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MEMORANDUM

Date: January 27, 2015
To: Coverage Working Group
From: TRPA Staff
Subject: Excess Coverage Mitigation Program – Develop Recommendation

Requested Action:

Develop an Excess Coverage Mitigation Program recommendation for TRPA Advisory Planning Commission (APC), Regional Plan Implementation Committee (RPIC), and Governing Board review and consideration.

Overview:

At their annual priority setting workshop in 2014, the Governing Board directed staff to address Excess Coverage Mitigation (ECM) as a second phase to the review of coverage transfers across hydrologic zones. The Regional Plan Implementation Committee (RPIC) endorsed formation of the Coverage Working Group, which met four times from March through October 2014 to develop recommendations on coverage transfers across Hydrologically Related Areas and the excess coverage mitigation program.

At the January 27, 2015 Coverage Working Group meeting, TRPA staff requests that the Group review, consider, and come to an agreement on the recommended alternative for how the fee is spent. Once the Working Group develops a recommendation, it will be advanced to the Advisory Planning Commission (APC) for review and consideration prior to consideration by the RPIC and the full TRPA Governing Board. The following section offers a background on the problem and the current proposal.

Background:

Excess land coverage is essentially existing “grandfathered” coverage that exceeds the amount of base allowable coverage within a project area (see Section 30.4.1 of the TRPA Code). TRPA regulations require project applicants to mitigate the excess land coverage through any of the following excess coverage mitigation program options (or combinations thereof) including reducing coverage on-site or offsite as a part of project approval (restored pursuant to subsection 30.5.3); payment of an Excess Coverage Mitigation Fee (ECM fee) in lieu of coverage reduction; consolidation or adjustment of parcel lot lines; or mitigation of excess land coverage in a Community Plan or Area Plan. Majority of project applicants pay the ECM fee. The California Tahoe Conservancy (CTC) and the Nevada Division of State Lands (NDSL) receive these ECM fee disbursements from TRPA to retire potential coverage or restore existing coverage. Memoranda of Understanding (MOUs) between TRPA and the land banks govern the use of the ECM fee.¹ The MOUs require that the land banks mitigate one square foot of excess coverage with one square foot of restored or retired coverage but do not specify which land capability districts the coverage reduction should occur in, nor do they differentiate between potential and existing coverage.² The main purpose of the ECM Program is to support Soil Conservation and Water Quality

¹ See Staff Summary for August 20, 2014 for more detail on coverage, the ECM Program, and the existing MOUs:

http://www.trpa.org/wp-content/uploads/Coverage_Working_Group-3_Staff-Summary.pdf

² More information is provided in the August 20, 2014 Meeting Summary for the third Coverage Working Group Meeting,

http://www.trpa.org/wp-content/uploads/August_20_Coverage_WG_MtgSummary.pdf

Threshold gains such as through the removal of existing coverage in over-covered low capability lands; yet the funds are not focused towards this purpose.

Outcomes of the Coverage Working Group Process, Excess Coverage Mitigation Program:

At the August 20th meeting, the Coverage Working Group identified the characteristics of an ideal ECM Program.³ These characteristics have guided the review of different alternatives. At the October 4th meeting, the Coverage Working Group reviewed preliminary alternatives and considered preliminary staff recommendations on how the ECM fee could be spent and updated.

The working group came to agreement on several aspects for how the fee is spent and updated (See Attachment A). The working group supported Alternative 4 (Water Quality Projects), an alternative that proposes expanding the eligible uses of the in-lieu ECM fees to include SEZ restoration, acquisition and retirement of land or development potential, and water quality improvement projects along with coverage removal. Under Alternative 4, eligible projects should target the primary thresholds affected by excess coverage including Soil Conservation and Water Quality Thresholds. The working group supported requiring a minimum amount of existing coverage removal to maintain the nexus to excess coverage mitigation, but not at the rate of 1 sq. ft. of coverage removal for each sq. ft. of coverage for which the ECM fee is paid (referred to as the existing sq. ft. requirement).

Discussion Focus for How the ECM Fee is spent:

The working group requested that staff refine the Alternative 4 (Water Quality Projects) criteria and develop minimum coverage removal requirement options, by examining the potential use of a ratio or another approach that ensures a portion of the ECM funds are dedicated to the restoration of existing coverage. A primary consideration is the need to replace the existing sq. ft. requirement with other criteria in a way that ensures accountability while maintaining a nexus to excess coverage mitigation. It is also necessary to consider the contrasting landscape conditions between Nevada (NV) and California (CA) especially since the volume of covered SEZ land (excluding road and trail coverage) available for acquisition and restoration in NV is significantly lower than in CA. Additional information on differences between NV and CA is provided in Attachment B. These landscape contrasts across the states should be recognized and accounted for to support the development of criteria that is achievable and obtainable.

In review of the above-mentioned issues, staff evaluated several options. Ultimately, staff determined the two options for the minimum coverage removal requirement, provided below, that best meet the Characteristics of an Ideal ECM program while addressing the challenges discussed above (the table in Attachment C provides additional detail). A summary of the evaluation results is provided below.

Criteria Options for Coverage Removal, in Reference to Alternative 4, Water Quality Projects

Option 1, Ratio for all funds: For each 10 sq. ft. of ECM fee paid, 1 sq. ft. of existing coverage from sensitive land or 2 sq. ft. of existing coverage from non-sensitive land must be restored at a minimum. This approach would remove the existing sq. ft. requirement from the MOUs, and would require existing coverage acquisition/restoration with a ratio that incentivizes the restoration of existing coverage in environmentally sensitive lands.

- **Background:** Based on land bank transaction accounting, existing coverage in California can cost on average, seven times more than the per square foot amount generated from the ECM fee and up to a

³ See characteristics listed in the Attachment C table and the October 2nd, 2014 Memorandum for more information http://www.trpa.org/wp-content/uploads/Coverage_WG_Memo_with-Attachments.pdf

maximum of ten times more if outliers are removed (See Attachment E). Consequently, the proposed ratios will support the development of a fiscally feasible requirement.

- **Evaluation:** As shown in the Attachment C table, this option scored highly for mitigating water quality impacts, promoting direct coverage removal, focusing on coverage removal in over-covered sensitive lands, and the feasibility of implementation. However, this option scored lower in simplifying the system (relying only on the ratio can be considered complicated), incentivizing redevelopment, creating achievable requirements for the land banks, and establishing a sustainable structure (the ratio might be challenged if future market conditions change or if the fee is updated).

Option 2, At least half of the funds are dedicated to the existing coverage ratio and the other portion is dedicated to a flexible spending account: At a minimum, half of the ECM funds shall be used for existing coverage acquisition and restoration according to the ratio described in Option 1. The land banks can dedicate the remaining portion of the ECM funds to Environmental Improvement Projects (EIP) that result in Soil Conservation and Water Quality Threshold gains. Alternately, other projects could be proposed by the land banks for approval by the Executive Director; these projects also need to result in Soil Conservation and Water Quality Threshold gains. This option allows ECM funds to be used for the acquisition and retirement of land or development potential, SEZ restoration, coverage restoration, and water quality projects. This approach would remove the existing sq. ft. requirement from the MOUs, and would dedicate, at a minimum, half of the funds to existing coverage acquisition/restoration with a ratio that provides the greatest incentive for the restoration of existing coverage in environmentally sensitive lands. The land banks will need to report on how the funded projects result in Soil and Water Quality threshold gains, using existing EIP performance measures (where appropriate) and reporting on the sq. ft. of coverage restored in each land capability district, acres of land acquired, acres of SEZs restored, and estimated Soil and Water Quality Threshold gains (more detail provided in Attachment A).

- **Background:** Based on land bank transaction accounting, existing coverage in California can cost on average, seven times more than the per square foot amount generated from the ECM fee and up to a maximum of ten times more if outliers are removed (See Attachment E). Consequently, the proposed ratios support the development of a fiscally feasible requirement. In addition, the flexibility offered in the other portion of the funds not dedicated to the ratio helps to make this option more achievable.
- **Evaluation:** As shown in the Attachment C table, this option scored higher overall than Option 1. This option scored highly for mitigating water quality impacts, promoting direct coverage removal, focusing on coverage removal in over-covered areas such as SEZs, establishing achievable obligations, reducing controversy, and the feasibility of implementation. “Incentivizes Environmental Redevelopment” and “establishing a sustainable structure” (the ratio might be challenged if future market conditions change or if the fee is updated) were the only characteristics this option did not meet.

Staff Recommended Option

While both options achieve many of the Characteristics of an Ideal ECM program, Option 2 met more characteristics of an ideal ECM program than Option 1. Staff recommends that the Working Group recommend Option 2 for APC, RPIC, and Governing Board consideration on how the fee is spent.

Discussion Focus for How the ECM Fee is Updated:

During the October meeting, the Working Group generally agreed that fee updates should occur regularly, every four to five years, with a mechanism for updates based on changes in an index; negating the need for region-wide appraisals or lengthy update procedures requiring Governing Board approval during each update cycle. TRPA staff were tasked with identifying and assessing potential methods for development of a reasonable and defensible mechanism for regular fee updates. The results of this assessment are contained in Attachment D.

TRPA staff recommends basing updates on changes in an index of average single-family residential sales in the California and Nevada portion of the Lake Tahoe Region as opposed to a regional or national index. TRPA staff identified a preferred method for regular ECM fee updates that could be feasibly established; however it could be perceived as being complex. TRPA staff encourages Working Group discussion of the assessment in Attachment D, but recommends discussing the timing for when the ECM fee update alternative should be pursued. Some reasons for delaying the ECM fee update until after the implementation of the alternative for how the fee is spent are that the amount of ECM funds needed is influenced by the amendments for how the fee is spent (particularly the requirements for usage of the ECM Funds) and the HRA coverage transfer restrictions. An additional concern is that the ECM fee is paid by project applicants redeveloping over-covered legacy development. Consequently, care should be taken with implementing a significant fee increase.

Contact Information: If you have any questions, please contact Jennifer Cannon, Associate Planner at 775.589.5297 or jcannon@trpa.org.

Attachments:

- Attachment A – Outcomes from Coverage Working Group
- Attachment B – Comparison of Land Characteristics Between NV and CA
- Attachment C – Evaluation of the Criteria Options for the Coverage Removal Requirement
- Attachment D – Assessment of ECM Fee Update Mechanisms
- Attachment E – Land Bank Transactions

Attachment A

Outcomes from Coverage Working Group

How the ECM Fee is Spent Proposal:

The proposal would expand the eligible uses of the in-lieu ECM fees to include SEZ restoration, acquisition and retirement of land or development potential, and water quality improvement projects along with coverage removal. ECM fees would continue to be provided to the Nevada and California Land Banks, who could implement projects directly or through grants or contracts. Some removal of existing coverage would be required to maintain the nexus to excess coverage mitigation, but not at the rate of 1 sq. ft. of coverage removal for each sq. ft. of coverage for which the ECM fee is paid.⁴ Other eligible projects would ideally benefit multiple thresholds; however the primary thresholds affected by excess coverage (Soil and Water Quality Thresholds) would be targeted. Specific criteria and project requirements should be incorporated into the MOUs with the land banks to address accountability in the use of the funds, feasibility of implementation, and other major concerns.

Intent: Implement projects that have the greatest environmental benefit to the primary thresholds affected by excess coverage. Provide a more flexible use of the funds to allow mitigation funds to be used for the projects that will result in the greatest benefit to thresholds affected by excess coverage. Mitigation reflects the water quality impacts of the excess coverage and promotes coverage removal in low capability districts.

Major elements and/or criteria for the proposal:

1. Continue the direct distribution of ECM funds to the land banks.
2. Land bank Memoranda of Understanding will establish a minimum coverage reduction requirement.
 - a. A portion of the ECM funds must be used for the removal of existing coverage, with removal of existing coverage in SEZ or other sensitive lands as the highest priority.
3. Land banks shall provide sufficient reporting on how the funded projects result in Soil and Water Quality Threshold gains, using existing EIP performance measures (where appropriate) and reporting. These include:
 - a. Square foot and land capability of coverage restored,
 - b. Acres of land acquired,
 - c. Acres of SEZs restored (includes restoring SEZs that are degraded but do not have coverage),
and
 - d. Estimated Soil and Water Quality Threshold gains.
4. ECM fees can fund stormwater projects but they must be in addition to what jurisdictions are doing to meet TMDL requirements.

⁴ Memoranda of Understanding between TRPA and the land banks require that the land banks mitigate one square foot of excess coverage with one square foot of restored or retired coverage. The MOUs do not specify which land capability districts the coverage reduction should occur in, nor do they differentiate between potential and existing coverage.

Excess Coverage Mitigation (ECM) Fee Establishment:

Setting the Fee:

- A. Establish a uniform ECM fee within each state (i.e., one fee in NV and one fee in CA). *Intent: simplify ECM fee structure, and remove different fees in different HRAs since the fees can be used in any HRA.*
- B. Consider the market costs of coverage when resetting the ECM Fee. The fee should not account for the entire cost of purchasing land and restoring coverage; instead it should reflect average market cost of potential coverage or a ratio/ percent of market cost of hard coverage. *Intent: set a balanced fee that accounts for coverage costs but does not significantly increase barriers to redevelopment.*

Updating the Fee:

- C. Regular ECM Fee updates should occur every four to five years with a mechanism for updates based on changes in an index of average sales in the California and Nevada portion of the Lake Tahoe Region to allow for regular updates without appraisals or Governing Board approval each time the fee is adjusted. *Intent: streamline and simplify the fee update process and provide regular fee updates reflecting market conditions.*

Promote Direct On-site Coverage Mitigation:

Encourage applicants to directly reduce coverage onsite by offering them “extra credit” for onsite restoration. For example, if a project is required to mitigate 100 square feet, they can pay the fee on the whole 100 square feet or remove 75 square feet on site. This extra credit could be limited to grant additional credit for only sensitive coverage removal, onsite. *Intent: encourage onsite coverage removal particularly in environmentally sensitive areas.*

Attachment B

Comparison of Land Characteristics Between NV and CA in the Tahoe Region

Characteristic	CA	NV	Total	Conclusions	Data Measurement Notes
Overall Acreage of Parcels ¹	150,260	49,821	200,081	Three-fourths of the parcels in the region are located in CA while 1/4 of the land is located in NV.	<i>Little to no change</i>
Percent Acreage of Parcels	75%	25%	100.00%		
Acreage of Public Owned Parcels	127,385	40,386	167,771	At least three times more public owned land in CA (acres) than in NV and slightly greater share of public owned parcels in CA.	<i>Could change, measured annually</i>
Percent of Public Owned Parcels (Acres)	85%	81%	-		
Acreage of Private Owned Parcels	22,875	9,435	32,310	Twice as much privately owned land in CA (acres) than in NV.	<i>Same as above</i>
Percent of Privately Owned Parcels (Acres)	18%	23%	-		
Total Acreage of SEZs	14,885	2,601	17,486	Seven times as much SEZ acreage in CA in comparison to NV.	<i>Land Capability GIS layer is currently not updated regularly.</i>
Total Acreage of Env. Sensitive Lands other than SEZs	108,175	42,074	150,249	Twice as much sensitive land acreage in CA in comparison to NV.	<i>Same as above</i>
Total Acreage of Env. Sensitive Lands on Private Owned Parcels	11,821	4,845	16,666	Twice as much sensitive land acreage in CA in comparison to NV.	<i>Same as above</i>
Total Acreage of SEZs on Private Owned Parcels	3,444	807	4,251	Over four times as much SEZ acreage in CA in comparison to NV.	<i>Same as above</i>
Acreage of Covered SEZs on Private Owned Parcels ²	517	71	588	Over seven times as much covered SEZ on private parcels (acreage) in CA in comparison to NV.	<i>Land Capability GIS layer is currently not updated regularly. Coverage reductions would be measured for the Soil threshold analysis.</i>
Acreage of Covered Env. Sensitive Lands other than SEZs on Private Owned Parcels	237	352	589	Twice as much covered SEZ on private parcels (acreage) in CA in comparison to NV.	<i>Same as above</i>

Notes:

1. Excludes all water bodies, roads, and other areas not covered by parcel boundaries.
2. Only includes building, parking lot, and other types of coverage except for roads and trails.

*Land Capability acreage is an estimate, measured using the Bailey-Sinclair GIS layer and should not be considered survey grade or reflective of verification challenges.

Attachment C

**Evaluation of the Criteria Options for the Coverage Removal Requirement,
In Reference to the Water Quality Alternative (How the Fee is Spent)**

	<i>Option 1</i>	<i>Option 2</i>
Evaluation Criteria:	Ratio for all funds: For each 10 sq. ft. of ECM fee paid, 1 sq. ft. of existing coverage from sensitive land or 2 sq. ft. of existing coverage from non-sensitive land must be restored at a minimum.	At a minimum, half of the funds are dedicated to a Ratio (see Option 1) and the remaining portion is dedicated to Environmental Improvement Projects or other projects approved by the Executive Director that result in soil and water quality threshold gain.
Mitigation reflects the water quality impacts of the excess coverage (mitigation either minimizes, rectifies, reduces, or eliminates excess coverage impacts related to water quality)	1	1
Promotes direct coverage removal rather than merely paying a fee.	1	1
Do not create unobtainable obligations for the land banks (in other words, provide more flexibility for how the funds could be spent and encourage the development of requirements that are achievable in each state).	0	1
Focuses on removing coverage from over-covered areas - SEZs in particular	1	1
Incentivizes environmentally beneficial redevelopment	0	0
Establish a sustainable fee and policy structure that does not necessitate continuous updates.	0	0
Simplifies the system (avoid adding complexity)	0	1
Feasibility of Implementation (examine whether the recommendation is possible to achieve with the resources available).	1	1
Reduces Controversy	1	1
Total Score	5	7

*Scores can be -1, 0, or 1: A score of "-1" means the option detracts from the achievement of the criteria, "0" means the option is neutral, and "1" means the option promotes the attainment of the criteria.

Attachment D

Assessment of ECM Fee Update Mechanisms

Excess land coverage is essentially existing “grandfathered” coverage that exceeds the amount of allowable coverage in a project area. Excess land coverage is defined as the amount of legally-existing TRPA-verified land coverage existing within a project area that exceeds the base allowable coverage and any approved transfers of coverage.¹ TRPA regulations require project applicants to mitigate a portion of the excess coverage at the time that a project area is redeveloped. TRPA regulations require project applicants to mitigate the excess land coverage through any of the following excess land coverage mitigation program options (or combinations thereof) including reducing coverage on-site or offsite as a part of project approval (restored pursuant to subsection 30.5.3); payment of an Excess Coverage Mitigation Fee (ECM fee) in lieu of coverage reduction; consolidation or adjustment of parcel lot lines; or mitigation of excess land coverage in a Community Plan or Area Plan.²

Excess Coverage Mitigation Fee Summary

The Excess Coverage Mitigation (ECM) Fee payment (Code Section 30.6.1.3), was first made available in 1987. The ECM fee amount has increased over the years according to appraiser estimates based on the land bank’s cost to acquire, restore, and sometimes retire land coverage. In 1987, the ECM fee was \$5.00 per sq. ft. for California and Nevada. Then in 2001, the ECM Fee was raised to \$6.50 per sq. ft. in California and \$12.00 per sq. ft. in Nevada. The fees remained constant between 2002 and 2005, and then were increased once again in 2006 and 2007.³ The increased 2006/2007 fee reflects the current ECM Fee schedule that is used today.

The ECM Fee is calculated pursuant to the formula provided in TRPA Code Section 30.6.1.C and according to the schedule provided in the TRPA Rules of Procedure, Subsection 10.8.5. The current ECM fee is \$8.50 per sq. ft. in California and it ranges from \$12 to \$25 per sq. ft. in Nevada depending on the project’s Hydrologic Transfer Area. Code section 30.6.1.C.2 calls for TRPA to reset the ECM fees annually at the beginning of the year based on a certified appraiser’s estimate of the land bank’s cost to acquire and restore land coverage under the ECM Program. The appraiser is required to use the methodology established in the Uniform Standards of Appraisal Practice. The ECM fee schedule has not been updated since 2007 due to the high cost and lack of resources available for an annual appraisal of coverage costs in each Hydrologic Transfer Area. Considering the need to reset the ECM fee schedule, TRPA has reviewed the best available information regarding land coverage market prices.

Cost of Acquisition: The market price to purchase land coverage development rights (referred to as potential coverage) or existing land coverage varies by coverage type, the land capability classification, and the presence of existing development. On average, the market price to acquire potential coverage across the Lake Tahoe Region is nearly double the price in low capability areas such as meadows, wetlands, stream environment zones, steeply sloped areas versus high capability properties including lands more suitable for development (\$20.32 versus \$12.61, respectively).⁴ Unsurprisingly, the cost to purchase land with existing hard coverage (based on commercial development acquisitions) is higher than the cost to purchase land with potential coverage on high capability land; in fact, the average price

¹ See TRPA Code section 30.4.1 for information on base allowable coverage; Code section 30.4.2 for information on eligible coverage transfers; and Code section 30.6.1.A for details on how excess coverage is calculated.

² See TRPA Code section 30.6.2 for a complete listing of exemptions from excess coverage mitigation requirements.

³ *Market Value of Land Coverage and the Cost to Acquire and Restore Land Coverage Located in the Lake Tahoe Basin*. Prepared by Lynn C. Barnett, 2009.

⁴ Though the average price to acquire properties is typically twice the price in Nevada than in California (average of \$18.40 for NV in comparison to \$7.80 in CA).

is \$17.17 for existing hard coverage and \$12.61 for potential coverage on high capability land. Lastly, the cost to acquire and restore coverage, regardless if the coverage is potential or existing, is three times greater than the average price of purchasing potential coverage on high capability lands.

Regulatory Requirements: As is currently adopted, Section 30.6.1 of the TRPA Code applies to projects where the amount of TRPA-verified land coverage existing in the project area prior to the project exceeds the base land coverage prescribed by subsection 30.4.1. Code subsection 30.6.1.C.2, below, requires that the fee be updated annually, based on a “certified real estate appraiser’s estimate of the land bank’s cost to acquire and restore land coverage” under this program.

2. Excess Land Coverage Mitigation Fee

The excess coverage mitigation fee shall be calculated by determining the amount of required land coverage reduction (sq. ft.), in accordance with subparagraph 1 above. The land coverage reduction square footage shall then be multiplied by the appropriate Mitigation Fee Coverage Cost Factor to determine the Excess Land Coverage Mitigation Fee. The Mitigation Fee Land Coverage Cost Factor(s) shall be established by TRPA staff by January 1 of each year based on a certified real estate appraiser’s estimate of the land bank’s cost to acquire and restore land coverage under this program. The appraiser shall use the methodology established in the Uniform Standards of Appraisal Practice. The excess land coverage fee shall be calculated according to the schedule provided in the Rules of Procedure in subsection 10.8.5.

The excess land coverage fee shall be as follows:

$$\text{Mitigation Fee (\$)} = \text{Land Coverage Reduction Sq. Ft.} \times \text{Mitigation Fee Sq. Ft. Land Coverage Cost Factor.}$$

Working Group Outcomes

During the October 4th meeting, the Working Group generally agreed that fee updates should occur regularly, every four to five years, with a mechanism for updates; negating the need for region-wide appraisals or lengthy update procedures requiring Governing Board approval during each update cycle. This would require Code amendments to Section 30.6. The Working Group tasked TRPA staff with identifying and assessing potential methods for development of a reasonable and defensible mechanism for regular fee updates. The objectives of this task include: streamline and simplify the fee update process; provide regular fee updates reflecting market conditions for Excess Coverage Mitigation land purchases in the Tahoe Region; and, the recommended mechanism should be reasonable and defensible for regular fee updates.

Working Draft ECM Fee Update Mechanism

In order to assess potential methods for development of a reasonable and defensible mechanism for regular fee updates, it was necessary for TRPA staff to research existing inflation and escalation indices. This section highlights key findings from that research.

Consumer Price Index: During the October Working Group meeting, it was suggested that the Consumer Price Index (CPI) might be a suitable index for use as an ECM Fee Update mechanism. The CPI is a monthly data point produced by the U.S. Bureau of Labor Statistics. It is used to measure changes in the amount paid by urban consumers for a representative basket of goods or services.⁵ While the CPI reflects spending patterns of urban consumers and wage earners, and it accounts for nearly 87% of the

⁵ *Consumer Price Index*, U.S. Bureau of Labor Statistics. <http://www.bls.gov/cpi/>

total U.S. population, it does not include the spending and wage information for rural, nonmetropolitan areas. Thus, while the CPI might be accepted as the standard for measuring inflation in major markets, TRPA staff determined that this metric would not correspond to the conditions in the Tahoe Region.

S&P/Case-Shiller Home Price Index: The S&P/Case-Shiller Home Price Indices (Case-Shiller) measure U.S. residential real estate prices and track changes in home values both nationally as well as in 20 metropolitan regions. The indices are compiled monthly for the metropolitan regions, and quarterly for the national index. Of note, the indices exclude new construction, co-ops/apartments, multi-family dwellings, and any other properties not classified as single-family.⁶ Unfortunately, similar to the CPI, Case-Shiller lacks the ability to accurately reflect non-metropolitan local realities; especially rural areas such as the Tahoe region. Thus, TRPA staff determined that this metric was also not reflective of the local Tahoe conditions.

Other Findings: There are several key challenges in developing a meaningful and defensible metric to account for increased valuation in the region. One consideration of available county-level metrics is that home prices in the Tahoe Region are significantly higher than in the valley. Another consideration is that transaction counts are so low that it's difficult to generate statistically valid trends. As a result of these challenges, among others, it is necessary to use *median* values instead of *mean/averages*; one sale of a \$20,000,000.00 property can skew the averages for an entire reporting period.

TRPA staff, acknowledging the unique intricacies of Tahoe's residential real estate market, subsequently determined that a factor that computes growth rates of residential home sales in the region would be more appropriate than existing national or metropolitan indices, and would minimize potential bias of the resultant metric.

Development of a Draft Growth Index

Considerations: After researching available metrics and finding them irrelevant for use in the Tahoe Region, staff determined that ultimately, a factor computed based on local conditions would be the most suitable. The factor should be fairly easily reproducible, should be maintainable over time, could be computed for both California and Nevada, and of course, is grounded in reasonable economic theory. The data inputs must be reasonably obtainable. The factor should also be fluid, in that it can be computed whether the working group/GB approves a 5-yr or 10-yr update period.

Annual, median sales price (preferable to mean/average) was determined to be available and obtainable for all counties in the region, and county assessor offices are able to provide TRPA with sales statistics for the basin-portions of the counties, excluding valley and non-basin portions.

Growth Rate Equation: There are many ways to compute growth rates, and they range from very simple, to overly complex for the project's purposes. Staff considered several growth rate equations, and after researching economic theory and considering numerous alternate growth rate equations, TRPA staff determined that the Annual Percentage Growth Rate Equation (APGR) best meets the project objectives by minimizing over- and under-simplification as other equations tended to do. The APGR was determined to be very good at computing not just growth rate, but *percentage* growth rate; the latter is what is required in order to increase the fee by a specific percentage over time. The considered equations are summarized in Table D-1 below.

⁶ *S&P/Case-Shiller Home Price Indices*, S&P Dow Jones Indices. <http://us.spindices.com/index-family/real-estate/sp-case-shiller>

Table D-1: Equations Considered as a Fee Update Mechanism

	Equation	Pros	Cons	Recommended
Annual Percentage Growth Rate (APGR)	$\frac{[LN(Future Year) - LN(Base Year)]}{(\# \text{ years in period})}$	<ul style="list-style-type: none"> • Adequately Simple • Computes <i>Percentage Growth Rate</i> 	<ul style="list-style-type: none"> • Natural Log Functions difficult to explain to non-technical audiences 	Yes
Simplified Annual Growth Rate	$\frac{[(Future Year) - (Base Year)]}{(\# \text{ years in period})}$	<ul style="list-style-type: none"> • Most simple • High-level estimates computed quickly 	<ul style="list-style-type: none"> • Oversimplifies averages • Relies too heavily on base year and future year end-points 	No
Simplified Annual Percentage Growth Rate	$\frac{\left[\frac{(Future Year) - (Base Year)}{\left[\frac{(Future Year) - (Base Year)}{2} \right]} \right]}{(\# \text{ years in period})}$	<ul style="list-style-type: none"> • Preferred to Simplified Annual Growth Rate as it relies less on the Base Year • Decreased likelihood of oversimplifying or skewing averages 	<ul style="list-style-type: none"> • Oversimplifies averages • Relies too heavily on base year and future year end-points 	No
Average Annual Growth Rate (AAGR)	$\frac{[(Annual \% \text{ change in Median Sale } \$ \text{ Year 1 to Year 2}) + (Annual \% \text{ change in Median Sale } \$ \text{ Year 2 to Year 3}) + (CONTINUE FOR ALL YEARS)]}{(\# \text{ years in period})}$	<ul style="list-style-type: none"> • Moderately simple 	<ul style="list-style-type: none"> • If percent changes are very high or very low, can skew the average over the period 	No
Compound Annual Growth Rate	$[(Future Year)/(Base Year)]^{(1/(\# \text{ years in period}))}$	<ul style="list-style-type: none"> • Good for generally computing investment rate of return over a period 	<ul style="list-style-type: none"> • Not appropriate for project objectives 	No

Equation Recommendation: After conducting background research on existing inflation and escalation indices in order to assess potential methods for development of a reasonable and defensible mechanism for regular fee updates, TRPA staff determined that a factor that computes growth rates of residential home sales in the region, one that is computed in-house, would be more appropriate than existing national or metropolitan indices and would minimize potential bias of the resultant metric. Staff considered five growth rate equations and determined that one that utilizes a natural logarithmic function, the Annual Percentage Growth Rate (APGR), was preferred. As compared with other considered equations, the Annual Percentage Growth Rate equation best meets the update mechanism's desired objectives while decreasing the likelihood of a skewed or oversimplified resultant growth index.

Staff Recommendation for Fee Update Mechanisms

Based on the above assessment, TRPA staff recommend basing updates on changes in an index of average residential sales in the California and Nevada portion of the Lake Tahoe Region as opposed to a regional or national index. TRPA staff identified a preferred method for regular ECM fee updates that could be feasibly established; however it could be perceived as being complex. TRPA staff encourages Working Group discussion of the assessment in Attachment D, but recommends staggering Working Group recommendations on how the ECM fee is updated until after an alternative for how the fee is spent has been implemented. The reasoning is that the actual ECM fee amount will be influenced by the amendments for how the fee is spent, including the requirements for usage of the ECM Funds as well as HRA transfer restrictions. In addition, the ECM fee is paid by project applicants that are redeveloping over-covered legacy development and any raise in this fee might be counter-productive towards encouraging environmentally beneficial redevelopment.

Attachment E
Land Bank Coverage Transactions

CTC Transactions with Coverage Restoration

HRA	Upper Truckee				
	Smoke Shop/ Psychic	South Y Lodge	117-180-053	117-180-006	1771 Sawmill
Acquisition cost	\$325,000	\$320,000	\$480,278	\$481,284	\$349,900
Escrow/Option cost	\$15,000	\$15,000	\$15,000	\$15,000	\$5,000
Relocation cost	\$55,000	\$56,000	\$35,000	\$150,000	\$10,000
Environmental Remediation	-	-	\$50,000	\$50,000	-
Demolition/ Restoration cost	\$80,600	\$91,500	\$37,040	\$69,670	\$50,000
Staff Time - Project Management	\$19,200	\$19,200	\$19,200	\$19,200	\$9,600
Total Project Cost	\$494,800	\$501,700	\$636,518	\$785,154	\$424,500
Commercial Floor Area	\$55,000	\$0	\$32,419	\$119,700	\$0
ERUU's	\$0	\$27,500	\$0	\$0	\$0
Tourist Accommodation Units	\$0	\$72,500	\$0	\$0	\$60,884
Land Value	\$15,000	\$105,000	\$144,083	\$144,385	\$15,000
Commodities Re-Sale Value	\$70,000	\$205,000	\$176,502	\$264,085	\$75,884
Subtotal	\$424,800	\$296,700	\$460,016	\$521,069	\$348,616
Coverage - Square feet	\$7,754	\$14,441	\$5,679	\$7,550	\$4,000
Coverage - Cost per Square Foot	\$55	\$21	\$81	\$69	\$87
AVERAGE OVERALL EXISTING COVERAGE RESTORATION COST		Fee Amount	Average Cost/Fee Amount (Ratio of Increase from Fee to Average Cost of Coverage Restoration)		
	\$63	\$8.50	7.4		

Attachment E
Land Bank Coverage Transactions

NDSL Transactions

HRA	Market Price to Acquire (Price/Sq. Ft.)		Market Price to Acquire and Restore (Price/Sq. Ft.)		
	Potential Coverage on High Capability Land	Potential Coverage on Low Capability Land	Potential Coverage	Existing Coverage (Hard & Soft) on Low Capability Land	Existing Coverage (Hard & Soft) on High Capability Land
South Stateline, NV (4)					
	\$5.02				
	\$10.55				
				\$17.25	\$17.25
	\$10				
					\$12.00
AVERAGE	\$8.52				\$14.63
Cave Rock, NV (3)					
	\$15.31				
	\$12.00				
				\$19.75	
AVERAGE	\$13.66			\$19.75	
Marlette, NV (2)					
Incline, NV (1)					
		\$10.25			
		\$18.79			
	\$10.05				
	\$12.05				
		\$27	\$27		\$15.04
					\$7.92
				\$4.86	\$4.86
AVERAGE	\$11.05	\$19		\$18.92	\$11.48
AVERAGE OVERALL COST OF EXISTING COVERAGE				\$17.00	

*Incline Lake Corporation donated potential and restored coverage to the Nevada Land Bank.