated using a simple interpolation between two adjacent points in Figure 1.