

Simple Example of SEP-HCP Conservation Banking and Participation Process

DRAFT January 10, 2011

NOTE: This example is for general, illustrative purposes only. The actual details of the SEP-HCP conservation program are under development and may or may not be consistent with the example described herein.

Conservation and Take Authorization

- SEP-HCP has 2 main functions with respect to the covered endangered species:
 1. Conserve habitat by “Conservation Banking”
 2. Authorize incidental take through the “Participation Process”
- Functions are united by a conservation program coordinated by a SEP-HCP Administrator entity.
 - SEP-HCP Administrator may be Bexar County, a combination of County/City entities, or a dedicated third-party. However, the Permit Applicant (which may or may not be the same as the Administrator) will have ultimate responsibility for plan implementation and compliance with the permit terms and conditions.

Part 1 : Conservation Banking

SEP-HCP Conservation Bank

- SEP-HCP Administrator works with landowners to permanently protect and manage GCW and BCV habitat in the Plan Area.
- These actions create “mitigation credits” for the Conservation Bank.
- Credits are accumulated in the Bank and later used to offset impacts by Participants.
- Bank must maintain a positive balance of credits to continue allowing participation.

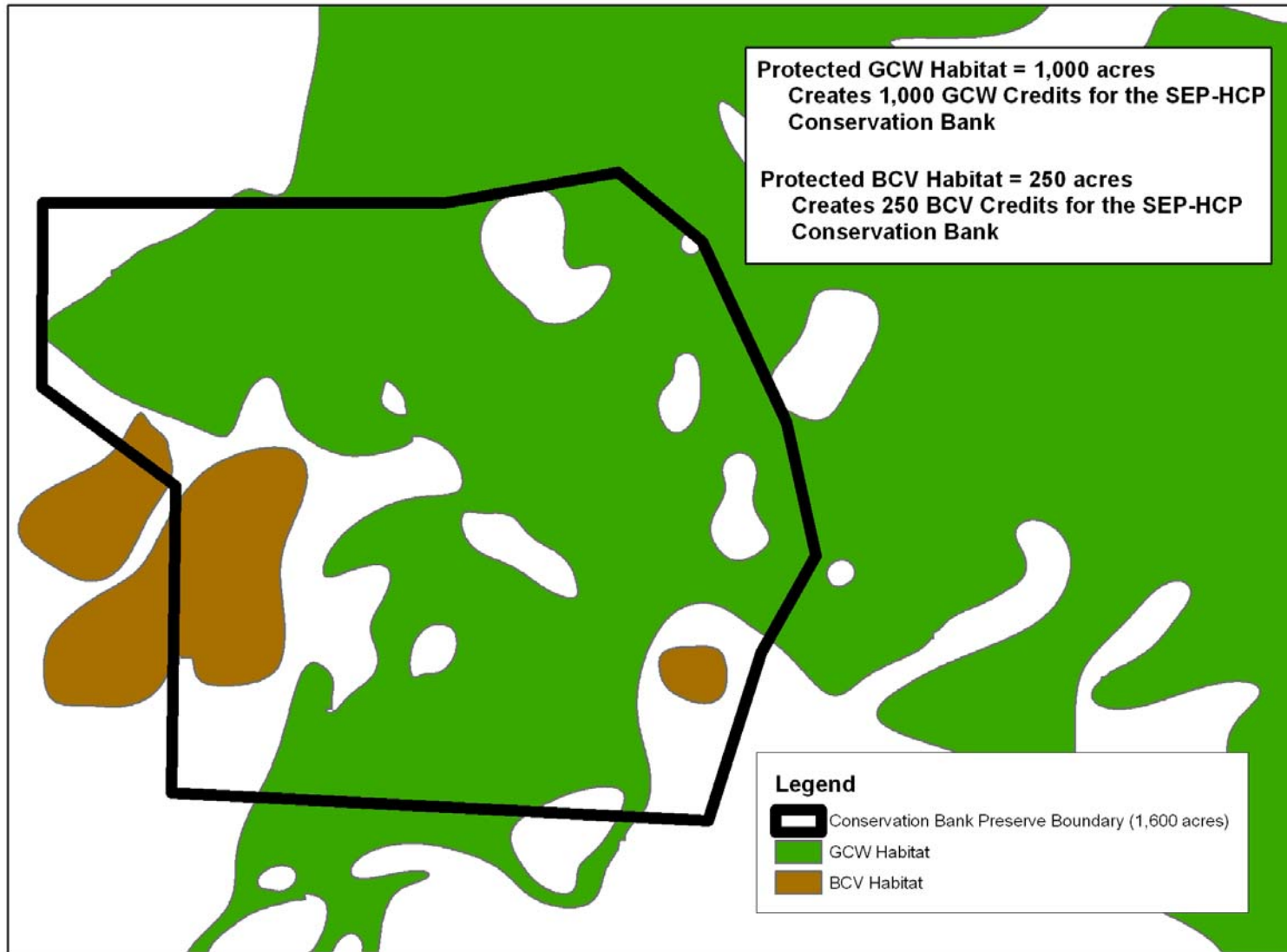
Habitat Protection

- SEP-HCP Administrator will work only with willing landowners to achieve permanent protection of endangered species habitat.
- Protection may occur by negotiating fee simple land acquisitions, conservation easements, or other types of conservation transactions.
- SEP-HCP Administrator will be responsible for the species-specific management and monitoring of habitat preserves in perpetuity.

Example Conservation Bank Acquisition

- SEP-HCP Administrator has \$XX million available to acquire preserve land for the Conservation Bank.
- SEP-HCP Administrator seeks proposals from landowners in the Plan Area who are interested in offering their land as a potential preserve.
- SEP-HCP Administrator evaluates proposals, conducts additional biological studies (as necessary), and identifies a project that best achieves the goals and objectives of the plan – a balance of biological, economic, and practical considerations.
- Landowner and SEP-HCP Administrator complete negotiations for the permanent protection and management of GCW and/or BCV habitat on the property.
- US Fish and Wildlife Service and SEP-HCP Administrator determine the number of mitigation credits created by the conservation transaction. Typically, each acre of habitat protected = 1 mitigation credit.
- The mitigation credits created by the conservation transaction are added to the Conservation Bank.

Conservation Bank Credits



Part 2: Participation Process

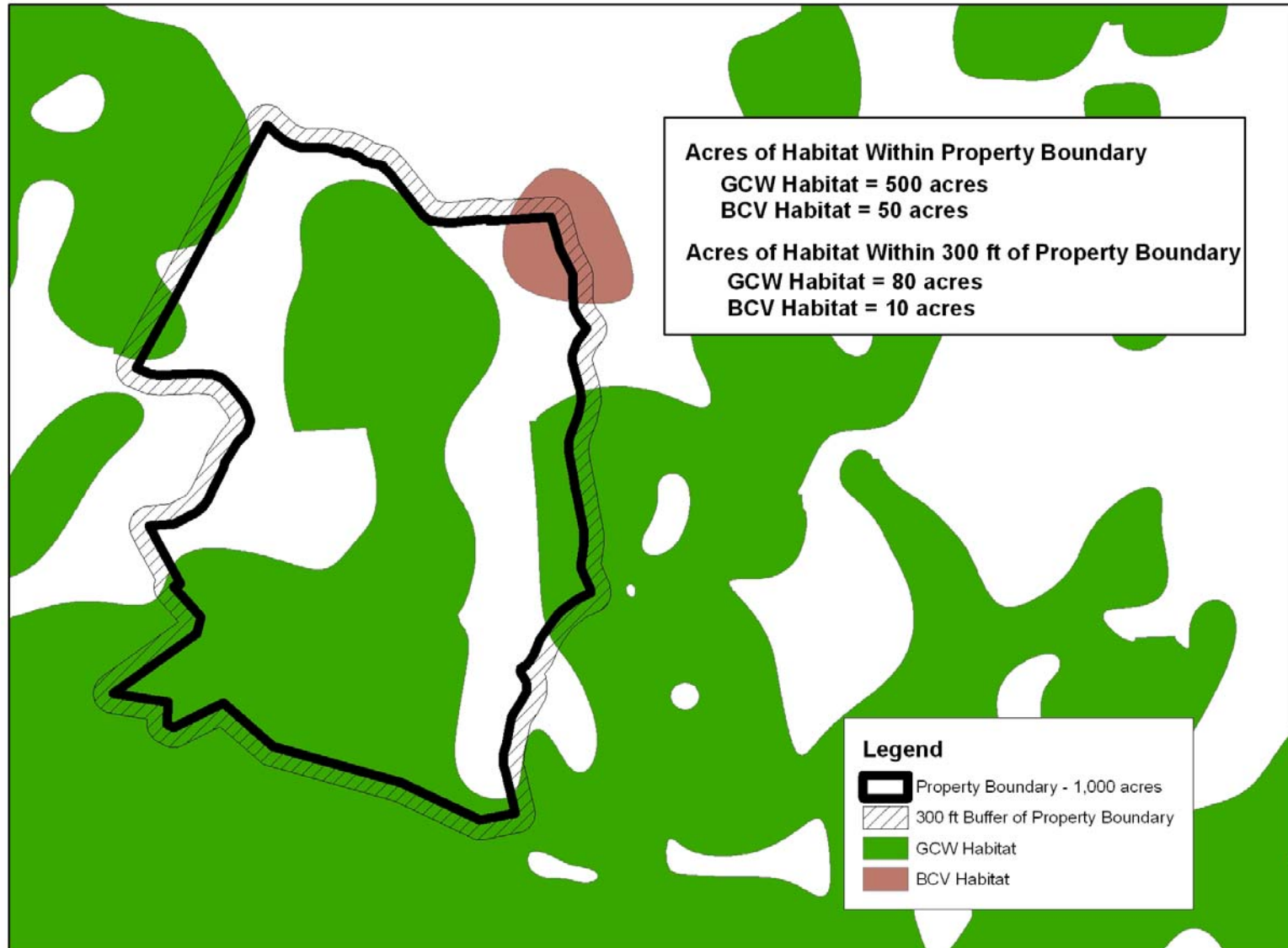
Basic Participation Process for Incidental Take Coverage

- Landowners or developers in the Plan Area may elect to achieve compliance with the Endangered Species Act by participating in the SEP-HCP.
 - Participation is voluntary, and other options for ESA compliance are available.
- Plan participants buy mitigation credits from the Conservation Bank (operated by the SEP-HCP Administrator) to authorize impacts to endangered species.
- Participation process includes the following steps:
 - Identify habitats
 - Assess impacts
 - Determine mitigation needs
 - Pay participation fees and complete enrollment
 - Comply with permit terms and conditions

Identify Habitats

- Potential participant obtains a habitat assessment of the project area that maps and describes the GCW and BCV habitat on and adjacent to the property.
 - Habitat assessments may be performed by the SEP-HCP Administrator or a qualified third party on behalf of the potential participant.
- Habitat assessment is used by the SEP-HCP Administrator to help determine potential, project-specific impacts to the GCW and/or BCV.

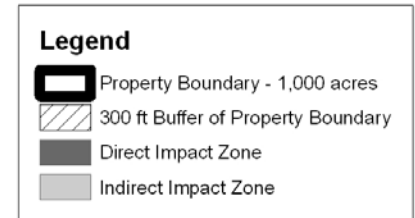
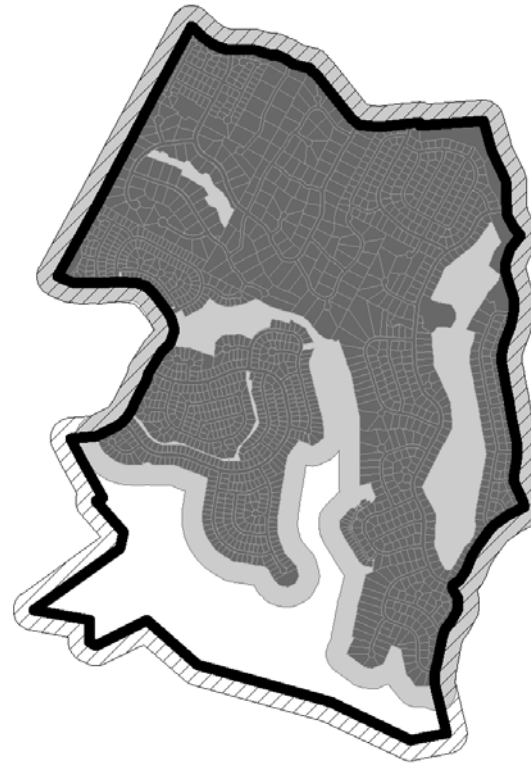
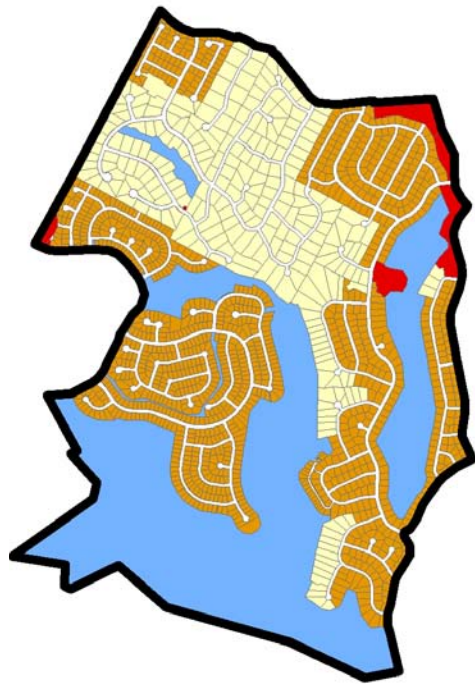
Identify Habitats - Example



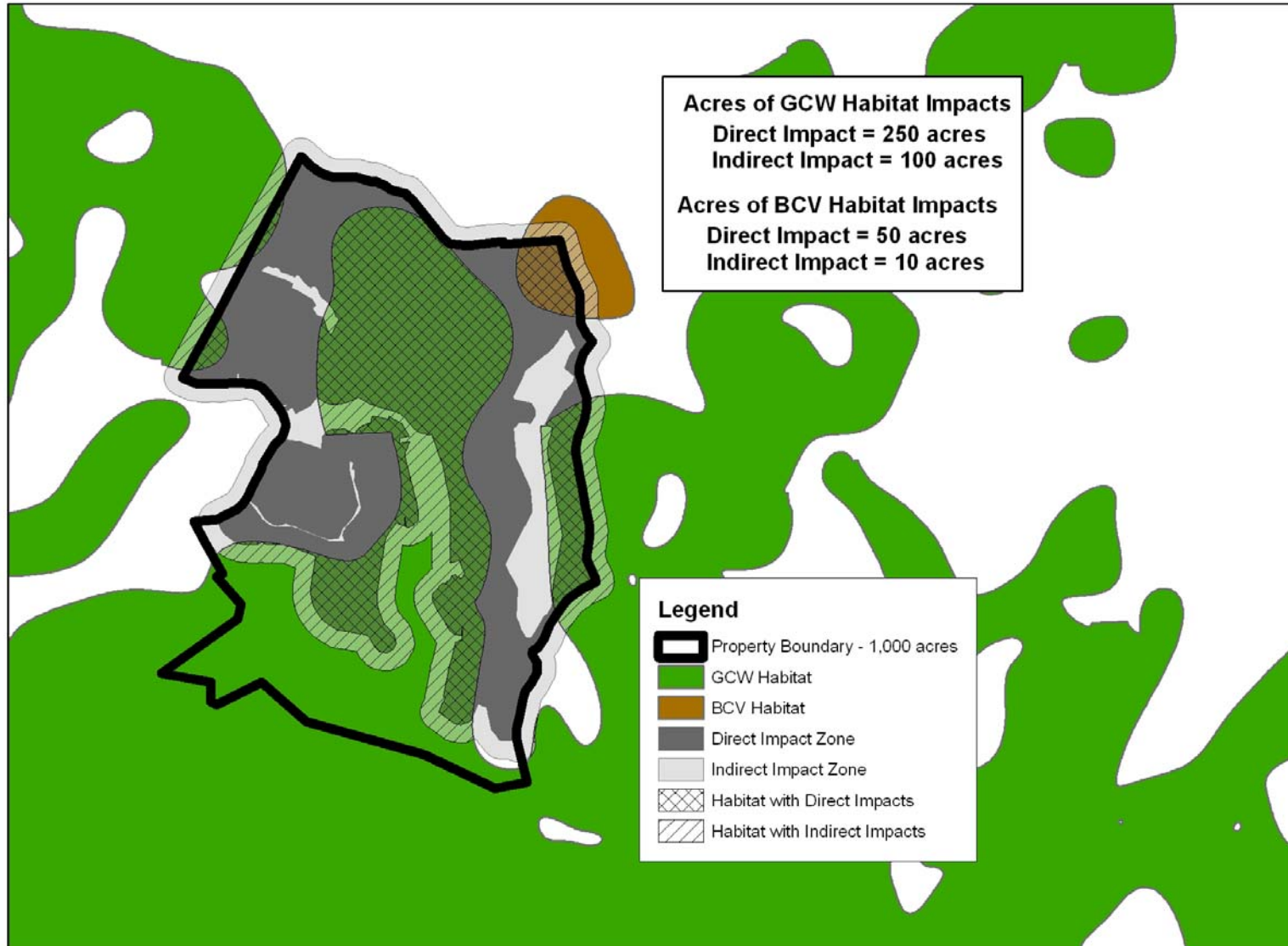
Assess Impacts

- Potential participant submits information to the SEP-HCP Administrator about the proposed project – i.e., a new development, utility corridor, roadway expansion, etc...
- Project information indentifies the extent and character of any proposed development or other land use changes that may affect GCW and/or BCV habitat.
- SEP-HCP Administrator evaluates the project information and the habitat assessment to determine how the proposed project may impact GCW and/or BCV habitat.

Assess Impacts – Example



Assess Impacts - Example



Determine Mitigation Needs

- SEP-HCP Administrator identifies the amount of GCW and/or BCV habitat that would be directly or indirectly affected by the proposed project.
 - Direct impacts may include habitat areas that are cleared for development or that are otherwise rendered unusable by the species.
 - Indirect impacts may extend into habitat areas beyond the limits of the direct impacts, where the quality or suitability of the adjacent habitat is reduced.
- The SEP-HCP conservation plan sets mitigation ratios for certain types of impacts to GCW and BCV habitat.
- SEP-HCP Administrator applies the pre-determined mitigation ratios to the acres of impacted habitat and calculates the number of mitigation credits needed to offset the impacts of the proposed project.

Determine Mitigation Needs - Example

- Example Habitat Impacts
 - GCW Direct Impacts = 250 ac / Indirect Impacts = 100 ac
 - BCV Direct Impacts = 50 ac / Indirect Impacts = 10 ac
- Example Mitigation Ratios (GCW and BCV)
 - Direct Impact = 2:1 / Indirect Impact = 1:1
- Example Mitigation Needs
 - GCW Mitigation Need = 600 credits
 - 250 ac direct impacts * 2 credits/acre = 500 credits
 - 100 ac indirect impacts * 1 credit/acre = 100 credits
 - BCV Mitigation Need = 110 credits
 - 50 ac direct impacts * 2 credits/acre = 100 credits
 - 10 ac indirect impacts * 1 credit/acre = 10 credits

Determine Mitigation Needs - Example

- Does SEP-HCP Conservation Bank have enough credits to cover the project?
 - If YES, then participation may be allowed.
 - If NO, then participation may not occur until additional credits are banked.
- Example Conservation Bank has a current balance of:
 - +1,000 GCW credits
 - +250 BCV credits
- Project may participate!

Determine Mitigation Needs - Example

- Example Participation Fees
 - SEP-HCP Administrator charges \$3,000 per credit for GCW and BCV
 - Potential participant requires 710 credits to meet the mitigation requirements for the project
 - $\$3,000 * 710 \text{ credits} = \$2,130,000$
 - Potential participant pays \$2,130,000 in participation fees to obtain GCW and BCV incidental take coverage through the SEP-HCP.

Enroll Participant

- Applicant may choose to pay the participation fee and complete enrollment in the SEP-HCP, or seek other compliance options.
- Participation in SEP-HCP is finalized with payment of fees and signed Participation Agreement.
- Participation Agreement establishes the terms and conditions of participation, including any seasonal restrictions or reporting requirements.
- Participation Agreement extends the SEP-HCP endangered species incidental take authorization to the participating project.

Update Conservation Bank Balance

- SEP-HCP Administrator is responsible for tracking conservation and participation transactions, and maintaining an accurate bank balance.
 - Prior bank balance = +1,000 GCW credits / +250 BCV credits
 - Participation debit = -600 GCW credits / -110 BCV credits
 - New bank balance = +400 GCW credits / +140 BCV credits
- SEP-HCP Administrator may continue to enroll participants until the conservation bank credit balance = 0 or the plan's take limit is reached.

County	Sector	Total Area	Model C2010 GCW Habitat - Low Estimate (Rank 4 Only)	% GCW Habitat - Low Est.	Model C2010 GCW Habitat - Mid Estimate (Rank 3 and 4)	% GCW Habitat - Mid Est.	Model C2010 GCW Habitat - High Estimate (Ranks 1 - 4)	% GCW Habitat - High Est.	New Development 2010 - 2040 (Dec. 17, 2010)	GCW Habitat Loss 2010 - 2040 (Low Est.)	GCW Habitat Loss 2010 - 2040 (Mid Est.)	GCW Habitat Loss 2010 - 2040 (High Est.)	Ave Annual GCW Habitat Loss 2010 - 2040 (Mid Est.)
Bandera	ZCBC	136,914	13,858	10%	21,623	16%	37,220	27%	3,780	378	605	1,020	19.5
Bandera	ZEBC1	60,791	12,325	20%	17,371	29%	26,105	43%	1,261	251	366	542	11.8
Bandera	ZEBC2	7,230	1,267	18%	1,775	25%	2,630	36%	925	167	232	332	7.5
Bandera	ZWBC	305,384	101,880	33%	124,983	41%	156,679	51%	2,988	986	1,225	1,525	39.5
Bexar	FN	37,318	2,980	8%	4,625	12%	7,866	21%	14,920	1,193	1,791	3,133	57.8
Bexar	FNE	37,017	10,527	28%	13,499	36%	17,638	48%	13,630	3,816	4,907	6,542	158.3
Bexar	FNW	92,020	30,883	34%	38,482	42%	49,938	54%	18,357	6,242	7,710	9,912	248.7
Bexar	FW	34,869	38	0%	53	0%	77	0%	22,445	-	-	-	-
Bexar	NC	22,795	682	3%	1,267	6%	2,622	12%	3,875	116	233	465	7.5
Bexar	NE	28,714	110	0%	278	1%	602	2%	3,443	-	34	70	1.1
Bexar	NW	30,871	381	1%	814	3%	1,822	6%	6,907	69	208	414	6.7
Bexar	W	16,497	-	0%	-	0%	-	0%	1,684	-	-	-	-
Blanco	ZNBC	319,165	17,802	6%	28,946	9%	52,374	16%	423	26	39	68	1.3
Blanco	ZSBC	137,424	10,086	7%	17,584	13%	33,324	24%	971	68	127	233	4.1
Comal	FNCC	80,616	16,756	21%	24,199	30%	36,235	45%	10,457	2,196	3,137	4,705	101.2
Comal	ECC3	82,408	26,965	33%	33,433	41%	41,833	51%	10,769	3,554	4,416	5,492	142.5
Comal	NCC3	64,901	6,353	18%	9,079	26%	13,602	39%	3,937	709	1,024	1,535	33.0
Comal	SCC	49,837	17,147	34%	20,289	41%	24,135	48%	19,849	6,748	8,137	9,528	262.5
Comal	WCC5	105,297	19,908	19%	28,752	27%	44,491	42%	23,888	4,539	6,449	10,033	208.0
Comal	ZNB	14,614	18	0%	56	0%	166	1%	4,347	-	-	43	-
Kendall	ZEKC	80,651	7,418	9%	12,696	16%	23,252	29%	7,057	635	1,129	2,046	36.4
Kendall	ZNKC	261,236	18,259	7%	28,894	11%	51,187	20%	5,881	411	647	1,176	20.9
Kendall	ZWKC	82,402	16,544	20%	23,679	29%	35,401	43%	5,642	1,128	1,637	2,427	52.8
Kerr	KCC	20,058	1,210	6%	2,443	12%	5,056	25%	4,751	285	570	1,187	18.4
Kerr	KCNE	86,381	6,014	7%	9,757	11%	17,101	20%	3,704	259	407	740	13.1
Kerr	KCSC	34,719	2,939	8%	4,590	13%	7,793	22%	649	52	84	143	2.7
Kerr	KCSE	83,108	9,208	11%	13,960	17%	23,249	28%	918	100	156	258	5.0
Kerr	KCW	484,574	57,044	12%	83,235	17%	130,572	27%	2,051	246	348	553	11.2
Medina	ZDMC	55,951	-	0%	-	0%	-	0%	2,034	-	-	-	-
Medina	ZEMC1	129,731	19,362	15%	23,681	18%	29,265	23%	25,505	3,826	4,590	5,866	148.1
Medina	ZHMC	113,228	-	0%	-	0%	-	0%	922	-	-	-	-
Medina	ZNCMC	199,783	36,705	18%	48,737	24%	66,965	34%	2,440	439	585	830	18.9
Medina	ZNMC	71,502	-	0%	-	0%	-	0%	5,636	-	-	-	-
Medina	ZWMC	283,693	13,921	5%	19,890	7%	30,484	11%	5,106	255	357	562	11.5
SEP SECTORS		3,621,699	478,590	13%	658,670	18%	969,684	27%	241,152	38,694	51,150	71,380	1,650
COUNTY SECTOR SUMMARIES													
Bandera		510,319	129,330	25%	165,752	32%	222,634	44%	8,955	1,782	2,428	3,419	78.3
Bexar*		300,101	45,601	15%	59,018	20%	80,565	27%	85,260	11,436	14,883	20,536	480.1
Blanco		456,589	27,888	6%	46,530	10%	85,698	19%	1,395	94	166	301	5.4
Comal		367,673	87,147	24%	115,808	31%	160,462	44%	73,247	17,746	23,163	31,336	747.2
Kendall		424,289	42,221	10%	65,269	15%	109,840	26%	18,580	2,174	3,413	5,649	110.1
Kerr		708,840	76,415	11%	113,985	16%	183,771	26%	12,074	942	1,565	2,881	50.4
Medina		853,888	69,988	8%	92,308	11%	126,714	15%	41,642	4,520	5,532	7,258	178.5
SEP SECTORS w/o Comal Co.		3,254,026	391,443	12%	542,862	17%	809,222	25%	167,905	20,948	27,987	40,044	903

SEP-HCP BCV Impacts Analysis

BCV Habitat per Wilkins et al. (2006)

Land Development - Dec. 17, 2010 version

Draft December 22, 2010

County	Total County Area	BCV Habitat Estimate (Wilkins et al. 2006)	% BCV Habitat	New Development 2010 - 2040 (Dec. 17, 2010)	BCV Habitat Loss 2010 - 2040	Ave Annual BCV Habitat Loss 2010 - 2040
Bandera	510,109	7,599	1%	8,955	133	4.3
Bexar	804,048	47,854	6%	85,260	5,074	163.7
Blanco	456,500	2,275	0%	1,395	7	0.2
Comal	367,819	3,591	1%	73,247	715	23.1
Kendall	423,972	4,945	1%	18,580	217	7.0
Kerr	708,103	53,074	7%	12,074	905	29.2
Medina	855,078	62,292	7%	41,642	3,034	97.9
SEP-HCP PLAN AREA	4,125,629	181,630	4%	241,152	10,085	325
SEP-HCP PLAN AREA w/o Comal Co.	3,757,810	178,039	5%	167,905	9,370	302

County	Sector	Total Area	KFR Area	New Development 2010 - 2040	Redevelopment 2010 - 2040	Total Development 2010 - 2040	Karst Zone 1 Impacts 2010 - 2040	Karst Zone 2 Impacts 2010 - 2040	Karst Zone 3 Impacts 2010 - 2040	Karst Zone 4 Impacts 2010 - 2040	Estimated Number of Species Caves - Zones 1 and 2	Estimated Number of Species Caves - Zones 3 and 4
Bandera	ZEBC1	60,791	N	1,261	1,444	2,705	-	-	-	14	-	-
Bandera	ZEBC2	7,230	N	924	531	1,455	-	-	-	26	-	-
Bexar	FN	37,318	N	14,920	4,216	19,136	5,687	4,107	4,688	-	97	-
Bexar	FNE	37,017	N	13,630	4,358	17,988	2,151	10,390	3,918	-	132	-
Bexar	FNW	92,020	N	18,357	7,859	26,216	5,796	4,025	7,712	1,355	176	1
Bexar	FW	34,869	CAC	22,445	4,345	26,790	2,698	6,402	11,028	-	41	-
Bexar	NC	22,795	N	3,875	3,125	7,000	41	2,248	3,840	-	38	-
Bexar	NE*	17,689	N	3,444	3,226	6,670	-	1,158	5,347	-	16	-
Bexar	NE*	11,025	AH	3,444	3,226	3,835	-	-	-	-	6	-
Bexar	NW	30,871	N	6,906	4,149	11,055	57	677	8,700	-	10	1
Bexar	W	16,497	CAC	1,684	1,786	3,470	73	954	1,457	-	17	-
Medina	ZEMC1	129,731	N	25,505	6,042	31,547	-	4,894	3,929	1,994	103	1
Medina	ZNCCM	199,783	N	2,441	3,985	6,426	-	1	-	-	-	-
Bexar	SOUTH	49,909	AH	-	6,576	6,576	32	498	3,533	-	14	1
SEP KARST REGION		747,545		118,836	54,867	170,867	16,535	35,354	54,151	3,389	650	4

County	Sector	Total Area	KFR Area	Estimated Number of Species Caves Affected by Development (2010 - 2040)		Approx. Surface Area Associated with Affected Species Caves (2010 - 2040) - 10 ac per cave		Approx. Surface Area Associated with Affected Species Caves (2010 - 2040) - 50 ac per cave		Approx. Surface Area Associated with Affected Species Caves (2010 - 2040) - 100 ac per cave	
				% of Total Est. Caves	% of Total Karst Zone 1 - 4	% of Total Karst Zone 1 - 4	% of Total Karst Zone 1 - 4				
Bandera	ZEBC1	60,791	N	0	0%	0	0%	0	0%	0	0%
Bandera	ZEBC2	7,230	N	0	0%	0	0%	0	0%	0	0%
Bexar	FN	37,318	N	50	52%	501	2%	2,505	9%	5,010	18%
Bexar	FNE	37,017	N	64	49%	641	2%	3,204	9%	6,408	19%
Bexar	FNW	92,020	N	50	28%	504	1%	2,519	4%	5,037	8%
Bexar	FW	34,869	CAC	32	79%	322	1%	1,610	6%	3,220	12%
Bexar	NC	22,795	N	12	31%	118	1%	590	3%	1,180	6%
Bexar	NE*	17,689	N	6	38%	61	0%	304	2%	608	4%
Bexar	NE*	11,025	AH	-	0%	-	0%	-	0%	-	0%
Bexar	NW	30,871	N	4	37%	40	0%	201	1%	402	2%
Bexar	W	16,497	CAC	4	21%	36	0%	182	2%	364	3%
Medina	ZEMC1	129,731	N	25	24%	251	1%	1,257	3%	2,515	6%
Medina	ZNCCM	199,783	N	0	0%	0	0%	0	1%	1	2%
Bexar	SOUTH	49,909	AH	2	13%	20	0%	99	0%	197	1%
SEP KARST REGION		747,545		249	38%	2,494	1%	12,471	4%	24,942	9%